To my father
I know which way I was half right now.
ACKNOWLEDGMENTS

The standard litany of notes about a project of this nature requiring the work of far more people than appear on the title page applies. To wit, this project would not have been possible without the help and guidance of my committee and mentors: Don Ault, Greg Ulmer, Anja Ulanowicz, Bob Hatch, and especially my advisor, Terry Harpold, who managed with remarkable skill to always be there when I needed, as opposed to when I merely wanted. Thanks must also go to mentors past – Lauren Berlant, W.J.T. Mitchell, and as always Peter Havholm.

Further thanks must go to my colleagues at UF - particularly Lyndsay Brown, Tof Eklund, Steph Boluk, Zach Whalen, Matt Feltman – and elsewhere. Alex Reed, Meredith Collins, Lelac Almagor, and Shoshana Stern particularly stand out. Thanks also go to virtual colleagues, particularly pauldeman2pt0, knut_hamson, max_ambiguity, and kataplexis.

Of course thanks are also due to my family, not only for years of support, but also for periodically taking me seriously even though I was pursuing a PhD in video games and comic books. My mother, father, grandparents, mother-out-law, and especially, always, my far cooler sister, Tori Sandifer, without whom I’d have gone completely mad. You are as big a nerd as I am. I raised you well. I would also be remiss if I did not mention my other sister, Carly Sullivan, and my other other sister, Jacey Johns. The worst August ever would not have worked without you. Finally, special thanks to my Uncle Phil, upon whose Nintendo I first played Super Mario Bros, and whose comics were the first I read. This is all your fault.

Finally, a more esoteric set of thanks – thanks to Glen Gardiner for the illustrations in Chapter 4, to Geoff Rayle for screening films without which there would
not be a Chapter 4. Thanks to Krypto for being my dog, and to Brewster, for nearly a
decade of support. Special thanks to Starbucks for being there, if not whenever I
needed you, at least for 17 hours out of every day, and for selling me an espresso
maker for the rest of the time. Thanks also to various artistic inspirations: Dave Carter,
Tracy Grammer, Vienna Teng, Morrissey, Darren Aronofsky, Terry Gilliam, Rian
Johnson, Greg Rucka, Geoff Johns, Alan Moore, and especially to Doctor Who, for
providing me a role model for my entire life. And finally, to grapes. For fermenting.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgments</td>
<td>4</td>
</tr>
<tr>
<td>List of Figures</td>
<td>7</td>
</tr>
<tr>
<td>List of Tables</td>
<td>9</td>
</tr>
<tr>
<td>Chapter 1: The Demo and the Problem of Progress</td>
<td>11</td>
</tr>
<tr>
<td>Chapter 2: Duplicity is the Other of Invention</td>
<td>46</td>
</tr>
<tr>
<td>Chapter 3: Crisis on Infinite Canvas</td>
<td>86</td>
</tr>
<tr>
<td>Chapter 4: Out of the Screen and into the Theater</td>
<td>133</td>
</tr>
<tr>
<td>Chapter 5: Entertainment is Only Skin Deep</td>
<td>186</td>
</tr>
<tr>
<td>List of References</td>
<td>224</td>
</tr>
<tr>
<td>Biographical Sketch</td>
<td>229</td>
</tr>
</tbody>
</table>
### LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1</td>
<td>Douglass Englebart’s demonstration of the Oniline system</td>
</tr>
<tr>
<td>2-1</td>
<td>Screenshot of MacPaint</td>
</tr>
<tr>
<td>2-2</td>
<td>Screenshot of MacWrite</td>
</tr>
<tr>
<td>2-3</td>
<td>The Macintosh speaks for itself</td>
</tr>
<tr>
<td>2-4</td>
<td>The Macintosh declares its own insane greatness</td>
</tr>
<tr>
<td>3-1</td>
<td>Comparison of Infinite Crisis and Action Comics pages</td>
</tr>
<tr>
<td>3-2</td>
<td>Cover to Action Comics #270</td>
</tr>
<tr>
<td>3-3</td>
<td>July 1, 1906 Little Nemo strip</td>
</tr>
<tr>
<td>3-4</td>
<td>March 21, 1909 Little Nemo strip (detail)</td>
</tr>
<tr>
<td>3-5</td>
<td>October 29, 1905 Little Nemo strip</td>
</tr>
<tr>
<td>3-6</td>
<td>September 23, 1906 Little Nemo strip</td>
</tr>
<tr>
<td>3-7</td>
<td>July 13, 1941 Krazy Kat strip</td>
</tr>
<tr>
<td>3-8</td>
<td>May 30, 1943 Krazy Kat strip</td>
</tr>
<tr>
<td>3-9</td>
<td>Page from Acme Novelty Library</td>
</tr>
<tr>
<td>3-10</td>
<td>“The Call of the Mild”</td>
</tr>
<tr>
<td>3-11</td>
<td>When I Am King</td>
</tr>
<tr>
<td>3-12</td>
<td>The Right Number</td>
</tr>
<tr>
<td>4-1</td>
<td>Use of space in 3-D film</td>
</tr>
<tr>
<td>4-2</td>
<td>Use of space in 3-D film for a viewer near the screen</td>
</tr>
<tr>
<td>4-3</td>
<td>Use of space in 3-D film for a viewer at the side of the theater</td>
</tr>
<tr>
<td>4-4</td>
<td>19th century stereoscope viewers</td>
</tr>
<tr>
<td>4-5</td>
<td>Trajectories of the paddleball sequence from House of Wax, moved to a common origin point</td>
</tr>
</tbody>
</table>
4-6 – Still from Dial M for Murder .................................................................179
4-7 – Still from Revenge of the Creature .......................................................180
4-8 – Still from Kiss Me Kate ........................................................................180
4-9: Still from House of Wax .......................................................................181
4-10: Still from House of Wax .....................................................................181
4-11: Still from Kiss Me Kate ........................................................................182
4-12: Still from House of Wax .....................................................................182
4-13: Still from Creature From the Black Lagoon ........................................183
4-14: Stills from Dial M for Murder ...............................................................183
4-15: Still from Kiss Me Kate ........................................................................184
4-16: Still from Starchaser: The Legend of Orin .........................................184
4-17: Joe Kubert art from a 3-D Tor comic ..................................................185
4-18: Still from Flesh for Frankenstein ..........................................................185
5-1: An early Nintendo advertisement for the Wii, proclaiming that “playing = believing.” .................................................................219
5-2: One of the many fake images of the Wii (then known as the Revolution) to be spread around the Internet ..................................................219
5-3: Image from Wii advertisement ..............................................................220
5-4: The Wii console, its front facing down on the table ..............................220
5-5: A Mii in the process of creation .............................................................220
5-6: Screenshot from Metroid Prime 3 ..........................................................221
5-7: Screenshot from Elebits ........................................................................221
5-8: Screenshot from Red Steel ....................................................................222
5-9: Screenshot from The Legend of Zelda: Twilight Princess ....................222
<table>
<thead>
<tr>
<th>Table</th>
<th>page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-1: Table of video game controller complexities.</td>
<td>223</td>
</tr>
</tbody>
</table>
This dissertation is an exploration of the phenomena of newness and innovation. It approaches these phenomena not as historical events in a progress narrative of media and technology, but rather as an operative element of certain texts that has clear and describable content and effects. Its specific focus is particular form where these phenomena are on active and central display – the demo. The demo is defined as a text that exists primarily to show the potential and form of a given medial paradigm. This includes things that are explicitly marked as demos, usually for promotional or marketing purposes, but also early texts in a particular medial form that exist to show what the form can do. The project is divided into five chapters, which in turn form two general portions of the piece. The first two chapters construct a general theory of demos and of the act of demonstration, first looking at the problem of innovation and progress, then constructing a specific theory of the demo. The concluding three are a set of case studies of demos, focusing on the infinite canvas webcomic, 3-D film, and the Nintendo Wii.
On August 6, 1991, at 3:31 PM, Tim Berners-Lee, an employee at the European Organization for Nuclear Research (CERN) made a post to the alt.hypertext newsgroup responding to a seemingly innocuous question by Nari Kannan, who asked if there was any development towards “hypertext links enabling retrieval from multiple heterogeneous sources of information.” In his response, Berners-Lee described a project he was working on that would do just this by creating a protocol, HTTP (Hypertext Transfer Protocol), via which hypertext files could be requested and returned by servers on the then-nascent Internet, complete with links that would, if followed, use HTTP to request files from other servers (Berners-Lee). The project was called WorldWideWeb, and this Usenet post marked its public debut.

This historical moment poses something of a problem for a media theorist. What, role does or did this moment play in terms of the World Wide Web as it is today? On the one hand, from a historical perspective, it is factually the case that Tim Berners-Lee created key parts of the basic technology that underlies the World Wide Web. On the other hand, the development of the Web does not slot so easily into a sort of “great man” theory, and there is a degree to which the centrality of this single event to the history of the Web belongs more to myth than history.  

Associated with this dualism is a significant problem: on the one hand, there are clearly a set of events in the history of any medium that are historically significant in its establishment as a functional piece of

---

1 Berners-Lee himself seems aware of this fact, albeit strangely. His autobiographical account of the events, *Weaving the Web*, is on the one hand written with the implicit assumption that he was the dominant figure in the creation of the World Wide Web. On the other hand, Berners-Lee’s account is full of lengthy descriptions of other people’s contributions and disclaimers of the magnitude of his own work.
technology. On the other hand, retrospectively, those events play a fundamentally myth-making role – in this case providing a particular narrative of the creation of the Web, one that privileges the specific concerns of Berners-Lee over the vast amount of work done by both his predecessors and followers in the overall development.

To continue with the example of Berners-Lee’s USENET post, it is clear that the historical line from this post to Google, Facebook, and Wikipedia is lengthy and features other significant developments. Regardless, it is difficult to ignore the transformative effect of this post and Berners-Lee’s subsequent one outlining the project. And it is also important to note that the transformative effect of this moment stands independent of later commercial pushes for the World Wide Web. In truth, the World Wide Web as Berners-Lee launched it was fairly unimpressive, consisting only of a handful of sites. It would not be until December of that year that the Stanford Linear Accelerator Center would set up the first web server outside of Europe. The only existing graphical web browser, also named WorldWideWeb, ran only on the NeXT computing platform, which had near negligible consumer adoption. The project was, in other words, difficult to use by anyone but a handful of very technically-savy enthusiasts – who were, it should be noted, more or less the only people using the Internet in 1991.

Over time, however, the sell became easier. In 1993 the largest practical barrier to the World Wide Web’s influence was removed with the release of Mosaic, a graphical web browser that could run on Macs and PCs – thus opening the technology to more

---

2 The NeXT platform was uniquely suited to what Berners-Lee was doing, however. Berners-Lee notes the ease with which the development tools of the NeXT let him work, and also noted the existence of “a spare thirty-two-bit piece of memory, which the developers of NeXT had graciously left open for future use by tinkerers like me” (Berners-Lee and Fischetti 28). Of course, Berners-Lee also suggests that some of the motivation for getting a NeXT in the first place was the desire for what was, at the time, a sleek, shiny new toy.
users. Over the next few years consumer online services such as Prodigy, America Online, and Compuserve added Web functionality to their services, and, over time, the Web as it is today both came into existence and was successfully marketed to a mass audience. All of this was accompanied by enthusiastic rhetoric touting a techno-utopian future that it is easy to find fault with. But it is important to note that there really was an innovative and desirable product underneath the silliness of catchphrases like the “Information Superhighway” and the associated vision of a utopian information future, most notably framed in Bill Gates’s ephemeral best-seller *The Road Ahead*. The marketing may have gotten the word out, and developments like Mosaic and America Online may have made it accessible to many more users, but once people got their hands on the Web, it had a striking ability to sell itself. The marketing apparatus and cultural phenomena followed causally from Berners-Lee’s original post. This is what allows the post to serve its mythic role: at the heart of it, Berners-Lee had an idea that was compelling enough that people took the time to improve on the implementation.

On the other hand, it would be irresponsible to get too caught up in the glamour of the post and treat it as some sort of dramatic shift or epistemic break. Marshall McLuhan’s maxim that “the content of a medium is always another medium” (McLuhan 8) is instructive here. Despite its allure, Berners-Lee’s central invention wasn’t all that

---

3 Mosaic was not the first web browser to follow WorldWideWeb, nor even the first graphical one. An important intermediate step came when a text browser was implemented on CERN servers that could be accessed from any computer via Telnet. Beyond that, a number of browsers sprung up before Mosaic, all of which failed to gain mass acceptance for various reasons: Erwise, written at Helsinki University of Technology, ViolaWWW, written by Pei Wei, Tony Johnson’s Midas, and Samba for the Mac (Berners-Lee and Fischetti 55-65). Of the browsers from this era, the only one to continue to have any significant usage was Lynx, adapted from a hypertext browser at the University of Kansas. Lynx, however, was a text-based browser, and survives today primarily because it can be used on extremely low-power computers, and, more significantly, because it is better for screen-readers used by sightless users. Mosaic was the first browser to succeed in being multi-platform, easy to install, and graphical. Mosaic, it should be noted, was adapted into Netscape Navigator, which in turn became Firefox, which maintains a 20% market share in web browsers, second only to Internet Explorer.
new. In truth, his contribution was relatively narrow. The primary Internet protocol, IPv4, had been set up by DARPA in 1981. By 1991 the Internet already had significant uses, most notably e-mail and a very robust distributed discussion system in Usenet. Berners-Lee didn’t invent the concept of hypertext – the term was coined by Ted Nelson in the 1960s, and a clear line of influence can be traced back to Vannevar Bush’s 1945 landmark essay “As We May Think.” Berners-Lee’s contribution was to use existing Internet protocols to host hypertext documents and support their sharing and editing. And, notably, although both hypertext and the Internet existed before the World Wide Web, neither was anywhere close to a cultural phenomenon. The Internet was a computer network used primarily for military and academic purposes, and hypertext was a neat idea in data structuring that was familiar to computer geeks, but lacked any major implementations.

The questions, then, are: how the World Wide Web progressed from a linking of two significant but niche media technologies to a cultural institution that rivals television and film as the most important mass media paradigms of the 20th century? What was it that people saw in the initial concept that was so promising? And, more generally, how do media advance from embryonic forms based on individual, discrete technological innovations into large scale expressive paradigms whose influence extends over broad swaths of culture?

This is one of the central problems of media theory, before and after the digital age. There are a number of levels on which to approach such questions. The most obvious is a historical level, tracing technological and commercial developments and

4 Berners-Lee was, by his own admission, not entirely aware of this history – in particular he was unaware of Vannevar Bush when he made his initial design of the World Wide Web.
their implementations in widely-used forms. And indeed, numerous such histories of the Web, film, and other media have been offered. But such historical approaches have certain unsatisfying limitations. Cultural moves and marketing rhetoric can be tracked easily enough, but when one tries to look at the actual development of a medium as a viable paradigm one starts to disappear into a haze of subjective and shared mythology. In some cases one can get quite far back on some major points – Tim Berners-Lee’s original proposal for the World Wide Web, entitled simply “Information Management: A Proposal,” is preserved and he has written extensively on the circumstances of its conception. But such records are the exception, not the rule. For the most part, the particulars of individual design decisions and the contributions of others along the Web’s development render key steps in the medium’s evolution inaccessible. For instance, although his initial proposal survives, the predecessor hypertext program he wrote, called Enquire, has been lost. Similarly, much of the work of his collaborators at CERN and of other early developers of web browsers is far less well documented.

This problem has been noted by others. Lev Manovich has remarked with remorse on the absence of theorists “at the moment when the icons and buttons of multimedia were like wet paint on a just-completed painting, before they became universal conventions and this slipped into invisibility” (Manovich 7). And it is a theoretical-critically significant problem – it leaves a hole in the narrative of how something moves from an idea to a convention. But the commercial realities of creating successful technologies requires communication about how a piece of technology can move from inception to convention. This is the central problem of evangelism – how to, in the minds of someone who has not yet seen the light, get a basic concept to become
a paradigm. The answer settled on by the savvier media evangelists has been the act of
demonstration – that is, of showing a medium’s potential future usage.

Demos are not exclusive to new media. All media, in their ascendancy, go
through a period of demonstration. Film’s evolution was marked by numerous demos:
the Lumière shorts and The Jazz Singer are obvious cases. The main characteristic of
these texts is that, aside from their explicit expressive content, they are also self-
referential – they actively present their act of mediation as an argument for its appeal.
Some demos are interesting in their own right and for their expressive content. To
choose a recent example, Super Mario Brothers is without a doubt a demo of the
Nintendo Entertainment System, but it is also a classic and noteworthy video game in its
own right. Others are interesting purely for their demo content and have little to no
expressive content – Douglas Engelbart’s 1968 demo of the oNLine System, widely
known as “the mother of all demos,” but has basically no expressive content in the way I
mean here. Regardless, it is of tremendous historical import, as it includes (among other
innovations) the first public showing of a computer mouse. Still other demos are
interesting in spite of their expressive content – House of Wax is not a critically well-
regarded film (although it is far from reviled), but it remains very interesting as a demo
of the narrative and formal potential of 3-D film.

---

5 The question of what to use as a general term for “expressive works in any given medium” is a vexed
one. The concept is important enough to want a single term, but no clear choice presents itself. Rather
than create an unsatisfying neologism, I have opted to follow the trend within literary studies of using the
word “text” to refer to an increasingly broad category of objects, including ones that have few (or no)
textual components.

6 Indeed, the game is so culturally significant that nostalgia for it and the era of gaming it represents is, as
we will see in the fifth chapter, a fundamental part of Nintendo’s marketing of the Wii 20 years later.

7 As I will discuss in detail in my fourth chapter, which focuses on 3-D film, this can be said of almost all 3-
D films, as the medium is ultimately suitable only for this demonstration phase.
What defines the demo is not, then, the presence or absence of significant expressive content, but rather the presence of a sort of willful reflection in its technique. The demo, I propose, is characterized by a use of technology or method that shows off and announces itself as novel. The demo is thus not limited to the early days of a piece of technology. Color film had existed for decades when *The Wizard of Oz* was released, and yet the moment drab black and white Kansas gives way to the lush colors of Oz remains a clear demo of the imaginative potential of color film. Similarly, the 1980s revival of 3-D film (and, indeed, the ongoing revival) repeated the act of demonstration despite the prior popularity of the medium. The historical age of a medium provides little barrier to the act of demonstration: it would not be out of line to read *Pale Fire* as a demo of the novel some 800 years after it was invented. What is significant, in all of these cases, is a self-referential turn where the medium displays the conditions of its operation and reception.\(^8\)

Despite this, however, the demo seems most important in its role in the earliest days of a technology or medium, where it serves as part of the establishing of basic affordances of the invention. It is in this context that its peculiar power seems most arresting and most focused on the rhetoric of radical transformation. These early demos are the ones most concerned with the task of managing the transformation from technology to medial paradigm. The paradox of the demo – its vision of dramatic change and its simultaneous dependence on past forms – is also at its most vivid in these early exemplar texts. The work they need to do in order to show the viability of

\(^8\) Needless to say, I am not suggesting that all self-referential texts are demos. What is necessary is not merely self-referentiality, but a particularly formalist self-referentiality, where what is referred to is not merely the text, but the form of expression, which is foregrounded and made conspicuous in its potentiality.
their paradigm is more dramatic, given that the paradigm is not established. But part and parcel of that is the lack of reference points for the paradigm, requiring that the work be done primarily in the context of the paradigm that the demo is ostensibly rejecting.

In this respect, there are two important observations to make about the demo. The first is that the demo is about more than the marketing of commercial objects. That is not to say that commercial transactions are not a key part of the demo – the release of The Jazz Singer, for instance, was clearly about the sale of tickets to the film and of the Vitaphone systems needed to show the film in theaters. But it was also about the marketing of a new paradigm of cinema. The message of the film is, in part, that synchronized sound is a productive vision of what film is. This paradigm was inexorably tied to commercial concerns, but it is clear that there is markedly more to it than that. More strikingly, the paradigm seems to have existed as a goal of the film at least some extent against the intentions of the film’s producers – Jack Warner had gone on record a year before the film’s release declaring the technology doomed. () Thus to some extent the desire for use that that the demo must create is not merely a product of a marketing paratext of the demo. Rather, the desire is something that is constituted by the text (and, because of the self-referential nature of the text, by the medium) itself. This is not a new observation – as McLuhan observes, “the ‘message’ of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs” (McLuhan 8).

Closely related to this observation, however, is the fact that the demo elicits a desire – or a degree of desire – that it cannot possibly satisfy. The sort of formal display
of the demo typical of its modern forms occurs in an uneasy relationship with the content of the demo, such that the medial paradigm often seems to speak louder than the ostensible content. This is evident in Engelbart’s demo, where his example of a document consists simply of the word “WORD” written over and over again, reducing the paradigm in a literal sense to a formal system that displays only potential.

But, of course, the system Engelbart was demooming (from which sprang many of the conventions of “direct manipulation” user interfaces) was appealing not as a formal system but as a medium through which actual, usable content could be created, manipulated, and shared. The manipulation of meaningless strings of characters does not make a killer app. What is crucial about Engelbart’s demo is the degree to which the audience-as-user is invited to project future content and applications onto the form presented in the demo. This sense of futurity is crucial to the demo, which exists not for its own sake but for the sake of potential future work. But that future work, existing largely as a fantasy at the moment of demonstration, does not and never will correspond to actual processes. In reality, the demo is generally not showing a radical shift but a subtle, if significant, tweaking of existing methods and media. The new paradigm offered by the demo is fundamentally ensconced in and defined by the paradigm from which technologically descends.

In fact, in the demo phase of the paradigm the most genuine differences are often the hardest to discern. Tim-Berners Lee originally presented the World Wide Web as a way of usefully organizing and accessing the information generated by “complex evolving systems” (Berners-Lee “Information Management”). In practice, this does not seem to have been the primary appeal of the invention in its subsequent uses. Indeed,
the best method for what Berners-Lee wanted turned out to be the wiki, a later development that grew out of the World Wide Web. The Web’s primary appeal turned out to be its ability to provide ready access to, and broadcast of, a heterogeneous set of systems. Berners-Lee’s initial proposal provides for heterogeneity, but he conceives of this on an IT level – essentially, making sure that the data can be accessed by different computer systems, and therefore by a select group of expert users with specialized needs. But in the end, the Web as designed was primarily a project about, as Berners-Lee described it, “the management of general information about accelerators and experiments at CERN” (Berners-Lee). Although his proposal anticipates a future point where this problem will occur throughout the world, the proposal he maps out is strikingly different from most uses of and descriptions of the Web as it exists today.

In practice, of course, the primary appeal of the World Wide Web was precisely its expansion beyond CERN to include radically heterogeneous types of information – news stories, contact information for old friends, pornographic images, reference materials, etc. – and its intersections with existing broadcast paradigms of print publishing, television, and film. This heterogeneity, however, could not possibly exist until after it had been successfully demoed and had taken root as a genuinely practicable world wide phenomenon. Early demos of the Web’s potential, therefore, had

---

9 It is interesting to note, however, that the wiki shares more than a slight resemblance to the original vision of the Web that Berners-Lee proposed. In his view, the browser was intended to be integrated with an editor so that reading and writing were twinned activities. But this feature ended up being basically distilled out of the Web by others. Berners-Lee notes that he “was amazed by this near universal disdain for creating an editor… most were more excited about putting fancy display features into the browsers – multimedia, different colors and fonts – which took much less work and created much more buzz among users” (Berners-Lee and Fischetti 70-71). This creates an interesting situation which is illustrative of the strange ways that media develop – the technology that Berners-Lee was endeavoring to create, it seems, required the technology he actually created instead to take hold before it could develop.

10 This problem of the disjunction between manifestos and actual medial invention will be a major topic of the third chapter on Scott McCloud’s proposal of the infinite canvas as the future of comics.
an uneasy relationship with its actual potential.\textsuperscript{11} This future potential is always displaced in the demo, however; we can find it as a distant glint that catches the eye and draws the viewer towards newly-imagined – or as-yet-unimagined possibilities for its use. This is the central feature of the demo – what I call its \textit{shininess}.

Shininess is an allure that is at once broad-reaching and facile. It is, at its core, an allure of surfaces, focused on technical and formal properties that, like Engelbart’s new kind of document consisting only of repetitions of “Word,” show only possibility. The surface of the shiny object reflects attempts to probe it, returning only the desires of the gaze itself. This reflectiveness tells us nothing about the actual depth of the object – a cheap chrome veneer is as reflective as the surface of the ocean. But on the other hand, the reflectiveness suggests a \textit{potential} for limitless depth. That this potential may never, in fact, be achieved does not make it any less appealing; in truth, it makes it all the more so. It is not enough for a medium to be shiny – in the end, the superficial allure must give way to some kind of depth in order for a new medium to become an established paradigm. But on the other hand, it is necessary, in demonstrations of a new medium, to engage in this sort of proleptic gesture, disingenuous as it may be. In the end, although shininess is an allure of surfaces, it remains a \textit{potentially} deep allure. Indeed, it is the depth of allure and the proleptic nature of the object of desire that makes the aesthetic of shininess so central to an understanding of progress. Because shininess is focused on a vague and elusive future promise, but is still evoked not by

\textsuperscript{11} To be fair, Berners-Lee, in \textit{Weaving the Web}, describes the efforts he made to navigate between his “larger vision of creating a global system” and the need to have a “good, visible reason to be doing this at CERN” (Berners-Lee and Fischetti 31). That said, \textit{Weaving the Web} was written in 1999, well after much of the Web’s future trajectory had become clear. In any case, the documents available from the Web’s creation make it clear that the technology was designed primarily with CERN’s internal needs at heart, and that its outside success was a secondary concern.
idle dreaming but by present, tangible technology, it can be viewed as the fundamental aesthetic of technological progress.

This dual nature that makes shininess important rests on the two paradoxical aspects of the demo that I outlined above – its promise of a dramatic paradigm shift, and its fundamental dependence on, and recapitulation of, prior medial forms. Understanding the demo, then, requires a thorough understanding of both of these aspects. Thankfully, existing media theory is more than suited to each task. The notion of media’s reliance on past forms is, as I’ve indicated, established by McLuhan, while the notion of the paradigm shift is established by Thomas Kuhn in *The Structure of Scientific Revolutions*. It would be prudent, then, to look at both of these accounts.

It may seem at first counter-intuitive to use *The Structure of Scientific Revolutions* as a basis for media theory, since the book is not ostensibly about medial change. However Kuhn’s central idea of the paradigm translates well to media studies. Kuhn proposes the paradigm as a way of dealing with the problem of identifying the rules and principles that define and sustain a specific scientific practice. He notes that many of these rules are unspoken and impossible to pin down precisely. As a result he proposes the idea of a paradigm, which is “prior to, more binding, and more complete than any set of rules” (Kuhn 46). The paradigm serves as a necessary framework that defines the institutional scope of what science can do – defining in particular what problems are set forth for solving and what assumptions are made about these problems.

The analogy between a scientific paradigm and a medial paradigm can be made with surprising smoothness. Kuhn, in fact, paves the way to this by establishing the
paradigm initially in terms of Wittgenstein’s theory of language where concepts are determined by “a network of overlapping and crisscrossing resemblances” (Kuhn 45). Were Kuhn writing later than 1962 a number of other analogies might also have presented themselves – Stanley Fish’s interpretive communities, for instance, or the “insistences” of Jacques Lacan’s Symbolic order. Though the products of disparate theories, all of these concepts share a substantial common ground, in that they present theories of constraining, but incompletely-codified systems of discourse that are necessary preconditions for any expressive act or thought. To give media a similar priority seems uncontroversial – after all, media are the material frameworks of expression. To suggest that the emergence of, say, photography, or the World Wide Web brought about fundamental shifts not only in social structures in which those technologies were used but also in the very form and concept of communication ought not be controversial.

What is promising about the place of the Kuhnian paradigm in such accounts of fundamentally-redefined knowledge structures is that it was developed specifically to approach the problem of change in these structures. That is not to say that the other theories do not have room for the possibility of change – Fish, for instance, admits that “Interpretive communities grow larger and decline, and individuals move from one to another” (Fish 182). But Fish does not expand at length on the practical reasons for such changes, or how they are institutionalized in new conventions of knowledge – in no small part because that is not the problem he is trying to solve in “Interpreting the Variorum.” Kuhn’s concept of the paradigm seems to me unique in that the specific problem it is trying to solve is the problem of change.
Setting aside specific mechanics of the paradigm shift for now, it is important to realize is that Kuhn endows the paradigm shift with a striking degree of power and allure. Indeed, it is this aspect of Kuhn’s theory that has proved the most enduringly controversial. In one of his most memorable phrasings of it, he looks at Lavoisier’s discovery of oxygen and says that “after discovering oxygen Lavoisier worked in a different world” (Kuhn 118). Understandably, this statement has been widely criticized. Peter Godfrey-Smith, in a particularly memorable denunciation, said of it that “it would have been better if he had left this chapter in a taxi, in one of those famous mistakes that authors are prone to” (Godfrey-Smith 96). Taken straightforwardly, Kuhn seems to be advancing the claim that shifts in scientific thought effect genuine, perhaps metaphysical, changes on the world of the scientist. Such a claim is troubling on the face of it. In practice, however (and Godfrey-Smith admits as much) Kuhn’s radicalism is more tempered than his description of Lavoisier’s “different” world suggests.

The primary driving force behind this restraint comes from the particular nature of a paradigm shift. It is here that the priority of paradigms is most crucial to understanding Kuhn’s argument. If a paradigm is understood with its full epistemological weight – as a precondition for subsequent scientific thought within the domain in which the paradigm is applied – than a shift in a paradigm must be given tremendous force. Kuhn repeatedly stresses that both “Aristotle and Galileo looked at swinging stones,” and that what changed from one to the other is not the stones themselves but the condition of sight and resulting interpretation of sensory data (Kuhn 121). Kuhn even admits the impossibility of fully abandoning the idea that sensory experience is “fixed and neutral” (Kuhn 126), further stressing his commitment to a sort of Kantian differentiation between
the objects themselves (swinging stones or the capture gas) and the phenomenological experience of those objects, via the particular subjectivity of an observing scientist. (Whereby they become either constrained fall or a pendulum, either dephlogisticated air or oxygen.) It is here in particular that the similarity between the paradigm and Lacan’s theory of the Symbolic’s constraint of the speaking subject’s understanding of her world is useful, as it lets us distinguish rigorously between the objects belonging to the register of the Real, which are beyond the limits of expression and comprehension, and the objects as experienced and imagined by the subject via the mediation of the Symbolic paradigm. Thus the deep metaphysical radicalism of Kuhn’s dramatic statement is resolved: it is not that the discovery of oxygen physically changed the real air or some other attribute of the actual world in which the chemist lived; rather it is that the discovery fundamentally altered Lavoisier’s perceptive and interpretive faculties, and the discursive universe, by which he understood what air is.

Though this claim is less metaphysically radical than the one Godfrey-Smith decries, its consequences are, in practical terms, equally dramatic. Even if Lavoisier did not physically alter the nature of air he still did, for all practical purposes, gaze upon the world with new eyes that saw radically different things than before. The allure of this shift in perception cannot be overstated, as it is fundamentally a shiny allure, in the way I have used that term. Lavoisier may have gazed upon a new world, but at the moment of his first look he had no way of knowing what the actual consequences of his discovery would be. He did not gaze at that moment upon a fully modern world. He had no knowledge of the centuries of productive development of chemistry as a formal discipline that would follow his discovery. He knew only that what he saw was new and
that some aspect of it brimmed with potential. The pragmatic value of his discovery would have been unclear – any excitement it carried came only from the fact that the potential for such value could be tremendous.

McLuhan’s theory of media, at least on the surface, exemplifies an opposite set of concerns to Kuhn’s. In contrast to Kuhn’s striking image of Lavoisier gazing upon a new world, one of McLuhan’s most iconic moments is his declaration that the content of a medium is always another medium. “The content of writing,” he elaborates, “is speech, just as the written word is the content of print, and print is the content of the telegraph” (McLuhan 8). This claim is, at its core, eminently sensible – the development of the medium of print did not simply occur as an untethered, transformative moment in history, but as a specific and considered development that responded to particular shortcomings and needs in existing media of written and spoken communication.

McLuhan expands this idea a few pages later, describing “that great pattern of being that reveals new and opposite forms just as the earlier forms reach their peak performance” (McLuhan 12).

McLuhan’s choice of the word “reveals” here is telling. He clearly treats technological development as something that follows and uncovers existing paradigms, rather than something that stems, ex nihilo, from an entirely new human creation. This is made clear by the metaphor he uses for the revelation of new forms, the appearance of visible sound waves as an aircraft reaches supersonic speeds. McLuhan, for the most part, carefully avoids the word “invention,” and even more carefully avoids phrasing invention as a verb or a process. Medial forms are in this respect found, not created. The implications of this claim are significant because they serve to heavily de-
emphasize the sort of radical change that is memorably expressed in Kuhn. Indeed, McLuhan’s position on this matter should be taken as a radical opposite to Kuhn’s, particularly in his phrase “that great pattern of being,” which clearly establishes the formal shifts he describes as taking place on a metaphysical rather than sociological or even psychological level. It is not that McLuhan denies the possibility of change over time in media – this is clear, since he does talk about the idea of newness. But it is clear that this newness is not a radical and fundamental shift in perception but the uncovering of a new facet of an existing metaphysical structure of human consciousness.

For McLuhan this metaphysical structure is inexorably tied to physical and neurological conditions of human thought and agency. It is helpful here to quote at length to show the character of his analysis:

For example, in the case of the wheel as an extension of the foot, the pressure of new burdens resulting from the acceleration of change by written and monetary media was the immediate occasion of the extension or “amputation” of this function from our bodies. The wheel as a counter-irritant to increased burdens, in turn, brings about a new intensity of action by its amplification of a separate or isolated function (the feet in rotation). Such amplification is bearable by the nervous system only through numbing or blocking of perception. This is the sense of the Narcissus myth. The young man’s image is a self-amputation or extension induced by irritating pressures. As counter-irritant, the image produces a generalized numbness or shock that declines recognition. Self-amputation forbids self-recognition. (McLuhan 42-43)

The scope of this analysis is breathtaking – McLuhan is relating large scale social change (“the acceleration of change by written and monetary media”) with deep structures of the psyche (“self-recognition”). The psyche here, however, must be understood not as a structure of human being understood through observation as it is for Kuhn, but rather as a philosophical view of being in the tradition of Hegel and Heidegger. This being is further connected to an explicitly neurological and physical
embodiment, and to a para-bodily materiality in the form of media such as the wheel.
The (human) self, embodied via a central nervous system, is materially affected by that system’s medial extension, in a way that both determines and is determined by the social framework in which the self and media are enmeshed. Medial development (the shift from pedestrianism to wheeled travel) occurs not as a shift to an extrinsic paradigm but rather as a reconfiguration of elements in an existing network, or, more accurately, as the discovery of a configuration of elements that was always possible before within that network, were a new form of locomotion to have been devised.

McLuhan’s famous aphorism that the content of a medium is always another medium must be read in this context, and the nature of this claim underscores a fundamental difference between Kuhn and McLuhan. For Kuhn the paradigm is necessary to – and in some ways constitutive of – observation, but the paradigm still distinct from the objects that are observed. For McLuhan, however, there is no possibility of an external structure such as the paradigm. Because medial change is a reconfiguration of an existing network that structure cannot be conceptualized except in terms of a previously known configuration of the network – that is, another, a prior medium. This accounts for the deeply atavistic streak within McLuhan – he argues explicitly that the changes brought about by media are, in a fundamental sense, not new changes; looking at the way in which Shakespeare, for instance, can easily be read as talking about TV (McLuhan 9).

Intriguingly, however, despite the deep atavism of McLuhan’s system, he retains a vision of technological progress as a radical effector of change that is strikingly similar in some respects to Kuhn’s vision of the revolutionary paradigm shift. While
technological shifts may be, in McLuhan, limited in their formal content, their social effects remain sweeping. *Understanding Media* is full of wonderfully sweeping statements about media and society that seemingly only McLuhan could get away with:

“The immediate prospect for literate, fragmented Western man encountering the electric implosion within his own culture is his steady and rapid transformation into a complex and depth-structured person emotionally aware of his total interdependence with the rest of human society” (McLuhan 50-51). For all the conservativism of McLuhan’s model of a prospect of medial innovation in any genuine sense, he here (and indeed throughout the book – quotes like this are on nearly every page) demonstrates a profound and moving view of media’s transformative effects. Even the smallest phrase – “the electric implosion” – is vast in its scope. McLuhan clearly believes that reconfigurations of media experiences lead to seismic shifts in the human experience of the world. That these shifts are inevitable reconfigurations and not radical new forms does not negate the sweeping profundity of their effects. By extension the shiny allure of a new configuration can be seen as embodied in a particular medium, by dint of its promised transformation of experience.

On the other hand, it would be equally misleading to suggest that Kuhn’s vision of the paradigm shift is a theory of a radical and fundamental break with the past. Quite the contrary, Kuhn devotes a good deal of space in his text to carefully establishing that a scientific revolution is not a radical break but a subtle and extended transition. Indeed, he bluntly states that “since new paradigms are born from old ones, they ordinarily incorporate much of the vocabulary and apparatus, both conceptual and manipulative, that the traditional paradigm had previously employed” (Kuhn 149). But this is just a
restatement of a point he makes even as he’s arguing for the radical potency of the paradigm shift, where he admits that the transformative flash of illumination necessarily depends “upon the experience, both anomalous and congruent, gained with the old paradigm,” and establishes that these intuitions “gather up large portions of that experience and transform them” (Kuhn 123). Thus Kuhn, even as he embraces the idea of moments of genuine and substantial change in discourse, views these changes as much in terms of atavistic throwbacks to the very systems they displace as radical shifts. The new world that Lavoisier gazes upon is, in the end, alluring not for its strangeness, but for the visible and ever-present links to the world it displaces. And indeed, it is the slow, institutional forgetting of the significance (both in the sense of importance and of serving as signifiers) of those links that eventually normalizes the new world and removes its strangeness.

What we see here, then, is that the central paradox of the demo – its simultaneous reliance on a rhetoric of radical and utopian technical shift and on an atavistic rhetoric of retrospection – is a more fundamental knot than it first appears. Neither rhetoric, in practice, operates in a pure state. Rather, each rhetoric is fundamentally intertwined with the other. In truth, their positions are interdependent; I could have framed the debate in reverse terms, with McLuhan initially standing as the one with radical views of the transformation of media, and Kuhn as the atavist. McLuhan’s atavism, upon close inspection, seems like a necessary move to formalize the radical effects he sees stemming from media and to establish a consistent field in which these effects can be conceptualized (i.e., the materiality of the body). Similarly, Kuhn’s radical image of Lavoisier gazing upon a new world can be read less as the start of the
project and more as an almost necessary retreat to deal with the deep (if not fundamental) gaps that open between two historically consecutive paradigms despite their obvious similarities.

Despite this intertwining, however, the apparently contradictory nature of these two rhetorics has too often been taken as a given by contemporary media theory, and too many theorists have found themselves allied to either atavism or radicalism. With these alliances come certain methodological approaches as well. The radicals stand out sharply for their dependence on philosophical approaches to media studies. This is a natural result of their approach – if media dramatically transform and shift fundamental modes of perception and thought, a high level theory of epistemology is a required in order to understand them. Atavistic approaches, on the other hand, tend to prefer more technical, empirical approaches. Again, this is sensible, since if media are taken to be a fundamentally backward-looking phenomenon, the materiality of media is necessarily going to be the field over which such changes are tracked.

Neither of these approaches are flawed as such. For instance, N. Katherine Hayles is, to my mind, engaged in an essentially radicalist study when inquiring how medial advances determine a posthuman condition of knowledge. It would be madness to consider this a flaw in How We Became Posthuman. Similarly, Manovich’s excellent The Language of New Media is essentially atavistic in its pursuit of deep links between the development of new media and the development of avant-garde film. These books, however, seem to me significant and useful not because of their commitments to their radical or atavistic projects, but in spite of them. What makes Manovich’s book much more than a catalogue of similarities between film and new media is his devotion to
linking these similarities to the rich, established language of film theory. Similarly, Hayles is at her best when she is most attentive to material and technical concerns of media.

In cases of lesser theorists, however, the problems of this two-school approach are obvious. The most flagrant offenders in this regard can be found in the tiresome game studies debates about narratology and ludology. The narratological position, championed most vividly by Janet Murray, contends that existing digital technologies such as games are an attempt to build “a virtual reality that is as deep and rich as reality itself,” (Murray 28) thus making existing technology mere “harbingers” of the more important future technologies. Ludologists like Espen Aarseth, on the other hand, are firmly invested in rejecting any narrative theoretical apparatus, declaring that “the value system of a game is strictly internal, determined unambivalently by the rules,” (Aarseth 48) leading to discussions that focus purely on technical, empirical elements of game studies. Though each side possesses a knack for bracing polemics, these tend to mask the fundamental poverty of insight caused by dogmatic and doctrinal embrace of radicalism and atavism to the exclusion of the alternative.

The attempts to divide radicalism and atavism into discrete schools with discrete approaches are, of course, flimsy generalizations. In truth few works of any value fall unproblematically into one camp or the other, engaging entirely in technical specifications or sweeping narratives of social change. This should not be surprising – after all, it is McLuhan who grounds his atavistic system on a Hegelian conception of being, and Kuhn whose radical system is in the end an analysis of empirical and institutional scientific practices. Regardless, the two approaches stand well, I think, as
opposing ends of a continuum on which most work within media studies can be placed. Though the problems of occupying either extreme of this continuum are obvious, the mere empirical fact of the two approaches’ inevitable intertwining throughout media studies does not provide a persuasive account of may constitute an actual reconciliation of the two. They are, in short, uneasily reconciled in practice, but not in theory – especially in terms of the fundamental question of how medial change actually occurs in the technical imaginary.

The problem of reconciling atavism and radicalism is a fundamental one of modern media theory, and most particularly of new media theory. Complicating the problem is that the solution must remain rigorous in two distinct fields – it must contain both a theoretical engagement in the idea of large scale social shift in order to engage most usefully with radicalism, but must also remain fundamentally technical and empirical to usefully engage with atavism. This balancing act is in no way impossible; as I have already said, the best media theorists engage with it. But it is non-obvious how to go about this in a way that is rigorously committed to both approaches.

Thus far the most successful approach is offered by Alan Liu’s The Laws of Cool. Liu traces the cultural function of what he calls knowledge work – which is to say, the primary tasks of the contemporary digital-age worker. His specific target is to understand the culture of “coolness” that, in his view, defines the aesthetic and values of contemporary knowledge work. This project is, in practice, intimately tied to high-level theoretical work, culminating in the development of “a viral aesthetics that at once mimes and critiques knowledge work,” (Liu 237)which he explicitly ties to Deleuze and Guattari. But this viral aesthetics is developed through the development of the dominant
paradigm that viral aesthetics infects – the paradigm Liu calls cool. Cool is developed over a hundred and thirty pages in rigorous detail. In these pages, Liu offers thorough historical research of the development of the World Wide Web as a commodity, tracing the Netscape corporation’s indexing of “cool” web pages, looking at specific web pages of the mid-90s including such oddities as Paul’s (Extra) Refrigerator, which offers live updates of the temperature, lighting, door position, and general status of the eponymous appliance (Liu 189). This historical overview is linked with a thorough study of modernist graphic design and its dominance in allegedly “cool” websites, as well as a thorough discussion of the development of different HTML tags. In other words, Liu produces a study of the cultural life of knowledge work that is firmly enmeshed in both atavistic and radicalist approaches; moreover he does so without contradiction.

However, Liu does not seem to me to be usable as a direct model for understanding the demo. Liu’s successful hybrid paradigm arises largely because, by focusing on the relationship between culture and a form of labor, he situates himself in a Marxist tradition that has long had a specifically rigorous theory of the relationship between material conditions and broad cultural shifts as developed by thinkers like Gramsci and Althusser. This works very well for Liu, but has a major limitation for study of the demo – the focus on cultural shift necessarily moves the focus to a later point in the development of a medial technology than that in which I am interested. Liu provides an excellent framework for theorizing what is going on as, to use our shared example of the World Wide Web, Mosaic is released and Web browsing filters towards the masses as it is integrated into existing services like America Online, and how that technology alters the cultural context it is released into. I am interested in an earlier moment than is
Liu – the question of the demo is not “how does this technology change the world,” but “how does this technology develop its initial foothold in the world?” What made the World Wide Web become the central feature of AOL instead of their equally ambitious chat room technology (which persists, but is in no way the sort of dominant paradigm that the Web has become)?

This is not an unrelated to Liu’s question of how a given technology and aesthetic shapes the cultural and economic desires and aspirations of a particular social class. Particularly important to both questions is the aesthetic of these new technologies – what Liu describes as coolness. And Liu’s description of this aesthetic as essentially modernist strikes me as very useful. When Liu describes the appeal of Paul’s (Extra) Refrigerator as being “because it literalizes the way in which a cool page converts information into something that, through nothing but information, is finally as impervious to the transmission of information as the white door of a refrigerator” (Liu 189) comes a conclusion that is very similar to my observations about the superficial and thus deep appeal of shininess. But in the end, Liu’s project is fundamentally a cultural project, whereas mine is semiotic – I am interested in the development of the communicative frame itself. Regardless, Liu’s success in merging radicalist and atavistic approaches is a model of the approach I aspire towards here. I am just interested in a more generally applicable answer to the question of how atavistic and utopian aspects of media can co-exist.

There is a more significant work to consider in this context – Jay David Bolter and Richard Grusin’s Remediation. Remediation is particularly relevant in this context because it explicitly takes up the central concern of the demo, namely the relationship
between a new medium and older ones. They coin the eponymous word “remediation”
to describe this relationship, defining it as “the representation of one medium in another”
(Bolter and Grusin 45). They distinguish this from the phenomenon of adaptation –
where, for example, a book is adapted into a film. What they describe is, in their words,
the quoting of a medium itself in another medium – for example, the ways in which
Microsoft Encarta appropriates conventions and framings of traditional encyclopedias
into digital form.

Remediation, in Bolter and Grusin’s eyes, is the product of two contrasting logics:
immediacy, and hypermediacy. These map fairly directly to the radical and atavistic
rhetorics I previously discussed. The former of these, immediacy, is the familiar utopian
image of the transparent and unencumbered representation of reality, presented,
initially in Bolter and Grusin’s formulation, in terms of virtual reality. The goal of
immediacy is two-fold – first is an attempt to suppress the material trappings of
mediation such that it “erases itself so that the user is no longer aware of confronting a
medium” ((Bolter and Grusin 24). This lack of awareness leads directly to the second
aspect of immediacy, that the medium becomes equivalent or indistinguishable from
real experience – as they put it, “the medium itself should disappear and leave us in the
presence of the thing represented” (Bolter and Grusin 6).

Contrasting with this is hypermediacy, in which the medium becomes discernible,
and the interface is actively viewed and interacted with in a fundamentally atavistic
fashion. Their primary example of this is the layout of juxtaposed and overlapping
windows that constitutes the basic appearance of the modern GUI, though the extend it
back to historical “fascination for mirrors, windows, maps, paintings within paintings, and
written and read epistles” (Bolter and Grusin 36). This explicit engagement in the materiality of the medium is taken to itself be pleasurable – a pleasure that is explicitly linked in their argument to the Modernist shift in pictorial and narrative arts. This turn to the medium’s visible presence is an atavistic pleasure inasmuch as it involves engagement with the technology as opposed to an embrace of its expressive possibility.

In Bolter and Grusin, the process of remediation is based on the interplay of these two concepts. In remediation, a medium uses a hypermediated presentation of multiple medial forms in order to show “why one medium might offer a more appropriate representation than another,” i.e., why one medium is more immediate (Bolter and Grusin 44). On the surface, this seems like it might adequately addresses the problem of the demo. After all, it accounts both for the atavistic tendencies of the demo and for its utopian drive towards a novel future.

But upon closer inspection, Bolter and Grusin’s explanation proves deeply unsatisfying. The heart of this problem lies in their conception of immediacy. Although they are aware of the problems of the concept, and refer to the “utterly naïve or magical conviction that the representation is the same thing as what it represents,” they do little to avoid this pitfall in their own argument. Instead, they defend themselves on the grounds that “computer graphics experts, computer users, and the vast audiences for popular film and television continue to assume that unmediated presentation is the ultimate goal of visual representation” (Bolter and Grusin 30). That is to say, while immediacy may not actually work in a seamless fashion, the fantasy of its operation is sufficiently a part of the cultural rhetoric of mediation that it must be taken seriously.
Although Bolter and Grusin are right to recognize the social prevalence of the logic of immediacy, in the end they do not compellingly distinguish between how media actually function on a technological and material level, and the terms of the social and commercial rhetoric and paratext that enframes media with an eye towards immediatist aims. Although the idea that these two are inexorably linked is central to my argument, it is important to avoid confusing social effects (i.e., the rhetoric of immediacy) with the actual workings of the medium. Bolter and Grusin further muddy this issue by taking the social phenomenon of immediacy as evidence for its actually existing in the medium when they return to the familiar myth of the early audiences of the Lumière films panicking in fear that the filmed train was a real train that threatened their lives. Bolter and Grusin explain that “the audience members knew at one level that the film of a train was not really a train, and yet they marveled at the discrepancy between what they knew and what their eyes told them… there was a sense in which they believed in the reality of the image” (Bolter and Grusin 30-31). That is, while the conviction that representation and thing are equivalent is magical and naïve, somehow this naïvete (which they consign to scare quotes shortly thereafter) is present in a secret and unexplained form within the media.  

This claim is justified simply because people evince a desire for immediacy. Thus in place of the magic and naïve believe in the equivalence of signifier and signified, Bolter and Grusin substitute the magic and naïve belief that a fantasy of a thing is equivalent to the thing’s actually exerting influence on real media practices. Centuries of theorization and wishing for immediacy in no way amounts to evidence of the presence of immediacy in the actual media subject to

---

12 The myth of panic at the Lumière train short is an unusually important instance of the mythology of the demo, and one that I will treat in more detail in chapter four.
remediation. If anything, such a long-standing fantasy of immediacy – and the failure to achieve it – ought be taken as clear evidence that there is something deeply wrong with immediacy as a concept. Instead, however, Bolter and Grusin treat remediation as a process of reformation, where media proceed ever onwards towards immediate experience.

To be fair, Bolter and Grusin seem aware that this tendency is problematic, devoting much of their third chapter to the problems of immediacy. They spend this chapter attempting to find some theoretical apparatus that allows for the simultaneous presence and impossibility of it. They end by attempting to frame remediation in terms of the film studies debate on the male gaze, allying immediacy with the male gaze, and hypermediacy as being fundamentally deviant and multi-valiant. In the last paragraph, they turn to Judith Butler. As they put it, Butler argues “that heterosexuality itself depends on homosexuality for its cultural meaning. While the socially accepted practice of heterosexuality seeks to exclude other sexual practices as deviant, it is precisely this exclusion that enables heterosexuality to define itself as normal and normative.” From this, they conclude that “As the sum of all unnatural modes of representation, hypermediacy can then be used to justify the immediacy of linear perspective. It would be for this reason that hypermediacy always reemerges in every era, no matter how rigorously technologies of transparency may try to exclude it. Transparency needs hypermediacy” (Bolter and Grusin 84).

This is a staggering passage. Do Bolter and Grusin really mean to equate immediacy with the (repressive) discourse of heterosexuality, and treat hypermediacy as a (usefully oppressed) discourse through which immediacy gains its legitimacy? And
furthermore, do they really intend to link this newly repressive structure of remediation to the progress narrative of an endless march towards immediacy? Even if the final and ultimate legitimization of immediacy is, as they suggest, impossible, it is a shocking claim to suggest that any sort of continual motion toward this goal is a matter of reform and progress, given the comparison.

I have no doubt that Bolter and Grusin would resist such a characterization of their argument. And, to be clear, I am not accusing them, implicitly or explicitly, of embracing the repressive discourse of heteronormativity. Rather, I am pointing to Remediation as a cautionary tale about the dangers of taking the idea of immediacy to be something that is actually experienced in any way, shape, or form by users a given medium. This is an easy trap to fall into, given the degree to which a utopian rhetoric of immediacy is prevalent in marketing and media theory. But, as I said earlier, the existence of a desire for something cannot be taken as evidence that the thing can have actual effects on experience. In fact, it is much more productive to treat immediacy not as something that actually happens in media, but as a particular fantasy and desire constituted by the description and reception of media.

Bolter and Grusin come close to this realization when they discuss the purported realism of photography, noting that the belief in the immediacy of photography comes from “the belief in some necessary contact point between the medium and what it represents. For those who believe in the immediacy of photography, from Talbot to Bazin to Barthes, the contact point is the light that is reflected from the objects on to the film” (Bolter and Grusin 30). But in this moment, they are just re-constituting a sort of Benjaminian aura, where the film gains authenticity because of its proximity to a
mythical original hand. Aura, however, cannot readily be taken as an actual thing that is in a material object – rather, it’s a quasi-mystical experience that, as Benjamin puts it, “is never entirely separated from its ritual function” (Benjamin 795-96). The major medial developments that Bolter and Grusin identify as immediate – photography and film – are the developments that Benjamin opposes to this mystical experience, saying that this ritual value is replaced with “the exhibition value of the work” (Benjamin 797).

Bolter and Grusin bypass this schism in their own account of Benjamin, suggesting that Benjamin represents a sort of hedge between immediacy and hypermediacy. On the one hand, they say, “Benjamin seems to be suggesting that mechanical reproduction is responding to and even satisfying a desire for transparent immediacy – that removing the aura makes the work of art formally less mediated and psychologically more immediate. On the other hand, Benjamin’s mechanical reproduction also seems to evoke a fascination with media” (Bolter and Grusin 74). It is a valid point inasmuch as Benjamin does not, it is true, slot straightforwardly into either of the categories of immediacy and hypermediacy. But it is, in the end, more revealing of their own blind spot regarding immediacy: they treat it both as a quasi-mystical experience and as a transparent experience – a further consequence of their failure to distinguish between fantasies of immediacy (which are, indeed, quasi-mystical) and any actual process of reception (which is not mystical except inasmuch as it pretends to engage with the fantasy).

If we treat immediacy not as something that happens, but as, à la Lacan, a sort of longing for the object of desire that necessarily cannot be granted because of a fundamental and irreconciliable split between representation and object then the
situation becomes clearer. Immediacy, taken as a fantasy that we enjoy despite knowing that it cannot be fulfilled, makes a lot more sense. The pleasure in “immediacy” that can be taken is not a sense of wonder at how, for example, the train defies the audience’s senses. Rather, the thrill of the Lumière short is a sort of knowing pretending – a willingness to pretend that the pleasure of seeing something previously unimaginable is equivalent to the unobtainable pleasure of immediacy. This pleasure is comparable to that described by Tom Gunning as “an aesthetic of astonishment,” in which “the spectator does not get lost in a fictional world and its drama, but remains aware of the act of looking, the excitement of curiosity and its fulfillment” (Gunning 869). Thus the relationship between “immediacy” and hypermediacy is not, as Bolter and Grusin would have it, a case of one being impressed into the service of another, but a far more subtle relationship in which one serves as an imagined version of the other.

In this view, instead of having to actually advance some master narrative of medial progress, a new piece of media needs only to present a sense of impressive wonder at something that is presented in the demo as new. But it is here that the peculiar characteristic of the demo comes in. Medial technology is not simply a piece of art designed to create a sense of mystical wonder. It is also a practical invention. The World Wide Web and the oNLine System were not simply meant to impress – they were meant to be solutions to actual problems that could be implemented by people. Thus their demos cannot simply present a sense of amazement at the new; they also have to present a convincing case that the means shown are productive. That is to say, the demo needs not only to show something new, it also has to promise that this new thing is a useful paradigm for future representations and conditions of use. By doing so it
sustains the sense of wonder at the new, suggesting that the pleasure of the pseudo-
immediate can be sustained.

Thus the demo becomes a site of contact between the radical and atavistic
visions of technological change. On the one hand is the role the demo plays in a
narrative of forward progress. That this narrative is primarily a fantasy as opposed to an
actual progression towards some utopian ideal does not remove its importance to
understanding what happens in the demo. But on the other hand, the demo is also a
deeply technological event – bound up in an explicit presentations of the capabilities
(and by extension the limitations) of technology. It is a case where it is possible both to
look at the narrativisation of technological developments and at how technological
developments directly build and establish a narrative. Both of these are fundamentally
linked by the aesthetic of shininess, an aesthetic that becomes the driving agent for a
conceptualization of change and progress. The demo is the closest thing available to an
actual site at which the entanglement of progress and development in media can be
looked at and discussed without falling into the trap of becoming over-committed to a
radicalist or atavistic point of view.

It would be at this point prudent to turn to actual mechanics of the demo. The act
of demonstration is a peculiar one. As I have already suggested, it is fundamentally
disingenuous, in that it proffers a quality of shininess via which the viewer of the demo
projects an imagined future action or actions. This sort of empty and thus seemingly
infinite extensibility, however, may never actually be delivered on. Closely related to its
disingenuous allure is its proleptic nature – that is, it does not proffer to provide the full
extent of what can be done – it merely points forward to the future existence of various
representations. Thirdly, and crucially, the demo is not merely a representation of the medium, but a canny enactment of its structure. This idea is closely related to Bolter and Grusin’s idea of hypermediacy, in that the medium actively turns its eye upon itself, but it is more radical than that. It is best understood as a sort of speech act – what we might call a medial act. With all of this in mind, then, we should turn to the particular mechanics of how this disingenuous, proleptic medial act actually works.
Figure 1-1. Douglas Englebart’s demonstration of the Oniline system. [In this demonstration, a document is represented not by actual content but by the word “WORD” repeated over and over again.]
CHAPTER 2
DUPLICITY IS THE OTHER OF INVENTION

In the course of this chapter, I will map out more rigorously the nature of shininess, and how the demo uses it to create conditions under which a conjectural user desires to make use of the demoed object. I will do this primarily by focusing on the disingenuous nature of the demo – the way in which it offers a promise that is clearly may not be realized. Over the course of the chapter, I will develop a theory of this specific disingenuousness of the demo, beginning with the simple hypothesis that it is a somewhat straightforward sort of lie, and eventually developing an account of it based on speech acts and the notion of a playful and willful absurdity as a mechanism for developing new paradigms of expression.

For these purposes, it will be helpful to have an example to follow. For this, I will use one of the great masters of the modern demo, perhaps the great master, Apple Computer co-founder Steve Jobs. More than almost any other media company, Apple, Inc., markets its products via the rhetoric of shininess, and it is Jobs’s salesmanship that defines this marketing. Apple fans and critics alike speak of Steve Jobs’s considerable “reality distortion field,” referring to his ability to persuade people of virtually anything he wishes them to believe. But the most defining aspect of Jobs’s salesmanship are the lengthy product announcements he gives at Apple technology expos and press events. Jobs’s skill at these pitches is such that he has ascended to the level of self-help mantra – there exists a book titled The Presentation Secrets of Steve Jobs that purports to teach the reader how to give presentations as effective as Jobs’s, complete with chapters advising things like “Answer the One Question that Matters Most,” “Use ‘Amazingly Zippy’ Words,” and, perhaps most notably, “Develop a Messianic Sense of
Purpose.” The book describes Jobs’s appeal thus: “Few people can escape the Jobs charisma, a magnetism steeped in passion for his products. Observers have said that there is something about the way Jobs talks, the enthusiasm that he conveys, that grabs everyone in the room and doesn’t let go” (Gallo).

Perhaps the most important and greatest demo Jobs ever gave was of the original Macintosh computer and operating system. On January 24, 1984, the launch day for Apple’s new computer, Jobs wrapped up the Apple shareholders meeting with a demonstration of the Macintosh. In a perfectly timed and executed demo, he removed the computer from a moderately sized bag, inserted a floppy disk, and ran a short video, projected onto the wall behind him, showing some of the Macintosh’s capabilities, while the theme music from the 1981 film Chariots of Fire plays played in the background. From the first image – the word MACINTOSH scrolling, letter by letter, across the screen, the crowd goes absolutely nuts. The rest of the demonstration is no less impressive to them – the words “insanely great” being drawn in underneath the Macintosh logo, Susan Kare’s iconic image of a woman combing her hair in MacPaint, done in the style of a Japanese woodblock print, a screenshot of MacWrite, the game Alice, and screen shots from several other Mac applications, the crowd cheering all the while. Afterwards, Jobs promises to let the Mac “speak for itself,” and the Macintalk application was used to announce the sentence, “Hello, I’m Macintosh.” Once again, the crowd erupted in thunderous applause.

In this short demo (the demo wraps up in under four minutes) we see clearly both the utopian instincts of the demo and its more disingenuous realities. The excitement of Jobs’s audience is obvious. But on the other hand, the reality of what they’re looking at
is, even without the benefit of hindsight, somewhat underwhelming. The original Macintosh had a 9” black and white monitor. As a result, on the surface of it, the Commodore 64 – priced at about a quarter of the Apple’s $2500 price tag – was already displaying more viscerally impressive graphics. Even though, in reality, the Commodore 64 was vastly less powerful than the Macintosh, it output in 16 colors to a television. Furthermore, the sorts of things being shown were not impressive on the face of it – scrolling text is, after all, neither particularly useful nor entertaining. MacPaint and MacWrite were indeed impressive applications – MacWrite was the first major word processor capable of displaying the document as it would print, and MacPaint combined competent bitmap drawing tools with heavy integration with the user interface. But these substantial affordances of the software were not clearly conveyed by the screenshots offered in the demo.

And on a technical level, the demo was thoroughly disingenuous. In fact, the product that was launching that day, the 128K Macintosh, could not actually run the demo software that had been cobbled together. The Macintosh on stage with Jobs was actually a prototype 512K Mac that was eight months away from release. Furthermore, given that the original Macintosh was not upgradeable by the user, no Macintosh that any user actually purchased in the first several months after the computer’s release was ever going to be capable of running the demo shown by Jobs.

What is interesting is that, apart from the swap to more powerful hardware, none of this disingenuousness is, in an important way, truly deceptive. Jobs’s audience has not been deluded into believing that the future of computing was scrolling text. And while the culminating event, the speaking Macintosh, had some practical applications (such as
tools tailored to blind users), it is difficult to say that it had a wide range of uses beyond its novelty. The audience, on one level, knew this. And yet they were nonetheless completely hypnotized by Jobs’s demo.\textsuperscript{13} Part of this, no doubt, was the existing paratext of the demo – most notably the fact that it occurred in the wake of the famous “1984” Superbowl ad, directed by filmmaker Ridley Scott, but also the general high profile of the Macintosh launch as an event. Jobs was not, in this demo, originating the desire for the Macintosh, but rather providing a sort of climax – an assurance that the Macintosh lived up to the existing hype. Or, perhaps more accurately, Jobs was re-performing the hype for this select audience to reassure them that the hype was justified – not so much showing that the Macintosh was as good as promised, but rather showing that the Macintosh was as hypeable as it appeared.

It is worth breaking down exactly what is said here, and what is, in addition, communicated by the manner in which it is said and received. Jobs is not saying that scrolling text as such is the future of computing. Rather, he’s saying that the Macintosh is a harbinger of that future, and then demonstrating the Macintosh via a compelling show of scrolling text and speech synthesis. The scrolling text and speech synthesis, like Engelbart’s generic text document (“Word Word Word”), is instead a powerful site upon which a proleptic, imaginary vision of future technology is projected. But this still leaves a potentially troubling aspect to the demo. Why present features of uncertain or

\textsuperscript{13}It should be noted, this sort of phenomenon is far from an artifact of the pioneering early days of computing. Indeed, there is a weird degree to which this approach is central to the design of technology. For instance, Mac OS X has a functionality to slow-motion the “genie effect” animations of minimizing and restoring windows – a functionality that clearly exists purely for the point of showing off the animations in the earliest demos of the system. But not only does the functionality survive into OS X Leopard, long after that functionality has stopped being demoed, but the functionality is supported on the new system animations created for Leopard. Thus not only is effort made to create functionality that exists only to show off, but effort is actually made to maintain such functionality in future versions.
even dubious utility, apart from the specific conditions of the demo, in lieu of a more accurate presentation of the new device’s capabilities? Even if Jobs and his audience are both aware of the disingenuousness involved, there is something not quite right about the situation.

The problem, such as it is, is that this aspect of the Macintosh demo is effected somewhere in the realm of what Harry G. Frankfurt discusses in his monograph *On Bullshit*. Specifically, it falls into the intriguing category he pulls from an essay by Max Black entitled “The Prevalence of Humbug,” of “deceptive misrepresentation, short of lying” (Frankfurt 6). Frankfurt spends the bulk of his essay figuring out exactly what “misrepresentation short of lying” constitutes. The primary case of interest to him – bullshit – is characterized by a complete disregard for the truth. The bullshitter, Frankfurt writes, “does not reject the authority of the truth, as the liar does, and oppose himself to it. He pays no attention to it at all. By virtue of this, bullshit is a greater enemy of the truth than lies are” (Frankfurt 61). If Frankfurt is to be taken at face value, then, what is going on in the case of demos such as the 1984 Macintosh release is that the notion of truth is being discarded, presumably in favor of simple commercial expediency. In this view, it does not matter whether the Mac is, as Jobs asserts, “insanely great” or not – it matters only if such a notion can be used to sell the new computer. This is, perhaps, the most cynical reading of the demo available – the full 180° of the utopian view of demos and technological progress. The demo here is simply a sales pitch; to speak of its accuracy or inaccuracy, or even in terms of the semiotic concerns of mediation at all, is to miss the point. In this view, the question of truth is not even relevant to the demo.
Though it is possible such demos do exist (I’m skeptical), it seems clear to me that this does not adequately describe what is going on in Jobs’s presentation in 1984, nor in most demos of any significance. Whatever criticisms one might level against Jobs, the suggestion that he is anything less than entirely sincere in his belief of the vital importance of the products he promotes is not plausible. Even here, though, it is possible that the demo still could be bullshit in Frankfurt’s eyes. Frankfurt, in fact, suggests that one reason for the prevalence of bullshit is the rise of “various forms of skepticism which deny that we can have any reliable access to an objective reality,” and the resultant “retreat from the discipline required by dedication to the ideal of correctness to a quite different sort of discipline, which is imposed by pursuit of an alternative ideal of sincerity” (Frankfurt 64-65). The demo-as-bullshit argument can thus be maintained even in the face of a seeming true believer such as Jobs. But the notion of sincerity as Frankfurt presents it seems ill-suited to the task to which it is being applied in this example. Frankfurt’s description of someone who, “convinced that reality has no inherent nature, which he might hope to identify as the truth about things, he devotes himself to being true to his own nature” (Frankfurt 65) does not seem to describe Jobs, whose zeal in supporting his products seems to go well beyond a self-centered sincerity and into an almost religious fervor. Even if, as Frankfurt would have it, what Jobs seeks is the approval of his audience and potential customers, every portrait of Jobs presented suggests that, for him, approval necessarily meant approval of the products he hawks (the Macintosh, the NeXT, etc.). Jobs is infamous for taking even slight criticisms of his work personally. Michael Moritz relates the story of how, following an unflattering 1982 profile of Jobs in Time Magazine Jobs “banished me from
Apple and forbade anyone in his orbit to talk to me,” (Moritz) a banishment so severe that Moritz’s revised edition of the book 27 years later seems to have no new insights from anyone involved with Apple. This same story is related by Steven Levy, who wrote a book on the subject after Moritz, and describes Jobs’s skepticism of the press due to having “been traumatized by a story in *Time* that he considered a cruel personal attack by a reporter he once trusted” (Levy 25). The tendency continues to the present day with the infamous story of Jobs removing all books by John Wiley and Sons from the shelves of Apple Stores because of Wiley’s publication of a biography of Jobs that he disliked. Given this ferocious sensitivity, combined with his legendary passion for Apple’s role as an innovator, it is difficult to imagine him as anything less than sincere in this demo.

Even if one does want to cast a skeptical eye at Jobs, the fact remains, members of his audience are taken in by this possible bullshit. What are they responding to? Are they simply happy shareholders delighted at the sales potential of the Macintosh? Then what does one make of Jobs’s numerous successful demos to the broader public at Apple trade shows? And even in the specific scene of this 1984 shareholders meeting, one is hard-pressed to push the bullshit argument too far. This interpretation, after all, seems to require a simultaneous investment in Jobs’s own sincerity and in the crass commercial motives of his audience, and, furthermore, to require a certain level of ignorance or misrepresentation on the part of each party. One must imagine a particularly callous group of shareholders to imagine that they are applauding rapturously in imagining their future profits while watching an obviously sincere man excitedly present what they, in this reading, must be viewing as a bunch of pretty but
useless features that some imagined consumer base is going to fall in love with. And one must imagine a particularly deluded Steve Jobs to gratefully take in this applause.

What do we come to if we entertain the alternative? That Steve Jobs is not only sincere in Frankfurt’s sense of being true to himself, but also in that he is seriously presenting what he sees as an “insanely great” product with transformative potential? That the audience is applauding not because they imagine profits, but because they are caught up in the proleptic fantasy that Jobs’s demo invites. What, then, do we make of the fact that what they are applauding over is, objectively, not much more than scrolling text and other gimmickry? And for that matter, what do we make of the fact that despite the facileness of what was on display in this demo, the original Macintosh really was one of the single most important product releases in the history of popular computing?

Part of this difficulty surely stems from the ambiguous and problematic nature of the prolepsis itself. At the risk of obviousness, part of the difficulty faced by the demo is that its object is a displaced potentiality. The future cannot be directly shown. One must make it present via a reference to the past. And so some sort of substitution – possibly a not entirely honest one – must take place. But this is not sufficient. Certainly a sincere presentation of the still-imagined future is impossible. But there seems to be a significant gap between a sincere and truthful presentation of the imagined future and the prospect of taking seriously the actual content – as distinct from the form – of Jobs’s demo. And the observation that the demo cannot possibly work in a different way is very far from explaining how and why it does work in a context such as this.

Let us, then, make a rigorous analysis of the actual moment and content of the demo. What is a demo? The word is short for demonstration, which comes from the
Latin *monstrare* and *monstrum*, meaning, respectively, to point out or show, and divine omen or wonder. The prefix, *de*, indicates that these activities are to be done entirely or completely. So to demonstrate is to show completely with the distinct sense that what one is showing is wondrous. But how, on the level of practice and, more decisively for our requirements, on the level of semiotics, does this take place? Jobs introduces his demo simply: “You’ve just seen some pictures of Macintosh. Now I’d like to show you Macintosh in person. All of the images you are about to see on the large screen will be generated by what’s in that bag,” he says, as he points to his left, then walks over and removes the Macintosh from the bag. With no further words, he hooks the Macintosh up, removes a floppy disk from his jacket, and inserts it. Although these gestures are not the main content of the demo, they are still shiny. The simplicity of the Macintosh as a one-box unit was unprecedented in personal computing at the time. Furthermore, the 3.5” floppy disk was a new invention (and one Jobs touted earlier in the demo) that was a significant advancement over other forms of portable data storage, and one that would persist as a major computer standard all the way until 1998, when Jobs eliminated it from the original iMac, presaging the swift decline of the format. As Jobs inserts the disk, the music, along with the slideshow, begins, and the word “MACINTOSH” begins to scroll across. Later, after the initial demo, as the music fades, Jobs speaks a second time: “Now we’ve done a lot of talking about Macintosh recently. But today, for the first time ever, I’d like to let Macintosh speak for itself.” The Mac speaks, and the crowd goes wild.

One interesting thing to note is that there are, in this scene, two speaking subjects – Jobs and the Macintosh. Jobs, in this case, speaks as a sort of host, introducing the
Macintosh and allowing it to speak, ostensibly for itself. But it is also through his authority that the Macintosh is allowed to speak. The ordinary day-to-day functioning of a personal computer, after all, is not a demo. The Macintosh only becomes a demo when it is contextualized as such by Jobs in the context of the unveiling event for shareholders and potentially a wider audience of users of the device – an event that has remained a key part of Apple’s marketing and Jobs’s mystique to this day.

The Macintosh, on the other hand, speaks. Furthermore, it does so in what is not, stricto sensu, a linguistic act. Rather, its speech is comprised of a blend of images, text that is not very expressive in its own right (one is, for instance, hard-pressed to argue that the scrolling text at the beginning is the computer saying “Macintosh,” little yet that the menu bars and text of the screenshots is expressive as such), and a third somewhat nebulous category that includes things like the changing images or the scrolling text. I will call this category of speech, which comprises the expressive and communicative content of any given medium, “medial speech.” In the case of Jobs’s demo we have two speaking subjects – Jobs, who engages in traditional linguistic speech within a definite scene to introduce the demo, and the Macintosh, which uses medial speech to show itself, also in that definite scene and in relation to, and in support of, Jobs’s utterances.

14 In this regard Jobs’s 1984 demo is perhaps not the best example, since the climactic moment of the demo is, in fact, the computer engaging in linguistic speech. However, first of all, this is not a normal feature of demos, and second of all, it does not seem to me reasonable to suggest that Jobs’s audience believed that the words coming from the computer were created spontaneously by the computer. That is, everyone was well aware that the computer was simply reading a script. Thus the ostensible content of the computer’s speech – “Hello, I am Macintosh” – was not the speech of the computer-as-subject. Rather, the entire act of speech, encompassing both the semantic content of the computer’s monologue and the medial function of sound generation, is in this case the “speech” of the computer-as-subject, which must be understood as a non-verbal form of speech, as we will see shortly.
Both Jobs and the Macintosh are here engaged in what J.L. Austin identifies in How To Do Things With Words as a speech act. Austin defines this category as being an “utterances which can fall into no hitherto recognized grammatical category save that of ‘statement’” but that “do not ‘describe’ or ‘report’ or constate anything at all, are not ‘true or false’” and where “the uttering of the sentence is, or is a part of, the doing of an action, which again would not normally be described as saying something” (Austin 4-5). This clearly describes what Jobs is doing – he, by speaking, inaugurates the special situation of a demo. For the Macintosh, it is less clear – in part because a speech act requires the intention of accomplishing something, an intention that cannot easily be ascribed to the Macintosh, and in part because a fundamental part of Austin’s definition is that the speech act be an utterance that is subject to grammar. Indeed, much of How To Do Things With Words is concerned with specific details of grammar and how it applies to speech acts. Thus to use Austin’s theory to cover the category of medial speech of the self-announcing Macintosh is, necessarily, to adapt it somewhat. That said, it does not seem to me a significant alteration to Austin’s approach to allow medial speech into the scene of the speech act. Nothing in the basic idea of the speech act necessitates restriction to traditional linguistic speech, and while the transition away from it does render large sections of Austin’s book unhelpful for the analysis, nothing seems to me to contradict it as such. As for the matter of intention, it does not seem to me necessary that the intention behind a speech act formulate in the brain of the speaker. It is sufficient for there to be a sort of abstract form of an intention. Because the Macintosh is designed to accomplish certain things, there is still a clear sense of
intention in any seeming demonstration of its text-to-speech capabilities that does not depend on the assumption that the computer itself actually has free will.

Because it seems to me the easier of the two subjects, I will address Jobs’s participation in this scene first. As I said, the nature of his speech act is clear – he is engaging in a sort of inauguration of the process of demonstration. Austin describes analogous speech acts in *How To Do Things With Words*, in particular in the christening of a ship. Although in this specific case, Jobs accomplishes this inauguration through verbal speech, it should be noted that this is not always necessary. The major consequence of Jobs’s speech is to designate *the Macintosh’s speech* as a demonstration. Saying, as Jobs effectively does, “what follows is a demonstration” is one way of doing this, but the task can be accomplished through other means. When, for instance, the marketing of the film *House of Wax* proclaims the wonders and marvels of the third dimension, or the marketing for *Wii Sports* touts the new fun that the game allows, these also designate the texts that follow as ones that will speak in part as demonstrations, in that they will show their technological capacities, and furthermore, will show these capacities as part of a larger narrative of technological and medial progress such that the capacities become a sort of form of intention (thus satisfying the conditions of a speech act and, in fact, making the showing into a demonstration). This marketing contains verbal speech, but clearly also adds numerous complications to the dynamic, including the substitution of another entity for a human speaking subject (Warner Brothers and Nintendo are not people), the loss of the presence of the subject at the scene of the demo, and the loss of a purely verbal act of communication.
However the overall point here remains significant – before the act of demonstration can occur, it must first be designated by some external agent as a demo.

What, then, of the Macintosh’s speaking for itself? What does its medial speech do? This is a harder question, since medial speech, especially as it is constituted here, does not translate directly into intentional verbal speech in a satisfying fashion. Clearly the Macintosh shows itself – it declares its nature. And as I have observed before, this nature is offered proleptically. That is, its realization is postponed – what the Macintosh shows us is the potentiality of its speech for future use. We can thus read the Macintosh’s speech act as a form of the promise – the Macintosh pledges its future functionality, its capability of speaking again in this way, and perhaps in others as well. The specific method of the promise is the exhibition of certain features and functionalities. By showing its capabilities, it promises future action and future speech acts.

One of the first things Austin does after defining speech acts is to look at a specific category of speech acts that he terms *infelicities*. An infelicitous speech act is one that does not accomplish what it appears to be doing. Austin subdivides this category heavily, but his two main distinctions are between what he calls *misfires* and *abuses*. Misfires are speech acts that are made but are void. For example, while I am quite capable of walking outside of my house, finding two people, and declaring “I now pronounce you man and wife,” to do so would not be to marry two people, as I lack the recognized legal authority to perform that particular speech act in the appropriate context. Abuses, on the other hand, are described as cases where the speech act is “professed but hollow” (Austin 18). For instance, if I say “I bet you that Liverpool will win
the league this year,” but have no intention of paying up should they be defeated, I have committed an abuse. This speech act fails not because I lack the authority to make a wager, but because in truth I was not making a wager.

Given these definitions, we can ask whether the demo of the Macintosh is felicitous or not. First of all, is it a misfire? I think it is clear that it is not – Jobs, as one of the major architects of the Macintosh project, clearly does not lack the authority to demonstrate it, and the event clearly has the blessing of Apple as a company. Although this level of authority is not strictly speaking necessary – someone could just as easily demonstrate the new Macintosh purchased that day to family or friends without any official sanction from Apple – it certainly adds weight to the proceedings. And though explicit permission from the creator or manufacturer of a piece of technology is not needed to demonstrate it, no demo is without at least some measure of authoritative structure implying such a sanction. If nothing else, the person who proclaims the medial speech a demo must be recognized by the audience of the demonstration as having authority to make such a demo. Furthermore, there is a level of technological appropriateness that must be met. One would be hard-pressed to demonstrate the original Macintosh today, simply because a 25 year old computing platform does not seem to have the meaningful capacity to offer a proleptic vision of itself. The original Macintosh is now viewed as a thing of the past, and thus outside of some very peculiar contexts cannot really be demoed. For the most part, however, these issues of authority are generally satisfied, and are so basic that they can often be taken for granted.\textsuperscript{15}

\textsuperscript{15} An interesting exception to this is the trend among specialists and hobbyists to offer demos of outmoded technology that was, for whatever reason, overlooked and not widely known at the time of its release. The demo, in this context, instead of being based on a proleptic authority is based on a sort of
There are exceptions – questions of authority will, for instance, be central to my analysis of Nintendo’s Wii – but by and large, the issue of the misfire on the part of the exhibitor is not a significant one in demos.

We should move, then, to the second category of infelicity, abuses. Abuses are defined by Austin as occurring when

the procedure is designed for use by persons having certain thoughts or feelings, or for the inauguration of certain consequential conduct on the part of any participant, then a person participating in and so invoking the procedure must in fact have those thoughts and feelings, and the participants must intend so to conduct themselves, and further must actually so conduct themselves subsequently. (Austin 15)

On the surface, this appears to be a restatement of Frankfurt’s concept of insincerity, and has thus already been dealt with – clearly Jobs is not insincere. But the introduction of a second subject – the Macintosh – renders this a trickier version of the problem. For one thing, the Macintosh, being a computer, does not have intentions, thoughts, or feelings. And so any speech act it engages in will seemingly necessarily be an abuse by simple virtue of the fact that it cannot have the requisite thoughts and feelings, nor can it have any intentions about its future actions. On the other hand, it is not unreasonable to ask whether this view would in fact preclude the Macintosh from engaging in any sort of speech act at all.

I do not think that it does, but the resolution requires a somewhat more complicated view of intentionality as I’ve already suggested in the discussion of a sort of formal intention. What is crucial here is to remember the role that Steve Jobs is playing in this demo. Without Jobs’s authorization of the demo, the Macintosh cannot engage in alternate history, showing a future that might have been, with the implicit subtext that the desirable features of that future might still be rescued in some other form.
half of the speech act. Why does the Macintosh require Jobs’s authorization to speak? The answer is that, because the Macintosh cannot speak “for itself,” any speech it engages in must be read as being speech for somebody else. Thus Steve Jobs’s authority is not just the creation of a social scene in which the Macintosh may speak, it is also the lending of voice to the Macintosh. So when the Macintosh speaks, it now shares some portion of the intentionality which has been conferred by Jobs (who is himself acting with a similar relationship to Apple Computer, which has conferred a similar authority to Jobs in the context of the Shareholders meeting).

It is important to read this transaction as more than a simple theatrical trick. The transmission of authority to the Macintosh is not equivalent to Jobs simply playing a character. The Macintosh, authorized by Jobs, can speak in ways that Jobs himself cannot. For one thing, Jobs is unable to engage directly in the kind of medial speech that is touted as the Macintosh’s new, innovative idiom. For another, the Macintosh, even as it lacks intentionality, does have a sort of authority that Jobs lacks. It is this authority that Jobs calls upon when he says that “all of the images you are about to see on the large screen will be generated by what’s in that bag.” Because the subsequent speech does come from the Macintosh, there is a level of proof offered by the fact that the Macintosh does speak. This proof is central to the demo – it comes from the act of showing that is the central feature of the demo.

So even as it derives its intentional authority from Jobs, the Macintosh remains a distinct, separate agent that, by its presence, renders its speech distinct from Jobs’s. It speaks on Jobs’s behalf, and for Jobs, but it does not speak as Jobs. Its intent, then, is to fulfill the obligation forced upon it by Jobs's authorization. Jobs, in saying that “I’d
like to show you Macintosh in person.” By eliding himself – stepping back from the show and act of demonstration – Jobs calls upon the Macintosh to provide this missing step in his argument. The Macintosh’s implicit intent, then, is to fill this gap in Jobs’s speech adequately – to not make a liar out of Jobs.

Jobs’s claim is, perhaps, best captured in his own preferred description of products – “insanely great.” The Macintosh, he promises, is insanely great. What evidence does he give of this promise? He makes a few observations, but in the end, at a crucial moment, he steps aside and lets the Macintosh show its own insane greatness. Does the Macintosh intend to show this? It must be understood to do so, inasmuch as Jobs is intending for it to do so. But this takes us back to the question we answered previously – is Jobs being in some fashion dishonest? Is he sincere? And given that the Macintosh’s ability to display some form of intention, if he is insincere, does that render the Macintosh insincere as well?

Clearly he is not lacking the requisite intentions when he proclaims the Macintosh to be insanely great. But what he is doing is more than that. He is, more properly, saying that “I promise that the Macintosh is insanely great, and I will allow it to show you its insane greatness” by stepping aside as the Macintosh engages in a definitive act of medial speech. So the full total of intentions at work here are an intention behind a promise of insane greatness, and a demonstration of the Macintosh that includes evidence of its insane greatness. Herein lies the problem we have circled back on numerous times – the fact that the content of the Macintosh’s medial speech is, evaluated externally, largely unpersuasive in this regard. From a rational perspective, the Macintosh does not adequately fill the gap in Jobs’s speech. It is inconceivable that
Jobs actually believes that the future of computing is the scrolling text or speech synthesis, one must therefore assume that this is not merely a misfire of poorly chosen features, but rather an abuse. Jobs is having the Macintosh show a seemingly inaccurate view of what the future of computing is. But as I have pointed out before, if it is abuse, it is not a very cunning one. Nobody is deluded by Jobs’s demo. And yet they love it. If they are not fooled, and it seems clear that they cannot be, what exactly are they applauding?

The question, I think, hinges on a question we have yet to address – what is the content of Jobs’s promise of insane greatness? What does it mean to promise that the Macintosh is insanely great? It is more than a simple assertion of greatness. It is not equivalent, for instance, to enumerating the reasons the Macintosh is great. Central to the demonstration is the moment of elision – “I’d like to show you Macintosh in person.” In this moment, the Macintosh’s greatness is postponed. It is projected into the future. Similar postponements occur throughout Jobs’s speech prior to his demonstration – “The 3.5” disk drive will be the disk of the 80s,” “You have to see this display to believe it,” and by appearances, this future is only moments off. Jobs says that “all of the images you are about to see on the large screen will be generated by what’s in that bag.” This seems to defer only to the images on the screen. But after the images run, Jobs continues with this deferral. “We think that’s the knowledge worker of tomorrow,” he says, as well as saying that “Macintosh can become the second desktop appliance.”

Indeed, Jobs’s signature rhetorical move in his famous demonstrations is an act of deferral. Jobs likes to close product demonstrations by pretending to be finished, then turning and saying that there is “one more thing…” This one more thing is generally in
fact the major object, the new product or technology that is the actual focus of the presentation. The rhetorical move serves not only to defer the insane greatness perpetually forward throughout the presentation (since the audience is always anticipating the one more thing they know is coming), but also serves to explicitly position insane greatness as something that exists past the end of the act of speaking.

The insane greatness of the Macintosh is thus situated in a future moment. This is the significance of its essential novelty being a promise. It is also inherent to the concept of shininess. Shininess is about an allure. It shines, at its best, as a beacon orienting future development and progress, and at its most cynical, as a glinting object that we, as enthusiasts and consumers, flock towards like magpies. This eternal prolepsis is the difference between mere greatness and insane greatness. The great can be shown directly. The insanely great, however, must be held back. Otherwise, it would not be *insanely* great.

The nature of promised greatness is that it is not delivered at the time of the promise. But this is too pat an answer to resolve our difficulties with the curiously committed disingenuousness Jobs’s demo. Yes, promised greatness is not delivered at the moment of the speech act. But that doesn’t answer what does happen in the demo. Clearly the demo is meant to be a sort of down payment on future greatness – a presentation of some greatness now as a forecast of future greatness. Let’s look further, then, at the nature of a promise – at the nature of this deferral. For this we will turn to Jacques Derrida, who has frequently addressed the theme of promises and speech acts. I will begin with *Memoires for Paul de Man*. 
At the end of this book, Derrida says that “a promise cannot be kept, it cannot even be made in all its purity,” and furthermore that “a promise has meaning and gravity only with the death of the other” (Derrida, Memoires for Paul De Man 150). In what sense is this seemingly dramatic claim true? Derrida’s main example, which he deals with formulating this claim, is de Man’s essay on Rousseau in Allegories of Reading. Derrida describes this work saying that its readings “do not just present themselves as texts on the theme of the promise; they demonstrate – show and envelop at the same time – the performative structure of the text in general as promise” (Derrida, Memoires for Paul De Man 93). For our purposes, then, it is necessary to briefly digress from Jobs and understand exactly what this striking claim entails.

In the chapter of de Man in question, entitled “Promises (Social Contract),” de Man charts a relatively narrow argument. His starting point is a description of how property rights function. Property, de Man argues, “is the result of a contractual convention that involves both the citizen and the State; it is only when the state is thus involved that one can speak of property rather than mere possession” (de Man, Allegories of Reading 262). Specifically, the contract of property ownership requires what de Man calls a “double rapport” (de Man, Allegories of Reading 264) whereby it is binding both for the individual citizen and for the larger state, and, more to the point, binding in contradictory ways – for the individual citizen, property serves as an equalizer that adjudicates potential conflicts and, ideally, prevents them. For the state, however, property is something that must be protected from the threat of external, foreign invasion, and thus is a site of conflict and tension. Crucially, for any given citizen, this is not an either/or proposition – since the state is comprised of its citizens, property must
be considered both publicly and privately at the same time. “Each individual,” de Man says, “contracting so to speak with himself, is committed in a double relationship, namely as a member of the sovereign authority with regard to individuals and as a member of the State with regard to sovereign authority” (de Man, Allegories of Reading 264).

What is most important about this split is that the sovereign authority is dissociated from the individual. The issue here is that the consideration of the public interest necessarily involves the conception of a public interest that exists independently of the particular interests of the individual. De Man, following Rousseau closely, observes that this schism is a necessary consequence of the basic idea of the particular – to identify a particular out of a whole is, by necessity, to separate that particular from the whole, and also that this splitting fragments and undoes the whole.

From here, de Man expands to the general case of the law. The law is defined by its implementation by the sovereign – by the detached and generalized case of authority that coincides with the general will. But, de Man notes, “no law is a law unless it also applies to particular individuals” (de Man, Allegories of Reading 269). It is in the application of the general case to particulars that the law may be deemed just. Thus law like property contracts, exists in the dual relationship between general and particular. Finally, with the example of the law in hand, de Man turns to language. Language, he notes, is governed by a form of law, specifically grammar. “To the extent that a text is grammatical,” de Man notes, “it is a logical code or a machine” (de Man, Allegories of Reading 268). But like the law, grammar must also have a specific case that founds its authority – referential content. Where grammar structures language as a hard
abstraction, referential meaning focuses language onto particular uses – and, much like the general and the particular of law and property – these two aspects of language are both incompatible and inevitable. Thus de Man declares that “we call text any entity that can be considered from such a double perspective: as a generative, open-ended, non-referential grammatical system, and as a figural system closed off by a transcendental signification that subverts the grammatical code to which the text owes its existence” (de Man, *Allegories of Reading* 270).

Here, finally, de Man performs a sort of reverse engineering of his steps – having built from contracts to language, he works backwards to establish language as a form of contract. Thus de Man’s observation that “the legal machine, it turns out, never works exactly as it was programmed to do. It always produces a little more or a little less than the original, theoretical input” (de Man, *Allegories of Reading* 271) carries with it a commentary on the necessary imprecision of language – the imprecision that is at the heart of de Man’s deconstructive project. These observations, for our purposes, come to a head in the following passage:

> All laws are future-oriented and prospective; their illocutionary mode is that of the promise. On the other hand, every promise assumes a date at which the promise is made and without which it would have no validity: laws are promissory notes in which the present of the promise is always a past with regard to its realization: “… the law of today should not be an act of yesterday’s general will but of today’s; we have not committed ourselves to do what the people wanted but what they want. It follows that when the Law speaks in the name of the people, it is in the name of the people of today and not of the past” (p. 316). The definition of this “people of today” is impossible, however, for the eternal present of the contract can never apply as such to any particular present… The situation is without solution. (de Man, *Allegories of Reading* 273)

There is much to unpack here, no small portion of which we will return to via Derrida shortly. The two major points here, however, are these. 1) The promise’s
impossibility stems from the non-coincidence of the law (an instrument of the general public) and the actual will of the people (an instrument of the particular people). Or, when ported to the linguistic realm, the impossibility stems from the non-coincidence of the grammatical form of language and the referential intent of the speech. Because of this non-coincidence, precise speech becomes impossible, because language is always creating a gap within itself, rendering the promise impossible. 2) The promise is specifically identified here as an *illocutionary* mode. This is significant inasmuch as de Man equates the division between referential and grammatical content with the division “between the constative and performative function of language” (de Man, *Allegories of Reading* 270).\(^{16}\) The constative is equated with the grammatical function of language, and the performative with the figural. So when de Man specifies that the promise is an illocutionary mode, he is allying the promise specifically with the figural aspects of language.

The significance of this latter observation will become clear as we return, finally, to Derrida. Derrida’s version of de Man’s argument extends its scope in a key regard when he says that “a promise has meaning and gravity only on the condition of death” (Derrida, *Memoires for Paul De Man* 150). Although de Man’s argument about the nature of language has extremely broad implications, this statement expands the force of the argument dramatically. It behooves us, then, to unpack it. Why does Derrida link de Man’s argument to the notion of death? Part of this is simply occasion – *Memoires for Paul de Man* is, among many other things, a book about Derrida’s mourning over the death of his friend, Paul de Man. But that is a pat and unhelpful answer.

---

\(^{16}\) De Man implicitly acknowledges his debt to Austin here by using Austin’s preferred term of “constative” instead of “descriptive.” The performative is, of course, also Austin’s invention (Austin 3-7).
The more complete answer, I think, begins by noting that one of Derrida’s central concerns, throughout his work, is the problem of absence. I do not wish to allow this argument, which serves primarily to understand the demo as an illocutionary form, to extend over a very broad range of Derridean thought, so I will confine myself to one example from Limited Inc, a book I will return to subsequently. In Limited Inc, Derrida spends much time with the example of a shopping list, working through a claim by John Searle with which Derrida disagrees, pointing out that “at the very moment “I” make a shopping list, I know… that it will only be a list if it implies my absence, if it already detaches itself from me in order to function beyond my “present” act and if it is utilizable at another time” (Derrida, Limited Inc 49). I use this example not because of any ease of using the shopping list as a metaphor for death, but because this example, which renders concrete a larger concern of Limited Inc, specifically the problem of absence as it relates to illocutionary writing. It is this problem of absence, and specifically of absence as it relates to illocution, that forms the primary topic of Memoires for Paul de Man. 17

Derrida begins the book by setting up a question of mourning and memory – one that he draws in part from Paul de Man’s works. Several pages into the book, he runs into the difficulty that leads to his conclusions about the promise – that problem being, as I said, that Paul de Man died a month prior to the book’s delivery. 18 Thus Derrida concludes that the lectures could only be written if “they left or gave the last word to my friend. Or at least, since that had become literally impossible, to friendship, to the unique and

---

17 This problem of access, I stress, a more committed reader of Derrida could trace through many more, indeed perhaps most of his writings.

18 The book, it should be noted, is a collection of three lectures.
incomparable friendship that ours was for me, thanks to him. I could only speak *in memory of him*’ (Derrida, *Memoires for Paul De Man* 19). And so Derrida finds himself having to deal with the future speech of a dead man – how de Man would respond to Derrida’s own readings of de Man. This prolepsis broaches the subject of the promise. We see, then, the extreme form of the promise that underlies Derrida’s observations about it:

    A promise cannot be kept. It cannot even be made in all its purity. As if it were always linked to the departed other, as if it were therefore not linked. But consequently, this is because a promise pledges only to what is mortal. A promise has meaning and gravity only on the condition of death, when the living person is one day all alone with his promise. A promise has meaning and gravity only with the death of the other. (Derrida, *Memoires for Paul De Man* 150)

    Taken in the context of de Man’s argument, and remembering that text and the promise are inseparable, we come here to see the full weight of Derrida’s argument. Derrida, confronting textuality in the extreme case of speaking of and with de Man’s work in the immediate aftermath of his death, extends the impossibility of the promise – an impossibility that stems from the fact that the proleptic moment it foretells is not and can never become a present (a theme worked out more thoroughly by Derrida in *Limited Inc*) – to its most extreme form. Here the promise is impossible because of a root problem of mortality. The promise cannot be fulfilled because there is an inevitable and unbreachable limit to the reach of prolepsis.

    We have strayed rather far from Jobs and the Macintosh – both topically and in terms of the sort of argument that appears appropriate to the situation of a shareholders’ meeting. After all, it is a stretch to say that the main problem with Jobs’s demo is that the fulfillment of the promises it offers is circumscribed by the inevitability
of death. But it would be a mistake to treat death here merely as a biological or historically subjective phenomenon. Returning to de Man, this time his essay “Autobiography as De-facement,” de Man makes the striking claim that “death is a displaced name for a linguistic predicament” (de Man, “Autobiography as De-Facement”). This claim, made in the larger context of de Man’s argument about autobiography as a form of “restoration in the face of death” (de Man, “Autobiography as De-Facement” 925) suggests that death should be treated not as the mortal cessation of biological function, but as an inability to speak.

Given that media are, by their nature, aspects of the material conditions of speech, to situate medial development and death as oppositional forces is, while rhetorically bombastic, not unreasonable. And I am hardly the first to make the observation. Friedrich Kittler makes almost the same point in Gramophone, Film, Typewriter, when he says that “the realm of the dead is as extensive as the storage and transmission capabilities of a given culture. As Klaus Theweleit noted, media are always flight apparatuses into the great beyond” (Kittler 13). And indeed, this impulse, pairing media against death, can be seen as the fundamental drive of the conventional utopian rhetoric of media theory. When Bolter and Grusin say that “immediacy dictates that the medium itself should disappear and leave us in the presence of the thing represented,” (Bolter and Grusin 6) they can be taken, when speaking of any sort of expressive communication, to be speaking of a struggle against death in the Derridean/de Manian sense of the term. If the utopian vision of media is to situate the audience in the presence of the represented thing, the introduction of any sort of
speaking subject transforms media into an attempt to overcome the conditions of absence which are, necessarily, visited upon the subject by the situation of speech.

This realization allows us to return to de Man’s allying of the illocutionary with the promise. If the promise’s central inadequacy is its struggle against death, then the illocutionary, referential mode of language as a whole is allied with the utopian end of media theory. On the other hand, the grammatical mode of language – which opposes the referential and the promise – is allied with death. This connection makes sense on several levels – not only does de Man specify that “no grammar is conceivable without the suspension of referential meaning” (de Man, Allegories of Reading 269), but given that the referential mode of language finds itself expressed ideologically as medial utopianism, it should not be surprising that the grammatical mode of language to which it is opposed should have a similar expression in the atavistic counter-rhetoric.

In light of this, we can better understand why the insane greatness of the Macintosh must in some fashion be held back in order to be, paradoxically, made present to those who are promised that greatness. If insane greatness is taken – as I think it must be – as a sort of extreme claim on the illocutionary side – then its prolepsis has to be taken as extremely as possible. As Derrida says of the general case, the promise is always made beyond and past death – extending beyond all possible restrictions upon expression. This promise cannot be delivered upon, because its delivery would immediately invalidate it by showing the limits of its extension. The promise of the Macintosh, and of the demo, is always what the technology will do. And so at the moment of the promise’s making, it must fall short – it must not do what it is
promising that it will do, so that its offering remains displaced into a future that is endlessly deferred until mortality provides an absolute limit.

This still leaves the question of what the demo does deliver – the problem of why Jobs’s demo is so underwhelming in its content compared to the actual impact of the Macintosh. For this, we should turn to another work of Derrida’s – the already mentioned Limited Inc. Like Memoires for Paul de Man, Limited Inc is heavily involved in the question of speech acts. The bulk of the book consists of the eponymous essay, a blistering rejoinder to an essay by John Searle attacking Derrida’s prior work on speech acts, an also-included essay entitled “Signature, Event, Context.” The central issue of the debate, as presented by Derrida (Searle would no doubt disagree), is as Derrida puts it, “does John R. Searle ‘sign’ his reply?” (Derrida, Limited Inc 30) Although this question does not have the immediate philosophical heft of the discussion of death and mourning that constitutes the central question of Memoires for Paul de Man, as I have suggested already, its core concern is related to this question. The question of signature, like the question of death, is a question of separation and absence. Indeed, Derrida’s claims about signatures closely mirror his claim about the promise: “the condition of possibility, of those effects is simultaneously once again, the condition of their impossibility, of the impossibility of their rigorous purity. In order to function, that is, to be readable, a signature must have a repeatable, iterable, imitable form; it must be able to be detached from the present and singular intention of its production” (Derrida, Limited Inc 20). Like the promise, the signature is an impossible yet indispensable form that depends on its projection into the future and past, leaving its present as a moment of absence and separation.
Much time in Limited Inc is spent mocking Searle for his failure to grasp this point. Derrida accuses Searle of confusing the statement he made – that the signature must be able to be detached – with the statement that it is “necessary for the receiver to be absent” (Searle 200). Derrida pounces upon this error on Searle’s part, and picks apart Searle’s own language, noting Searle’s tendency towards a rhetorical move Derrida dubs mis – that is, the assertion of some ill-formed and unsuccessful event. Searle’s major use of this move is in accusing Derrida of misunderstanding – something Derrida quotes him at exhausting length as doing. Broadly speaking, Derrida’s attack on Searle is to suggest that this rhetorical move of mis is ultimately a confirmation of Derrida’s core assertion, inasmuch as a misunderstanding is, on some level, still functioning in a perverse fashion, and thus an instance of absence. That Searle has something to respond to even as, apparently, Derrida’s argument misfires so badly that, in Searle’s words, “Derrida’s Austin is unrecognizable. He bears almost no relation to the original” (Searle 204) is, in Derrida’s view, largely a confirmation of his exact point.

But in the course of making this point, Derrida engages in what he, throughout Limited Inc, refers to as a demonstration. The nature of this demonstration seems to be a sort of willful playfulness. Derrida comments frequently on whether or not he is being “serious” in his writing – indeed, one of the last statements he makes in the essay is: “I promised (very) sincerely to be serious. Have I kept my promise? Have I taken Sarl [sic] seriously? I do not know if I was supposed to. Should I have? Were they themselves serious in their speech acts? Shall I say that I am afraid they were? Would that mean that I do not take their seriousness very seriously? What am I saying?” (Derrida, Limited Inc 107). Beyond this, however, Derrida engages in various other seemingly playful and
non-serious forms of argument – for instance, repeatedly quoting and then re-quoting the copyright notice on Searle’s response to him, all the while accusing Searle of non-seriousness, asking “What makes him think that these rights might be questioned, that someone might try to steal them from him, or that there could be any mistake concerning the attribution of his original production? … that John R. Searle should be so concerned with his copyright, for saying things that are obviously true, gives one pause to reflect upon the truth of the copyright and the copyright of the truth” (Derrida, Limited Inc 30). Similarly mocking seems to be his insistence on referring to Searle as “Sarl” throughout the essay, arguing that because of Searle’s problematic concerns with authorship, and his explicitly crediting others for their assistance with his essay, that his essay should best be understood as the work of a “society with limited responsibility,” the French version of which forms the acronym SARL.

Derrida ultimately comments on this, albeit slightly indirectly. Speaking of the essay Searle responds to, “Signature Event Context,” Derrida asks “Does the principle purpose of Sec consist in being true? In appearing true? In stating the truth? And what if Sec were doing something else?” (Derrida, Limited Inc 43). This question is, at its heart, similar to the one we are raising about Jobs and the Macintosh. The claim that Jobs’s demo of the Macintosh shows off trivial and ultimately unimportant features is only problematic if one assumes that the demo of the Macintosh is primarily concerned with stating the truth about the Macintosh. What, indeed, if it were doing something else?

For his part, Derrida offers two suggestions for what he might be doing. First, he suggests that he may be “saying something apparently ‘false’” in a way that would
“increase the chances of the debate getting started,” or “proposing a text… whose performance (structure, event, context, etc.) defines at every moment the oppositions of concepts or values,” and of doing so in such a way that it is “irreducible to ‘verdictive’ (as Austin might say) sentences of the type: this is true, this is false” (Derrida, *Limited Inc* 43). In one sense, both of these are flavors of the same answer – that the argument is in some sense itself performative, and that it is not intended simply to convey information (as in, “these are the key features of the Macintosh”) but rather to serve as an evocative, metaphoric or representational act (“I’d like to let Macintosh speak for itself”).

What, then, is the metaphoric or representational point of using what seems like silly and gimmicky technology to demo the Macintosh? This is the question taken up by Craig Saper in his book *Artificial Mythologies*. Drawing from the work of Roland Barthes on mythology, Saper attempts to identify the mechanics and process of engaging in cultural invention – in other words, to specifically answer the question of how to constitute something innovative and new out of existing and defined parts. Saper’s answer is to depend on what he calls *artificial mythologies* – a category he describes as containing “fakes, inventions, ready-mades, and anti-art” (Saper 34). Saper argues that this category allows for invention because, working within the artificial myth, one gains the ability “to read against the grain, to create humorous often ironic distance between the reader and the message, and to disrupt the power of listening” (Saper 38). Thus by working outside the established definitions of truth, but still within the cultural context, one can create new viewpoints.
The central relationship, in Saper, between the artificial myth and the new mythology is expressed via the semiotic square – a concept Saper borrows from Algirdas Greimas. Greimas creates the idea of the semiotic square as a way of understanding the structural interplay of related concepts. At its core level, the square is constructed by taking some concept, and then organizing the various permutations of its opposites. In one of Greimas’s common examples, he takes permutations of sexual relations. He begins with conventionally permitted and prescribed sexual relations – namely heterosexual marriage. Opposed to this is forbidden sexual relations – incest, homosexuality, etc. But also opposed to each of these is their negations – sexual relations that are not prescribed (adultery by a woman, in his example), and sexual relations that are not prohibited (adultery by a man) (Greimas 54). What is important to recognize about these varying oppositions is that the two forms of opposition are different. The first – a concept and its opposite – Greimas calls a contrary. But the second – negation – is called a contradictory. And these are two different forms of negation, such that the double negative – prescribed sexual relations and non-prohibited sexual relations – are not equivalent. However, though they are not equivalent, these two categories – permitted and non-prohibited – remain compatible and even allied.

What is important to recognize about this relationship is that there is a negative space in relation to a concept’s opposite in which the concept itself can find an uneasy but functional niche. Thus by moving from a new cultural paradigm to the inverted space of the artificial mythology, a space to play and experiment with concepts, and develop them freely. As Saper puts it, in this space one spends time “digging around through
the in-between zones, in traffic, and in the ambiguous and contested" (Saper 35). This space, then, is rich with meaning and possibility.

This idea that play is a powerfully generative activity should not be unfamiliar to a reader of Derrida in particular. After all, out of his playful structure in Memoires for Paul de Man, in which he repeatedly makes various promises even as he insists that the promise ultimately cannot be fulfilled, Derrida finally ends with this powerful passage:

> When the friend is no longer there, the promise is still not tenable, it will not have been made, but as a trace of the future it can still be renewed. You could call this an act of memory or a given word, even an act of faith; I prefer to take the risk of a singular and more equivocal word. I prefer to call this an act, only an act, quite simply an act. An impossible act, therefore the only one worthy of the name, or rather which, in order to be worthy of its name, must be worthy of the name of the other, made in the name of the other. Try and translate, in all of its syntactical equivocity, a syntagm such as “donner au nom de l’autre” or “une parole donnée au nom d l’autre.” In a single sentence, it could mean in French, or rather in English: “to give to the name of the other” and “to give in the name of the other.” Who knows what we are doing when we donnons au nom de l’autre? (Derrida, Memoires for Paul De Man 150)

This sublime power that Derrida finds clearly comes out of the tangled possibility of the promise, and of the proleptic act in general. Certainly, all of the words that make up this simple act – mourning, memory, promise, etc – are indeed artificial mythologies due to their visible unfulfillability. But the end nature of Derrida’s profound mourning of and gratitude towards his friend is no less powerful for it. And thus we see the “something else” that Derrida suggests he is doing in Limited, Inc clearly – he is, in fact, playing in a willfully silly margin of the concept of the speech act in order to show some more fundamental and powerful aspect of it.

This also explains the nature of Jobs’s demo. Jobs and his audience knew that the scrolling text and speech synthesis was a gimmick. Indeed, the rapturous applause
Jobs received for his demo could not have been obtained had his audience not been fully in on this fact. But these features do display a sense of playfulness and wonder – a desire to play with the Macintosh and see what other strange things it can do. This sense of playfulness, and open-ended performativity it entails, is the goal of a successful demo. It captures the essence of shininess.

Counter-intuitively, when shininess resolves into a full understanding of the thing, the essential desirability of the shiny object is lost. The appeal of shininess is its quality of possibility, its promise of novel experiences. Like any promise, the shiny object can never be found and located. It is always ahead of us, glinting, drawing us in, encouraging us to chase it. The demo does not always do this. There are other senses of wonder available beyond shininess, many of which are far less productive in generating a desire for a piece of technology – a point I will explore more thoroughly in terms of 3-D film. But shininess, for all its possibly crass lowness, remains the high point, simply because it is through the muddled play of shininess that some form of invention can occur. It is this fact that explains why, for all of the myriad of problems the utopian conception of media theory has, it remains indispensable. While wishing for a transparent and immediate experience will not make it so, it is not a futile gesture either.

Put another way, the key feature of shininess is that it engenders a state of playfulness that facilitates a process of invention. Indeed, Craig Saper subtitles his book “A Guide to Cultural Invention.” But the term, as Saper uses it, derives more fundamentally from the work of Greg Ulmer, who was Saper’s PhD advisor, and has strongly influenced his work. Ulmer, in Heuretics: The Logic of Invention, explicitly takes up the question of how modes of expression are created in new technological
forms. The book works primarily by analogy, using what Ulmer deems the chorographic method. In this method, Ulmer invents the method by describing it self-referentially, making the description of the theory the first use of the concept. His approach is much like what Saper describes – playful, gleefully appropriatory, and based on an approach of creation as opposed to description. As he puts it, in one of the book’s most memorable moments, “I am developing an analogy for chorography, saying that electronic writing is like performing a tableau vivant from *Beau Geste* as part of a follies show at a frontier saloon commemorating the Columbus quincentenary” (Ulmer 114).

My approach differs from Ulmer’s inasmuch as I am interested less in the situation of production than of analysis of the objects of production. It seems clear, looking at the history of media, that technological change has occurred, and has led in turn to distinct changes in the formal aspects of communication. What is less clear to me, looking at the existing body of work of media criticism, is that anyone has adequately theorized this process and asked what goes on in it. Ulmer, indeed, notes that its method “does not lend itself to direct communication, at least not yet” (Ulmer 45). And while Ulmer states that there is no general case for his chorographic method, this does not mean that it is impossible to analyze and understand a given historical moment of invention, and to understand the technological, social, and semiotic effects of a given instance of inventiveness. Where Ulmer’s approach opens the door to an understanding of the first moment of medial invention – the actual process of

---

19 An analogy could be drawn to the programming practice of *bootstrapping*, whereby one codes a very rudimentary system for writing code in one language, and then uses it to write and progressively refine a more complete version of the system to create the complete environment. This practice is more or less the standard method of creating new programming languages now, due in part to the fact that it forces the language to actually solve problems, thus rendering it more than a sterile theoretical exercise. This avoidance of sterile theory is, to a large extent, exactly what Ulmer is seeking to avoid through his performative methodology.
transitioning thought into a new form – it is worth noting that for many of us, our primary engagement with the bulk of medial invention is going to be in its second moment, so to speak. By this I mean that, far more often than we develop new forms of communication, we find ourselves in the face of a supposed technological change and in a moment of flux. Understanding this second moment, then, seems a highly important skill for surviving in a heavily mediated world.

The importance of this survival skill contrasts sharply with the self-evidently silly nature of actual inventiveness. This is the fundamental paradox of the demo. Because what the demo proposes is undefined and new, its rhetoric must be one of proleptic invention. The superficially silly wonders of shininess are, it is true, not themselves dynamic and defined new paradigms for media. But all the same, pretending that they might be and buying into the allure of shininess offer a strange promise.

This brings us back to a point I have mentioned incidentally throughout this chapter – despite the possibly silly aspects of Jobs’s demo of it, the Macintosh actually marked a seismic shift in terms of personal computing. Even though all of the promises of the demo were not fulfilled as such, both Jobs’s demo and the Macintosh itself were successful, and it seems unfair at best to argue that the demo was inaccurate in its promises. In MacWrite and MacPaint, Macintosh refined applications like word-processing and graphic editing in more or less into the forms they still take today It refined concepts of the GUI originating from the Xerox PARC and Engelbart. And it introduced a wealth of small but influential innovations such as the Save As feature. But these innovations do not seem to be the primary content of Jobs’s demo, and in many cases, despite their influence, they are not seismic shifts designed to, as Jobs famously
boasted of the Macintosh, put a dent in the universe. They are well-designed incremental refinements of existing ideas. But they are not shiny or insanely great, even as their relative accessibility compared to more radical inventions serves to make them better at giving a sense of shininess.

Given that we now understand both the stakes of the demo and the methodology by which it constructs both its allure and its changes, we should now move on to the meat of the matter, if you will – the actual business of looking at demos. As I have noted before, there are three case studies I wish to expand upon. The first, Scott McCloud’s vision of the future of comics in terms of the infinite canvas, is useful because it is a case where there is a surprisingly clear manifesto accompanying the technological demos. This allows us to work closely with the ideological components of invention and medial progress, and to work towards understanding of the demo as a phenomenon that encodes more than simply semiotic advancement. The second, the various pushes towards 3-D film, serves as an occasion to understand the difference between the demo and actual medial shift, allowing both for an understanding of what technological progress is (or at least is not), and for an understanding of the demo as negative phenomenon. The third, the 2006 launch of the Nintendo Wii, ends up, despite being the most contemporary of the three, as an occasion to look backwards, relating the demo to the idea of nostalgia, while also looking at the demo in what is in some ways its optimal environment: a medium designed around an ethos of fun that engages in incremental technological development while accompanying each minor leap with great fanfare. Taken together, they will provide a practical exploration of many of the
aspects of the demo that I have formulated in theoretical and structural terms here – most particularly the peculiar appeal of shininess.
FIGURES

Figure 2-1. Screenshot of MacPaint.

Figure 2-2. Screenshot of MacWrite
Figure 2-3. The Macintosh speaks for itself

Figure 2-4. The Macintosh declares its own insane greatness. [The phrase is drawn out visibly on the screen.]
For the most part, the demo is something that is not entirely explicit about its aims. Demos are not shy about what they are doing, but they do generally work by example rather than by spelling out the potential of a new piece of technology. We have already looked at counter-examples such as Jobs’s 1984 Macintosh demonstration, but we should turn our attention now to a particularly evocative, more recent example – that of the infinite canvas webcomic. What is interesting about this technology is that it is promulgated via an explicit manifesto by its creator that insists on its revolutionary potential. In this case the founding document of the new technology does not serve as a marketing tool, but as a polemic directed primarily at comics creators and consumers. The basic term and concept of the infinite canvas was developed by Scott McCloud in his 2000 book *Reinventing Comics*. The idea is simple. McCloud proposes using the capacity of the computer monitor to scroll over parts of a large image to create comics with arbitrarily long pages, which he argues better represent the true form of the comic medium. McCloud’s arguments for why this is the case are flawed, both on their own merits and in terms of how they actually describe both comics that use the infinite canvas and comics that serve as antecedents to his proposal. This in and of itself is not surprising – nor is it surprising that, despite these flaws, the infinite canvas is actually an important technological advance. What is interesting about McCloud, however, is that he presents his technological innovation in the form of a manifesto. This means that several elements that are generally implicit in demos are made explicit in McCloud, most notably in terms of how demos misrepresent and rewrite the history of a medium in presenting its ostensible future.
McCloud’s argument has been widely picked apart by critics, and it is not my intention to repeat this process. Rather, I am interested in the ways in which McCloud’s demoing of the infinite canvas specifically rewrites and misrepresents important aspects of comics, generally; these misrepresentations are, moreover, typical of the demo, generally: McCloud, in effect, is a case where the rhetoric of potential in the demo is made explicit. Reinventing Comics serves as a manifesto for the technology, making the utopian claims of the demo directly, and thus allowing those claims to be closely analyzed in order to determine their role in the operations of the demo’s creation of user fantasies of the technology. Specifically, Reinventing Comics makes explicit a key aspect of the demo’s disingenuousness – it is not merely that the demo makes a disingenuous claim about the potential of a given piece of technology. Rather – and this is crucial to the exemplarity of McCloud’s polemic – the demo makes a disingenuous claim about the entire apparatus of communication. The lie in the promise is not merely that this technology removes the limitations of language, but that it is possible to remove those limitations in the first place. This second falsehood is more implicit than the first – because demos usually focus on showing the new technology, their conception of the broader nature of mediated communication is often merely hinted at. But in the case of McCloud, with his explicit manifesto of how comics work, we can see clearly the sort of radical reconceptualization of mediation characteristic of demos.

In practice, this rewriting takes place in McCloud through a rewriting of much of the history of the comics medium. This rewriting occurs in two ways. First, McCloud

---

20 Among the most notable critiques on the serious side are issues 232 and 234 of The Comics Journal, which include significant critiques by Gary Groth and Dylan Horrocks, among others. McCloud’s approach has also been attacked more humorously by comics such as Penny Arcade.
misrepresents the potential of his own invention. This is not because he is wrong that the existing infinite canvas strips are good or innovative, but because he is wrong about why they are. Second, McCloud’s positioning of the infinite canvas as the true and purest expression of comics, rewrites and erases large swaths of what comics historically have realized as medial forms in their own right. This revisionism comes in two main forms: his treatment of the large format comic strip tradition exemplified by Winsor McCay and George Herriman, and McCloud’s treatment of superhero comics. In the former case, McCloud uses the large format comic strip as an historical and conceptual antecedent for his view of the infinite canvas, despite the fact that the actual strips do not generally behave in the way he proposes. In the latter case, McCloud presents an inaccurate and simplistic view of superhero comics so as to create a straw man to which he opposes the infinite canvas.

Reinventing Comics, although it is often reduced to the few pages on the infinite canvas, is actually a book with a much broader argument – the attempted repair and saving of the comics industry in general. One of McCloud’s main targets of criticism is the superhero comic, which constitutes the bulk of the American comics industry. McCloud repeatedly refers to works in the genre as “adolescent power fantasies,” declaring at one point that “superheroes are first and foremost about role-playing – becoming the character” (McCloud, Reinventing Comics 118). Based on this assumption, he rejects a vision of comics that is centered on on multimedia technology. This rejected view offers a more and a more “immersive” view of comics that resembles in many ways the utopian fantasies of Janet Murray and the like. McCloud asks, “If you were a Spider-Man fan, would you want to see him in partial motion or full motion?
Would you want to see him in 2-D or 3-D? In little boxes or on a full screen? In fact, would you want to see him at all if you could be him instead?” (McCloud, Reinventing Comics 212-13). Since comics are, in McCloud’s view, inadequate to this purpose (and thus inadequate to the aims of superhero comics entirely, as McCloud sees it), by shedding the immersive power fantasies of superheroes comics can regain their true form.

Although, as I said, McCloud’s argument has been picked apart extensively, the leaps of logic required by it are worth examining in terms of their implications for demos more broadly. The declaration that a Spider-Man fan wants primarily to see the character in 3-D, on a full screen, in full motion, is clearly refuted by the enormous and varied texts and paratexts of the Spider-Man franchise. As an empirical fact, Spider-Man fans are perfectly happy to see their favorite character in nearly any form – film, comic, television, video game, trading card, action figure, lunch box, and so on. Indeed, it seems like this a general characteristic of fandom’s relation to the superhero character – a fundamental indifference to the medial form the character takes. But the real staggering moment of McCloud’s argument comes when he suggests that the aspiration of Spider-Man fandom is to become Spider-Man.

This claim is problematic on a number of levels. First of all, it is characteristic of a view of narrative and mimetic practice of identification and becoming a character that is suspect at best. But the claim is particularly absurd when applied to superhero comics. Canonically speaking, Spider-Man is an inept, socially awkward teenager whose parents are dead, who is hated and hunted by citizens of the city in which he lives, and most particularly by his boss, and who is personally responsible for the deaths of his
adoptive uncle, his girlfriend’s father, and, eventually, his girlfriend. The level of masochism that would be prerequisite to wanting to be Spider-Man is absolutely staggering. And Spider-Man is far from the only character like this.. Superheroes are almost universally marked by deeply traumatic origin stories. Batman is a more or less psychotic figure obsessed with his grief at seeing his parents murdered by a petty criminal. Iron Man is an alcoholic whose armor serves the primary purpose of keeping a piece of shrapnel from piercing his heart. Superman is an orphan in perpetual mourning for his entire race. The X-Men are the subject of multiple government programs to actively exterminate them. Any reader who wants to be a superhero is engaging with the comics on a superficial level.

Yet, McCloud is correct in opposing superhero comics to the infinite canvas, but not for the reasons he suggests. Earlier in his argument, McCloud declares that “I don’t think there’s anything intrinsic to comics that restricts it to such power fantasies” (McCloud, Reinventing Comics 118). True enough, there is nothing that restricts comics to instances of superhero narrative. But on the other hand, McCloud is, I think, flatly wrong that there is not a strong relationship between comics and superhero stories, and that comics are not the ideal medium for them. The problem is that the reason this is true cuts against McCloud’s fundamental assumptions about how comics actually function as medial forms. In one of his more dramatic statements, McCloud proclaims that comics correspond to an artist’s map of time. That is, comics are about the subjugation of time to space. However, nearly the opposite is true: superhero comics function because of the way in which comics exist in time.
One of the fundamental advantages of comics as a medium is that they have a relatively cheap production cost, and can be published and distributed at a high speed, allowing them to readily operate as a daily, weekly, or monthly medium. When wedded with a distribution system such as the magazine racks or, subsequently, the direct market, both of which are based on continually selling the newest installment of something, comics quickly become a medium well-suited to long-form serialized story. Indeed, comics enable a sort of extreme serialization, characterized by the fact that, for instance, *Action Comics* is, at the time of writing, approaching its 900th issue, all of them at least in part about the adventures of Superman. These issues, published over the course of over 70 years, form a continual serialized narrative – one that, due to the fact that DC Comics’s main superhero line crosses over internally, is shared with over 850 issues of *Detective Comics*, along with hundreds of DC issues featuring Wonder Woman, Green Lantern, the Flash, etc.

The only other popular medium currently in sizable production to even attempt this sort of extreme serialization is television, in the form of the soap opera and *telenovela.* But the production costs of television are too high to use for the sort of high-action stories that characterize superhero comics, thus leaving comics as the sort of last medium standing in which a superhero story can be related in a serialized fashion. All of which is a tangential if McCloud is right that superhero comics are just power fantasies. But it makes much more sense if superhero comics are understood as a genre that is based heavily on principles of serialization themselves.

---

21 A few other arguable cases exist. Historically, movie serials filled a role along these lines, though they are no longer a meaningful part of the film industry. There is also some case to be made for the large book series characteristic of the science fiction and fantasy genres. But even in these cases, it is rare for the serialization to be measured in decades, as it is for both comics and soap operas.
It is outside the scope of this chapter to mount a full exploration of the narratology of superhero comics. So instead I will limit myself to a narrow band of contemporary comics texts that show effects of extreme serialization most clearly. Between 1985 and 2009, DC Comics published three miniseries — *Crisis on Infinite Earths*, *Infinite Crisis*, and *Final Crisis* — that form a loose trilogy. Each of these miniseries dealt heavily with the overall continuity of the DC comics line, and were explicitly concerned with the diegetic status of the “DC Universe” — a term, which, as I will show, is vexed for a number of reasons. Regardless of the quality of the material (and I will admit affection, if not respect for this trilogy), it is clear that these comics make use of, even depend upon, aspects of time and seriality that are actively marginalized in McCloud’s conception of comics.

The story of *Crisis on Infinite Earths* came about primarily to solve a specific problem facing DC Comics. In the 1950s, DC rebooted several superhero franchises from the World War II era that had been abandoned. Characters such as The Flash, Green Lantern, and Hawkman returned, generally in completely new forms and with new origin stories. In 1961, the comic book story “Flash of Two Worlds!” was published, and in it the modern Flash, Barry Allen, inadvertently travels to an alternate universe where the World War II-era Flash — which Barry Allen had thought to be a fictional comic book character — is real. The success of this issue led to a widespread revival of other Golden Age concepts, which eventually developed into a fully fleshed idea that the 1950s Silver Age comics took place on an Earth referred to as Earth-One, while the Golden Age stories took place on a parallel, if distinct, Earth-Two. These two Earths were part of a much larger multiverse that included the Earths of various comic book
companies DC had acquired, another Earth called Earth Prime which was supposed to be the real world (although it had its own Superboy), as well as varying alternate universes such as Earth-Three, in which all of the good characters in DC are evil, and the evil characters are good.

By the 1980s, two significant things had happened. First, the multiverse, which had never been comprehensively planned so much as opportunistically accreted, was beginning to collapse under the weight of its own complexity. Second, comics had transitioned from being sold primarily on newsstands to being sold primarily through specialty comics shops to a self-selecting readership of dedicated fans. This led to DC publishing the 12-issue *Crisis on Infinite Earths*. The purpose of this comic was to unify DC’s continuity into a single cohesive universe, and in the process to abandon the multiverse in favor of a single Earth. This is a significant milestone in modern superhero comics, in that it is the first time a company published a comic specifically to clean up and consolidate its own continuity. In other words, *Crisis on Infinite Earths* marked the first time that a comics company had published a series in order to address problems that the company’s product, broadly considered, had developed as a consequence of its success.

In retrospect, *Crisis on Infinite Earths* is a bit of a mess – it lacks a definite main character, or, for that matter, clear characterization. It depends on an extremely savvy and knowledgeable reader, knowledgeable about the state of comics in 1985 and well aware of the intertextual system that the series undertakes to simplify. And it just feels a bit dated, with over the top dialogue such as villains shouting “This is the day the universe dies!” (Wolfman and Perez 342) However, the comic did accomplish its
primary goal. The plot concerns a war between a godlike being called The Monitor, who has watched over and observed all aspects of the Multiverse, and his antimatter counterpart the Anti-Monitor, who has begun wiping universes from existence. The result of the battle is the collapse of the Multiverse into a single universe, with no heroes remembering the events of Crisis on Infinite Earths, and the events of all comics prior to Crisis on Infinite Earths being erased from history, allowing new origin stories for various characters.

Twenty years after Crisis on Infinite Earths, DC revisited the concept with Infinite Crisis. The basic premise of Infinite Crisis is that four surviving characters from Crisis on Infinite Earths who, at the end of that story had been transported away to an unexplained paradise, return to the DC Universe. These four characters were Alexander Luthor, the “good” Lex Luthor from Earth-3, Superman and Lois Lane of Earth-2, and Superboy of Earth Prime.

Where Crisis on Infinite Earths was a story richly steeped in DC continuity, Infinite Crisis frequently crosses over to out and out meta-fiction. Much of this stems from the central role of Earth-2 Superman. Because of the retconning of the Golden Age Superman comics to where they took place on an alternate Earth, the return of this character is, within DC continuity, also the return of the Superman who had debuted in Action Comics #1 – a version of the Son of Krypton who had not appeared at all in DC

\[22\] The term is short for “retroactive continuity,” and refers to the practice in serialized work of having a later story revise the events of a previous story, in effect telling the reader that the previous story did not happen as published. Perhaps the earliest example of this is Sir Arthur Conan Doyle’s resurrection of Sherlock Holmes in the story “The Adventure of the Empty House,” which proposes an interpretation of Holmes’s seeming death in “The Final Problem” that is plainly at odds with the intent of the story when it was published.
comics for twenty years, and had not appeared regularly since about 1958. Thus his return is, in a literal sense, the return of the origin point of DC Comics itself. This is stressed repeatedly in the story in various ways. Earth-2 Superman, for instance, declares “This is what the world does to legends. It corrupts them… or it destroys them” (Johns et al. 24-25). Given that he is, at this moment, talking about superheroes – i.e., about beings like himself – this becomes an explicit claim that the DC Universe has, in some fundamental sense, fallen away from the core ideas of the characters that defined it. This theme reaches its peak when Earth-2 Superman confronts the present-day Superman. As is the norm for such stories, prior to allying they must fight, and Earth-2 Superman starts the fight by lifting a car and hitting Superman with it. This image, which is done in a splash page to emphasize its importance to the story, is a visual mirror of the famous cover of *Action Comics* #1, the founding image of Superman. Thus the character who is literally a representation of the initial element of the DC Universe attempts to intervene in the current DC Universe via a visual recreation of his origin, serving to attempt to rebirth the DC Universe and, in a literal sense, to return it to its original concepts. And the role of Superman as the origin point of this is confirmed both metatextually, via the intertextual allusion to the *Action Comics* #1 cover, and

---

23 The details of the transition away from what was retroactively called Earth-2 are somewhat muddy, as not all parts of DC’s publishing line explicitly made the shift at the same time. The idea of Earth-2 was established in a *Flash* #123, published in 1961. The Flash was one of several characters that DC brought back in the Silver Age with a completely new origin and concept, and in that issue the Silver Age Flash traveled to an alternate world where the Golden Age version existed. Superman, however, did not have a break in his publication history, and so there is not a clear point of transition where the Superman stories moved to a new version of the character. By the time anyone got around to trying to resolve this difficulty, Superman had already had his entire origin rewritten following *Crisis on Infinite Earths*, and so there was no reason to go back and set an explicit transition point, since at that point all of the pre-Crisis Superman stories were set in an alternate world of one sort or another. The 1958 date represents the point where DC’s publishing of archival material declares that Superman made the transition to the Silver Age. I consider this fuzziness to be further support for my central contention in reading these comics – that the use of past stories and continuity is best understood as a sort of metaphoric, intertextual engagement with the franchise’s history rather than as a sort of literal interaction between imaginary people.
diegetically, when Alexander Luthor, musing on the nature of the various worlds of the DC Universe, “For some reason I can’t explain or understand, and probably never will, everything comes from Superman” (Johns et al. 163). Thus Superman’s literal status as the origin point of the DC Universe becomes inscribed as an ontological rule unto itself within the DC Universe.

This metatextuality takes its strangest and most explicit form in the third Crisis miniseries, Final Crisis. Written by Grant Morrison, Final Crisis takes the framing of Infinite Crisis and makes it the explicit content of the storyline. In the course of the story, Superman, in the space between the parallel universes that comprise the multiverse (which was reconstructed after Infinite Crisis), ends up in a place called Limbo, a world where “there are no heroes and nothing ever happens” (Morrison et al.).

In Limbo, Superman encounters a Borgesian book comprised of every possible book ever written. This meta-book tells of the encounter between the first Monitor (having re-established the Monitor from Crisis on Infinite Earths as one of an entire species) and the concept of narrative itself. The Monitor, in this original conception, is an infinite and limitless possibility. Stories, then, are viewed as a threat to the Monitor, and eventually corrupt the Monitor, turning him into an evil cannibalistic Monitor called Mandrakk.

Superman enters the realm of the Monitors, a sort of transcendent Platonic realm. Here things get very weird, as Superman fights Mandrakk, the dark Monitor who seeks to consume the entire multiverse. Superman narrates: “I’m inside a self-

---

24 Limbo and its ruler, Merryman, will be familiar to avid readers of Morrison’s work, as they appeared 20 years earlier in Grant Morrison’s run on Animal Man. Animal Man was in many ways a precursor to Morrison’s later superhero work, in that the series became progressively more meta-textual as it went on, including Animal Man becoming aware of his readers, and finally having a confrontation with Grant Morrison himself over the ethics of Morrison’s decision to kill off Animal Man’s family. Animal Man makes the nature of Limbo more explicit – it is the realm of forgotten and abandoned comic book characters.
assembling hyper story! And it’s trying its best to destroy me. And yet I’ve never known such perfect certainty. This is my reason to be. My purpose is simply to stop him.” Later, Superman is described more explicitly: “I found a better story; one created to be unstoppable, indestructible! The story of a child rocketed to Earth from a doomed planet…” (Morrison et al.) Thus in Final Crisis the metatextual framework of the trilogy, and by extension of the DC Universe, is made wholly explicit: Superman is represented as a foundational force that orders the nature of the DC Universe. And so when the creation-threatening crisis of Final Crisis unfolds, it is finally stopped by the fundamental and axiomatic assumption that Superman is an ordering force of the superhero comic realm, defined as the embodied, personified principle of that which saves the day.25

Although the three DC Crisis storylines take this metatextuality to an extreme level, they for the most part only make explicit what has long been a part of superhero comics. From the 1960s on, for example, Superman comics regularly engaged in a sort of active challenging of the premise of Superman comics, as in, for instance (and I pick this example nearly at random; there are others of this kind), Action Comics #270, which posits on its cover the franchise-breaking concept of a geriatric Superman. This concept cannot be delivered on fully without rendering Superman no longer a useful vehicle for telling stories, and the fundamental intrigue of the cover is thus a sort of “how are they

25 For the purposes of directness, I omit the role of Batman in Final Crisis. Parallel to Final Crisis, Morrison penned a Batman storyline entitled Batman RIP, one of the major aspects of which was the assertion that Batman is always prepared for everything, and thus always wins. Early in Final Crisis, Batman is kidnapped by the villains of the story. Parallel to Superman’s saving of the day is Batman’s sudden emergence from captivity to defeat Darkseid, who, along with Mandrakk, is the main villain of the story. The story of Batman’s escape is told in a two-part tie-in to Final Crisis published in Batman where he escapes from captivity in part by using his own backstory and origin as a psychic weapon against them. Thus, to be proper, Final Crisis is not merely about the axiomatic role of Superman, but about the particular balance of Superman and Batman as axioms underpinning the DC Universe. This is not surprising; Superman and Batman are the two superheroes upon which DC Comics and their main superhero universe were built.
going to get out of that?” puzzle. What is interesting is less how Superman will cope with old age as the question of how the writers will manage to successfully write the concept while preserving the basic idea of Superman.

But on a more fundamental level, comics are enmeshed deeply in a continuity fetishism. Even less metatextually—self-conscious stories in modern superhero comics depend heavily on the return of long-ignored characters, and an endless back and forth between dramatic (and inevitably temporary) changes to a character’s status quo and storylines that restore the character’s “classic” version. A fundamental pleasure of superhero comics is the accumulation of insider knowledge necessary to appreciate the intertexts of these stories. Thus the superhero comics tradition, at a basic level, reflects upon its own past as a genre and form.26

The question is, then, do stories such as the DC Crisis storylines have to be told in the medium of comics? While I am not willing to go so far as to say that they must be told in comics, it seems to me clear that comics as a medium – particularly, serialized comics – are very well-suited to them. The reasons, however, have little to do with McCloud’s definition of comics as an artist’s map of time, and much to do with the particular historical conditions of comics publication and reception, and their economic and technical suitability to iterative, long-form storytelling. It is not a coincidence that the modern superhero story emerged specifically through comics. Though the aspects of comics that facilitated its emergence – low production costs, serialization, and the ability to develop epic storytelling systems for little expenditure of money and artistic effort – are not the aspects on which McCloud focuses his definition. These aspects of

26 See also (Sandifer).
superhero comics remain a historical reality of the medium, and thus a part of how the comics operate as a medium.

McCloud would perhaps argue that my objection is disingenuous, and that I am attempting to treat the historical accident by which superhero stories established themselves as an attribute of the medium, when in fact it is just dumb chance in publishing. And indeed, McCloud and others would no doubt point to the wealth of comics of 1940s and early 1950s, in numerous genres, as evidence that in fact superhero comics were just one route that comics could have taken in American popular culture. The only reason they are the dominant form of contemporary American readership is because they happened to be one of the few forms that survived a major push towards comics censorship initiated publication of Frederic Wertham’s 1954 Seduction of the Innocent, a now much-criticized (especially by McCloud) attack on comics as psychologically debilitating.27 This potential objection seems to me inadequate for two reasons.

First of all, a reading of Seduction of the Innocent gives little sense of why superhero comics might survive the ensuing moral panic. The book is chock-full of attacks on superhero comics, including a memorable passage describing Batman and Robin as an idyllic representation of homosexual bonding.28 Thus their survival through the moral panic seems decidedly non-random. It is not that they were spared the wrath of Wertham and other critics and thus survived – it is that they were a strong enough

---

27 McCloud’s pantomime attack on Wertham in Reinventing Comics is characteristic of the attacks. A contrary view can be found in Bart Beaty’s Fredric Wertham and the Critique of Mass Culture.

28 This is not as unreasonable interpretation, as Will Brooker notes in Batman Unmasked. More broadly, the idea of Batman and Robin’s homosexuality has become a significant joke in comics fandom, with several websites devoted to locating panels from comics that are suggestive in this regard.
genre that they were able to survive the moral panic. This in turn suggests that, although other genres were popular before 1954 than they do today, the superhero genre was always central to fundamental aspects of comics practice\textsuperscript{29}.

Second of all, and more significantly, McCloud’s argument requires that we treat comics as a theoretical construct instead of as a historical, material-cultural phenomenon. It requires that we take a theoretical and formal description of the medium as evidence for what comics are instead of observable aspects of the medium’s development and impact. It ignores the fact that superhero stories are generally told in comics because comics were (and largely remain) the best available medium for this widely-read, arguably predominant (at least in the US) comics genre. This is a crucial step for McCloud’s larger argument, because it allows him to shift the grounds of the issue away from practical development and towards an imagined concept of comics that he can bill as capable of fulfilling the utopian role his larger demo of the infinite canvas requires.

This revisionism is not, strictly speaking, an error on McCloud’s part. Rather, it is a necessary aspect of the demo of the infinite canvas. The argument that the infinite canvas is a better form of comics requires that comics not be the material objects – with an exceedingly complex material culture, and social and political history – that were developed prior to the World Wide Web and the infinite canvas, but rather that they be a pure (and wholly imagined) form that is merely aspired to in a narrative proposed by

McCloud as the baseline of a “new and improved” version of an existing medium. This is characteristic of one of the foundations of the shininess of the demo – by decoupling a medium from the complexity and inconsistency of its actual historical instantiations the demo locates the medium’s realization as a communicative medium in a proleptic aspiration.

I want to stop short, however, of suggesting that a definition of comics as a whole should be based on of the serialization and rich intertextuality of superhero stories. Though this is without a doubt a major element of modern American comics, one ought also focus on related methods of the newspaper comics tradition. Here, although serialization is still important, the rules change significantly. And, as it is in this tradition that McCloud primarily situates the Infinite Canvas, his treatment of newspaper comics, even though it marginalizes superhero comics, may be an attempt to prioritize the newspaper tradition over the comic book tradition.

One may well object with my equation of the infinite canvas with the large-form work of McCay and Herriman, and the broader tradition to which this work belongs. McCloud does not mention McCay or Herriman in the lead-up to his presentation of the infinite canvas. But McCloud does not mention any traditional comics in this lead-up – his sole examples are things such as Trajan’s Column and the Bayeux Tapestry. This is itself a significant misrepresentation of the prehistory and history of comics. But McCloud does tacitly cite more conventional examples from the history of comics in an earlier section of the book in which he lists nine artists who were “willing to challenge

---

30 One would also, of course, want to pay considerable attention to the manga and bande dessinée traditions, but as McCloud largely ignores these in favor of a US-centric view, I will not include them in the present analysis. That said, given that they do not share the formal complexity, textual inconsistency, and relations of reader fantasy that seem to anger McCloud, it is puzzling that he leaves them out.
the status quo and exploit comics' great untapped potential (McCloud, *Reinventing Comics* 115) After all, it is made clear by the end that this potential is specifically the breaking of the limits of the traditional comics page. And indeed, this list of nine contains four artists who are identified with the large form tradition – both McCay and Herriman, as well as Will Eisner and Chris Ware.\(^{31}\) It is clear, then, that these artists’ works represent, for McCloud, a fundamental antecedent of the infinite canvas.

This tradition, then, can be broadly expanded to include the whole of the early newspaper cartoonists who took advantage of the full-page newspaper format common at the time. This tradition, it should be noted, was only a small part of the early newspaper style – far more strips worked in a simple format where the arrangement of the panels was incidental than used the full page. But it is a well-established tradition in comics, with modern derivatives to be found not only in Chris Ware, but also the late Sunday strips of Bill Watterson’s *Calvin and Hobbes*, and in Berkley Breathed’s *Opus*, each of which ran in half-page format that depended on a use of space beyond the simple progression of panel to panel.

What is interesting is the degree to which McCloud’s conception of how the infinite canvas works is contrary to, and in some respects I will argue, directly opposed to how these strips actually work as medial objects. It is not my intention here to systematically study large form newspaper comics, but I want to look specifically at the three main artists McCloud discusses – McCay, Herriman, and Ware, and more broadly at some of the traditions that follow from them, as this is an area in which McCloud is

\(^{31}\) The other five consist of four who are more identified with the social experimentalism of the Underground movement: R. Crumb, Harvey Kurtman, Art Spiegelman, and Dan Clowes, as well as Jack Kirby, who fits into neither category particularly well.
particularly disingenuous about how the overall medium of comics works. I will begin
with McCay, about whom much has already been written. Although there is much to
discuss about all parts of McCay’s work, I will focus on Little Nemo in Slumberland.
In a superficial sense, Little Nemo appears to be a shining example of McCloud’s
principal claims. It is a strip that takes full advantage of the lush, large canvas it has to
work with, working with intricate panel layouts and large views that are simply not
possible within a more limited page. And this is precisely what is most often praised
about the strip.

That said, although there are many instances in Little Nemo strips where McCay
uses the formal elements of comics in creative and innovative ways, the most consistent
formal aspect of the strip is more constrained. The lone element shared by every Little
Nemo strip is the final panel in which Nemo awakens from his dream. This panel is
roughly the same size in every Little Nemo strip – approximately 3.5 inches in each
direction (although it is not generally a square on any given day). And, more
importantly, the panel, while not the most visually striking element of any Little Nemo
page, is always allowed to take priority over adjacent panels in making design and
narrative decisions. For instance, in the July 1, 1906 strip, panel number six is a
staircase shaped panel that stretches the width of the page, and gets progressively
shorter as panels 2–5 grow longer above it, with each panel being an inch and a half
longer than the one before it. Panel 7, however – the final panel, is a quarter-inch

32 Unless otherwise discussions of Little Nemo strips are based on the Peter Maresca-edited So Many Splendid Sundays volume. Maresca’s focus on recreating the original coloration of the strips, and the fact that Maresca actually reprinted the strips at their original size, allows for accurate measurements. Due to the difficulty of reproducing the Maresca images, however, and the fact that much of the appeal of his collection is its reproduction of the material in its original colors and size – both advantages that would be lost in reproduction here – I have opted for scans from the Comic Strip Library (http://www.comicstriplibrary.org) for my illustrations.
narrower than panel 5, which sits above it, and the staircase panel begins what would be its shortest tier, extending a quarter inch under panel 5 before being cut off by the final panel. This is an extreme example, but it is common to see the final panel intrude as an inset over a large page-wide bottom panel, at times, as in the March 21, 1909 strip, even obscuring part of the action of that panel.\footnote{To be fair, this technique, although common later in the strip, was slow to evolve; it is not until 1906 that it is firmly established. Prior to that, although it was occasionally used, McCay structured the page around the final panel more conventionally, often setting a final row of panels of the same height and similar width to the final panel.}

Not only, however, is the final panel allowed to take precedence over other panels, it is both narratively and graphically the focal point of a given strip. This is true both on the simplest available level – the lower right is the end point of reading any comic, even an infinite canvas comic – and at times on a more complex level. The best example of this is the third Little Nemo strip, from October 29, 1905. In this strip, we see an early instance of McCay’s allowing the final panel to overwrite previous panels, as the staircase design is disrupted by the panel’s extension into the panel before it. But more importantly, the staircase panels (as Nemo falls off of his stilts) form the dominant feature of this strip – a diagonal line running from left to right. This line is constructed by two things – first, the staircase heights of the panels. But secondly, and more importantly, Nemo himself appears in each panel in a line parallel to the slope of the staircase. In each iteration, Nemo tilts slightly more forwards, falling. What is most significant here is that this line is anchored in the lower right-hand corner, via the final panel, which features Nemo falling out of his bed in a position on the page that makes him part of this line, and continues his lurch forward from the previous panel.
The final panel structures the rest of the strip from the end. This may seem like an obvious assertion, but it is a significant departure from principles of the infinite canvas, inasmuch as, on a newspaper page the end of the comic has a defined and necessary position. *The material traits of the comic are defined by the traits of the page.* And furthermore, the page is not, in the case of the October 29, 1905 strip, a constraint that reduces the expressiveness of the strip. Without the clear endpoint of the strip at the lower-right, and the pre-defined width of the page that divides into five equal parts, there would be no space to bisect with the diagonal line. There is, to my mind, no viable way to interpret the October 29 strip having been limited in its ambition and design by the page. Rather, the strip was built within the defined frame of the page, and its entire structure was based on the available dimensions and vertical orientation of the page in a way that is not limiting. The page was not a constraint that affected and limited the design, but rather the basic structure that the comic was created within.34

Certainly the infinite canvas, by its nature, is flexible enough such that these constraints could be added back in – there is no reason why an infinite canvas strip cannot have set dimensions that allow for a bisection. But this seems to me to set aside McCloud’s basic premise in his endorsement of the infinite canvas – if the way that infinite canvas comics utilize well-established expressive tropes of comics is to ignore the concept of the infinite canvas in favor of an artificial page, it does not speak highly of the concept. This is perhaps clearest in relation to the September 23, 1906 *Little Nemo*

34 If anything, the October 29 strip demonstrates the opposite tendency – it is perhaps a bit small for the space it occupies. After all, the defining diagonal of the page reaches only about 2/3 of the way up the side of the page, and the top third of the page is devoted to a fairly staid panel layout. The strip, however, does need this top section to balance it – it serves in many ways as a second anchoring point opposite the final pane. It further defines the space of the canvas, and thus makes the diagonal line a line that bisects something particular, as opposed to an arbitrarily defined field of space.
strip. This much-remarked upon strip’s central feature is a series of five tall panels of consistent width in which an elephant walks ever closer to the point of view of the comic, until the elephant is so close that his trunk is the width of the panel. This zoom on the elephant is, as a technique, defined by the constraints of the page. The width of each panel, at three inches, is defined primarily by the overall size of the printed page. The dominant creative feature of the comic here stems, in other words, stems directly from the decision to have five tall panels and the material constraint of the page.

Yes, the comic could be done as an infinite canvas strip, but to do so – while preserving the formal, visual grammar of the strip – would require recreating constraints of paper in the new medium. There is nothing about the infinite canvas that leads organically to the decision to organize the panels with a fixed and constrained width. This idea can only emerge through print comics, via the constraint of a finite canvas of pre-determined size, in the newspaper page. Thus McCloud, by situating these large-form comics as an antecedent to the idea of the infinite canvas, is presenting a view of the history of comics that neglects a basic trait of these images that is contrary to his praise of the expandability of the infinite canvas. More to the point, as with his marginalization of the intertextual and serial structure of superhero comics – neglecting these crucial formal traits of the genre in favor of the genre’s possible affective significance – McCloud’s revision of comics history involves taking things that are actually material assets of comics – their uses of serialization, self-citation, and of the boundaries of the page and issue – and claiming that they are deficits and flaws in the technology.
Like McCay, George Herriman’s masterwork, Krazy Kat, had the luxury of full newspaper pages, which for McCloud serve as the nearest analog to the expandability of the infinite canvas. Also like McCay, Herriman took advantage of this larger format to produce comics that can still be seen as daring and experimental many years later. More unfortunately, like McCay, Herriman was not particularly popular in his own time.35

Unlike McCay, however, the bulk of Herriman’s innovations were not formal. Where McCay is not generally viewed as much of a writer, Herriman’s dialogue, rich in a New-Orleans inflected dialect, is often singled out for praise. Moreover, Herriman’s uses of the page also grew quite adventurous, especially in the latter years of the strip. Where McCay used layouts for narrative effect, Herriman used his layouts in a more purely visual sense, arranging his panels seemingly for the sole purpose of laying out the comic as a coherent and single page36.

It was in roughly the last three years of the strip, however, that Herriman really began to experiment with the formal potential of layout. The July 13, 1941 strip, for instance, abandons all pretext of regular shape in the panels, largely sacrifices the notion that the panels should be read in a prescribed order (the four panels immediately adjacent to the large panel are ambiguous at best in terms of the order in which they should be read), and has one character who persistently juts out of the edges of panels.

35 Indeed, Krazy Kat only came out because of the direct intervention of William Randolph Hearst, who so liked the strip that he gave Herriman a lifetime contract despite the strip’s lack of popularity. Even still, the last nine years – the only period during which the strip was published in color – only appeared reliably in two newspapers, and only a handful of collections of the full run existed. Interestingly, one of these – the one that was, until a few years ago, the basis for all republications of the Sunday strips – was preserved by August Derleth, who was also largely responsible for the survival of the works of H.P. Lovecraft.

36 This is not to slight the earlier years of the strip, which were still more innovative in their use of the page than most of what was being published. But these innovations were generally limited to a few inset panels, panels set at odd angles, or panels that bled into each other. That said, even here his approach was markedly different from McCay’s.
An even more extreme example appears in the May 30, 1943 strip, near the end of the Krazy Kat's run. This strip allows for chaotic and irregularly shaped panels that intrude over each other, generating an overall disjointed effect. The visual anchor of the strip is panels four and five, which sit roughly in the center of the page. But unlike earlier strips where Herriman’s center panels simply determine the shape of everything around them, here there is no clear cause for the disordered panels. Panel six, for instance, juts up into panel three for no particular reason other than fitting lengthy word balloons in, and panel two is shaped as much by the pentagonal title logo as by any panels around it. Furthermore, the title logo is not even a regular pentagon – it extends considerably further along its upper horizontal side than on its vertical on the right. Some of the panels – most notably one, three, and eight – look as though, all things being equal, they would have been normal rectangular panels, but others, such as six and four – are clearly just strangely shaped on their own, and determine the shape of those around them. (Four, indeed, visibly intrudes into two, obscuring part of Officer Pup’s body). And then, for equally unclear reasons, panels nine and ten are perfectly normally shaped rectangular panels.

What is interesting about both of these seemingly formally anomalous strips, however, is that they are arranged quite carefully in relation to the borders of the page. This is perhaps clearest in the May 30, 1943 strip, though much of my analysis applies to the others. As I pointed out, there is nothing about the content of any of the panels that dictates it’s shape. That is not to say, however, that the panel shapes are simply arbitrary. With the exception of the internal panels – four and seven – the panels are
shaped by the borders of the page, which in turn determines the framework in which panels four and seven can be shaped and positioned.

This technique is also marked in one of the latter-day artists McCloud identifies as being among the greats of comics, Chris Ware. What is interesting in this respect about Ware’s comics is that they are intensely invested in material attributes of their presentation. Ware’s The Acme Novelty Library, a compilation of strips from his Acme Novelty Library series, is an immaculately designed book that repeatedly calls attention to its own craft. Furthermore, this design is in no way incidental. The book has two tiny comic strips running down the edges of the front and back cover, as well as a comic strip hidden on the inside of the band that runs around the cover, which can only be read if the band is removed. On top of that, the interior pages are full of interspersed black and white pages with numerous fake advertisements wrapped around short comic strips. The book also contains a middle section that encourages cutting out and reassembling pages into various folding projects and flip-books. All of this presentation of the strips is clearly heavily based on the technology and material constraints of paper.

The comics that are the main feature of the book are similarly intricate – one strip contains a staggering 98 panels on a single page (Ware 81). This use of space and its visual impact rely on a specific compression of information in a specifically-contained space. Although there are some infinite canvas strips that are structured similarly, pushing many small panels into a vast space, in the context of Ware’s larger book this packing of panels is a clear part of a larger aesthetic of condensing information down. an aesthetic that matches with his crisply geometric drawing style. This also matches
his thematic investments – the obsessional character of the design mirrors closely the neuroses and obsessions of Ware’s characters. Ware, despite being a comic artist who works primarily with large pages, and an artist whom McCloud praises for his use of layouts, has an aesthetic that is in several respects, then, diametrically opposed to the infinite canvas. His comics are based on an aesthetic of saturation – of overfilling and over-packing the page. And this sense of obsessive over-saturation feeds the themes of anxiety and depression that recur in Ware’s work. The infinite canvas’s opportunities for decompression, spreading out, and luxurious use of space are in fact opposed to what Ware is doing.

As I have noted throughout these observations, it is not that the infinite canvas precludes as such most of these formal innovations. Rather, it is that the innovations observed in early comic strips are based, expressly, on the use of the defined space of the page. Their expressiveness is not restricted by the dimensions of the page, but rather depend on the page’s material boundaries; expanding the page in any direction would, in fact, dilute the force of the arrangement of visual elements on the page. This, perhaps, is the historical-material trait most actively and thoroughly erased and rejected in McCloud’s account of comics and the advantages of the infinite canvas. McCloud wants for comics to be, as he says at his most grandiose, “an artist’s map of time itself” (McCloud, Reinventing Comics 206).

In other words, he wants comics to be an instance of space dominating and subsuming time. But in fact space and time exist are engages more uneasily in comics than he admits, because of the importance of serialization and intertextuality in the history of the medium, and because many of the most original and influential comics are
often best read in terms of events that take place in a defined space, the limits of which are expressly signaled by the visual organization of the space. A comic is not merely a series of arranged images that happen to be confined to an accidentally-circumscribed visual field (which might then be expanded or reshaped, without changing the meaning of the comic in any way other than expanding its expression), but a materially-constrained event of representation that takes place on a materially-constrained piece of paper. A comic consists, by its nature, of the cutting of space into segments used for the depiction of a narrative. The idea of the infinite canvas, therefore, is no more the “true” form of comics – to which comics would aspire, if it had the correct technology at its disposition – than a play in which the actors are free to wander out of the theater and through the streets is the “true” form of theater, or than unconstrained prose is the “true” form of poetry.

McCloud obscures this basic fact of comics’ visual operations for several reasons, all of which are important to understanding the nature and the rhetoric of the infinite canvas as a species of demo, in the meaning of that term I have argued in previous chapters. First, as I have discussed, he misses the expressivity of the limited canvas for ideological reasons. The infinite canvas is proposed not merely as an idea for a sort of pure and abstract art, but rather as an advancement for comics that fulfills specific goals – most transparently the marginalization of an affective condition of superhero comics’s reception that troubles McCloud. It also serves as a way of repressing the traditions of comics that run counter to his time-based definition. For instance, by getting comics away from the notion of the page, McCloud blunts competing definitions such as Thierry Groensteen’s System of Comics, which takes as
a central feature of its definition of comics the fact that “every drawn image is incarnated and is displayed in a space,” (Groensteen 21) a definition that lends itself much more than McCloud’s to understanding the sort of spatial complexity seen in the comics I’ve already discussed. McCloud recenters comics on a tradition that is more in line with his aims in promoting the innovation and affordances of the infinite canvas.

Such an ideological element is always operative in demos – their rhetoric of technological progress goes hand in hand with a disguised rhetorical aim. Beyond ideological reasons, however, McCloud neglects, misreads, or obscures determinate formalisms of comics – including those he both disparages and praises – because the demo of the infinite canvas requires, as I have observed of other demos, some degree of misrepresentation of the role of constraints in medial expression – which constraints the proffered “new” media technology is designed to lift or revinvent in some important way. This misrepresentation is bound, then, to a fantasy of medial evolution and supersession that is at the heart of the demo.

In a portion of his website dated February 2009, McCloud responds to criticisms of the infinite canvas. One criticism he describes as “art needs limitations.” McCloud’ responds, “It’s true that working within limitations has forced cartoonists to devise elegant solutions over the years, but those solutions were the byproduct of pushing hard against the edges of what the technology of print allowed.” (McCloud, Personal Website) This is a strange claim on several levels. First of all, it appears to rely on a view of mediation and medial change that is staggeringly utopian and naïve. In this view, all medial expression aims at sort of pure communication that can only be impeded by the introduction of constraints, thus the ever-present need for new, more
effective media, which would better approach this pure communication. This utopian line of thinking runs throughout Reinventing Comics, but it is difficult, if not impossible, to square it away with McCloud’s arguments regarding virtual reality and comics. If, as McCloud says, “the promise implicit in the idea of Virtual Reality is the final destination for the collective journey taken by storytellers throughout history, the journey toward the creation of a world so real it can make us forget the one we live in” (McCloud, Reinventing Comics 212), then there is no actual room in McCloud’s formulation for his idea of comics, which depends in some respect on an awareness of the artifice of the comics storyworld and its presentation. (If not, why then the need for the infinite canvas, which specifically aims at representing perceptions of the storyworld that are actually impossible in the “real” world?) McCloud later claims that comics, “having shed some of their original functions, may stand upright again and rediscover their root strengths,” (McCloud, Reinventing Comics 213), but this claim is also impossible to square with the claim only a paragraph before. McCloud is trying to have it both ways, and ends up both contradicting his own claims and missing opportunities to see in the operations of comics prior to the infinite canvas some of the effects he claims are new to the new medium.

But, whatever it misprision of what comics have done and could perhaps do in the digital field, I do not take this as inconsistency to be an error in McCloud’s argument as such, simply because such inconsistency seems to me at some level demanded by the structure of demo, the form of argument McCloud in which McCloud frames his “reinvention” of comics. But it remains, nonetheless, evident—either technological constraints are barriers to a true and perfect communicative experience – to which all
media aspire — in which case comics would be, finally, only an historical stepping stone on the way to Virtual Reality — or comics have a root strength in their material limits, in which case there must be some actual benefit to the technological constraints and conditions of mediation, and the mere existence of a constraint cannot be taken prima facie as a restriction of their expressive potential.

Such a misrepresentation is a necessary element of any demo, in the way I have defined the demo’s operations, and accounts for much of the demo’s allure. What is particularly interesting about McCloud’s demo is not that it is unique in rewriting history. All demos do this to some extent. Rather, what is interesting is the way it does so in the form of a manifesto, which renders this rewriting plainly evident. The idea that medial constraints are problematic or can be shaken off is always an element of medial demos, despite the fact that, as McCloud is clearly aware, a medium is defined precisely by its constraints. The demo, however, has to suggest that medial constraint is something to be surmounted rather than worked within. Thus the history of a medium — a history that is in fact based on the positive usage of constraint for expressive purposes — is revised to become a history of limitation and attempts to overcome them.

That McCloud is compelled by the condition of his demo to misrepresent important aspects of the history of comics, such that the examples he cites must lead to the Infinite Canvas is not to say that the infinite canvas is — in other respects — a bad idea. After all, this revision of history is an essential aspect of the demo. But in successful cases, the end product of this imagined history is at least the successful culmination of the imagined history. In the case of the infinite canvas, however, while there are numerous genuinely innovative infinite canvas strips, and McCloud has
identified several of them, these strips, including some of McCloud’s own work, do not work according to the theoretical vision of comics that McCloud proposes, but rather in the real and material tradition that comics emerged from. One of the most interesting comics McCloud singles out is Drew Weing’s comic *Pup*, of which relatively few installments exist. However, those that do exist make remarkable, innovative use of the infinite canvas. These uses, however, do not stray far from the concept of the page as a materially-coherent and –limiting concept.

The strip “Call of the Mild,” for instance, is a strip that depends on a layout that is very similar to the standard page. In it, one character, Kratzner, wanders through the snow, complaining more and more dramatically of the cold and his impending death from it, before finally arriving at the front door of Pup’s house, where he is offered hot cocoa. The strip’s central joke is that, contrary to Kratzner’s dramatic proclamations, he has in fact only been walking around the yard. But central to this is the fact that the action of the strip, traced by Kratzner’s path through the snow, moves in a circle around the page: when Kratzner arrives at Pup’s house, he is in fact quite close to where he was at the start of the strip. This joke, however, depends on the conceptualization of the comic as happening within a constrained space – the joke is not just that Kratzner was harmlessly wandering through the snow, but also that the space of the comic page means that he cannot actually end up far from where he starts. Thus the joke that he was safe all along is re-enforced by the discovery that, due to the structure of the comic strip as such, he was safe all along.

The strip by Weing that McCloud most often praises is “Pup Ponders the Heat Death of the Universe.” It begins with a lengthy scroll down to reach the first panel,
generating an L-shaped movement of the overall strip; a technique Weing used in earlier strips, though not as significant an effect. From there Pup enters a dream sequence where he flies up from where he is sitting, into outer space, where observes the destruction of the sun and the heat death of the universe, and then floats in cold blackness for a bit before returning to reality when greeted by his two friends asking him to play baseball. As he flies out into space, the size of each panel increases until, in the largest panel, where he is staring at the sun consuming the Earth, the panel is roughly 20x20 inches high, and reaches up such that it is nearly horizontally aligned to the top of the screen where the reader initially was before scrolling down.

On the one hand, this panel is a clear comment on the possibilities of the infinite canvas vs. the traditional page – the 20x20 panel is far too large to fit in any conventional comic that has ever been published on paper. On the other hand, the panel, even as it demonstrate the overcoming of a limit of print, also demonstrates a limit of the infinite canvas. The 20 inch panel is notable in part because it is significantly larger than the dimensions of any consumer monitor on the market today, such that any reader, even if she or he is viewing the strip in full screen mode, will have to scroll up and down to see the entire panel. This move is analogous to the elephant panels in Little Nemo – a commentary on the inadequacies of the panel for containing a scene or an object as large as those depicted. Thus the panel is best understood not merely as a comment on the possibilities of the infinite canvas, but also on the limitations of this mode – limitations that are very much a part of the pre-infinite canvas era of comics.

In contrast to “Pup Ponders the Heat Death of the Universe,” Demian5’s When I Am King is, in terms of its use of the medium, a celebration of the restrictions of the
panel. The strip is a high energy sex comedy that centers on the misadventures of a
king whose tunic is eaten by a camel and who spends the rest of the strip attempting to
recover it, an effort that goes very poorly because of his nudity and camel’s lust for him.
For the bulk of its run, the comic embraced the single panel tall structure of the modern
daily newspaper strip. Of its chapters, only a handful deviate from this straight line
reading, and those that do usually utilize the even more minimalist format of putting only
a single panel on the screen at a time. For most of the strip, there are relatively few
actual changes from panel to panel. Furthermore, the linework of the strip is mostly
simple and geometric. This simple art combines with the wordless nature of the comic to
give it a fast pace that suits its madcap sexual antics. With generally only one or two
panels in sight at any given moment and a relative lack of action or detail in each one,
the reader moves breezily through the strip. The effect is striking, and contributes to the
zany punch of the strip.

It is striking how much this method stands in contrast to McCloud’s vision of
comics. Simply put, When I Am King depends heavily on the interaction with the
reader’s subjective sense of time, rather than on the comic’s mastery of time into a
spatial configuration. Furthermore, it does this in a way that is very much a natural
extension of McCloud’s basic concept of the infinite canvas, which treats the screen of
the display device as a window over a larger canvas that extends beyond the edges of
the display device. The interface of the website of When I Am King does exactly this,
situating the comic in a frame at the top of the screen above the table of contents. The
result is that the degree to which the panels of the comic appear to constitute some sort
of coherent “page” is diminished, because the reader is able to interact with them only
insofar as they intersect with the more defined space of the site’s interface. Thus the page for the strip is marginalized, and the engagements of panels with each other mostly sidelined in favor of stressing the fleeting interactions of panels with the reader. And all of this is effected by embracing McCloud’s techniques to such a degree that he has repeatedly singled Demian5 out as one of the pioneers of the infinite canvas.

The one point where Demian5 does use the infinite canvas in a way more or less akin to how McCloud prescribes it is the one strip in chapter four where he bends the flow of the strip to scroll down and then right again. This strip is, in its structure, reminiscent of several of Weing’s Pup strips. But what is striking about it is the degree to which the technique is used to slow the progression of the strip. The panels are more or less without background and have no panel divisions; very little happens in them beyond the king’s wandering through a hallucinatory dreamscape. When the comic finally turns to scroll down, the panels are extremely spread out. But even here, there is not a sense of a coherent page – rather, the turning of direction and use of broad amounts of space is simply being used as a counterpoint to the comic’s normal method of extremely high-speed motion.

A more unusual choice by McCloud’s is Patrick Farley’s first (and to date only) installment of Delta Thrives.37 More even than When I Am King, Delta Thrives uses animation at key points of its narrative. It also has a dense structure of layered images and text that actively evokes the structure of a computer desktop. Furthermore, the plot

37 Delta Thrives captures another issue of webcomics – the fact that the comics do not leave any permanent record, and can disappear off the web, as Delta Thrives basically has – it is available only via the Internet Wayback Machine. This ephemeral aspect of webcomics – the fact that they in one sense only exist when their data is loaded onto a specific display – serves as a different and in some ways more fundamental rejection of McCloud’s idea that time can be subjugated to space in the experience of reading comics.
of the comic is very much invested in the fantasy of immediacy, focusing on the title character, Delta Thrives, as she experiences a virtual reality psychic connection with a dying whale, and has a transcendent spiritual experience as a result. This investment in immersion is heightened by the visual style, which uses computer rendered 3-D images of the characters as opposed to a traditional drawing style.

The result is a comic that comes very close to what McCloud describes as a slippery slope of comics, in which “comics’ multi-image structure – the portrayal of time through space – becomes superfluous, if not a nuisance” (McCloud, Reinventing Comics 210). But on the other hand, the reliance of Delta Thrives on what is, for lack of a better term, hypermediation cuts against this immersive fantasy. This highlights one of the fundamental problems with McCloud’s opposition of (constrained, waiting for technological transcendence) comics to a utopian fiction of immediate (that is, perversely, unmediated) expression. In practice, the innovations that concern McCloud in Reinventing Comics are not a slippery slope to comics’ destruction or replacement by something purer and therefore closer to what comics wish to become. Indeed, in the hands of a skillful artist like Farley, techniques McCloud eschews and the ones he advocates can work hand in hand to produce a genuinely interesting and innovative reading experience.

McCloud has made relatively few contributions to the infinite canvas form. His most substantial (and experimental) contribution is The Right Number, of which two of a planned three parts have been released. The strip is structured by a zooming mechanism, with each panel embedded in the previous panel. The strip zooms inward. The structure is intended to mirror its protagonist’s steady descent into paranoid
delusions. And in this regard, it is strikingly effective, as the infinite canvas strips I’ve discussed generally are. But even here, in McCloud’s own embracing of the form, he does not live up to his own rhetoric and vision of it. Far from creating meaningful temporal relationships between panels, the zooming format functionally leaves only one panel visible at a time. The next panel (and sometimes a vague anticipation of the one after that) is visible in the center of the panel, but it is a disjunctive element; the next panel rarely fits in visually with the previous one. As a result, there is no sense of visual space being used to represent time. In fact, time is largely represented by time, as the zoom animation is the primary content of the advancement from moment to moment.

There is, then, not only a disjunction between McCloud’s manifesto for the infinite canvas and the actual practice of it, but a disjunction between what McCloud describes as the function of comics and what he does when creating comics. This highlights the fundamental, if unintended, disingenuousness of the revision McCloud engages in – McCloud’s view of comics is sufficiently distorted that not even he can work within the comics tradition he proposes as the technical and conceptual precursor of the reinvention of comics. This is largely because there is no coherent comics tradition resembling the one he proposes – comics did not evolve steadily as a medium from Trajan’s Column to Delta Thrives; the actual history of comics has not been one of constantly struggling against the very material definition of comics, but a much more complex, inconsistent interplay of constraint and invention within and against constraint than McCloud is forced to assume if the novelty and transcendence of the new medial form is to be realized. When comics are removed from the realm of a theoretical
exercise presented as part of a demo and forced into the actual messy business of making comics, material history takes hold again.\textsuperscript{38}

Despite the serious weaknesses of many of McCloud’s claims in \textit{Reinventing Comics}, the book has had a clear effect on the work of comics artists; Weing, Demian5, Farley, and even McCloud’s experiments in web-based comics came as a direct result of arguments made in \textit{Reinventing Comics}, problematic as they are.\textsuperscript{39} And, crucially, this problematic character, \textit{evident from outside the distorting field of the demo’s allure} – is part of why the claims for the infinite canvas have been effective. The creative process is not spurred onwards by careful, rational, and historically-discerning analyses. It is spurred onwards by a promise of resolution that may, in fact, be impossible to realize, but whose \textit{possibility} is itself the shiny kernel that shapes adherence to its narrative.

The creativity on display in these early infinite canvas comics is a clear testament to the fact that their creators are genuinely trying to do new and innovative things with the media of comics and the WWW page. And it seems self-evident that McCloud’s manifesto is a direct instigation of these creators using the infinite canvas. But it is also clear that, despite having been inspired by some of McCloud’s utopian claims, none of them is trying to write comics that lay bare the true nature of comics and explodes its

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{38} Indeed, McCloud’s sequel to \textit{Reinventing Comics}, titled \textit{Making Comics}, focuses heavily on material questions of technique and technologies, with pages spent talking about different pen types even though McCloud admits to having not done work with an actual pen in a decade. And indeed, \textit{Making Comics} ends very differently from \textit{Reinventing Comics} – retaining some of the utopian tone, but regrounding it in the materialism of the page as McCloud declares that “No matter how many tons of ink we’ve spilled on it over the years, comics itself has always been a blank page for each new hand that approaches” (McCloud, \textit{Making Comics} 252) – problem with ref format
\item \textsuperscript{39} A reasonably thorough overview of McCloud’s influence over webcomics is the documentary \textit{Adventures into Digital Comics}, which includes interviews with both McCloud and Farley, as well as other artists to work in the infinite canvas tradition.
\end{itemize}
\end{footnotesize}
potential outward like a nuclear bomb. They are trying to do something interesting and new, yes – but they have not validated McCloud’s specific account of the possibility of the infinite canvas. Even McCloud himself, when making a comic as opposed to a polemic, is more restrained in his ambitions for reinvention.

It would be foolish to suggest that the mere promise of reinvention, tending towards transcendence, of a medium is sufficient to drive the creative applications of that medium. Indeed, the case of the infinite canvas is something of a marginal one – despite the creative successes of several comics creators, the fact of the matter is that the bulk of quality and innovation in webcomics has not taken the form of infinite canvas strips. It is still important, but it is manifestly not the utopian revelation McCloud believed it would be. But we can see, in the infinite canvas, a key aspect of the demo that is merely implicit in most demos – the way in which the demo necessarily rewrites the history of a medium such that, at least implicitly, medial form – that is, the formal mechanism characteristic of the prior medium or prior application of a medium – is a problem, rather than a fundamental part of how any medium achieves its expressiveness. This misunderstanding of medial history is often the reason that the utopian rhetoric of a demo and the reality of the technology fail to coincide. This fact is clearer nowhere more than in 3-D film, which example I will take up in the next chapter.
Figure 3-1. Comparison of *Infinite Crisis* and *Action Comics* pages. [This splash from *Infinite Crisis* visually quotes the cover of *Action Comics* #1, featuring the first appearance of Superman.]

Figure 3-2. Cover to *Action Comics* #270. [This cover is typical of the Superman covers of the era, in that it poses a direct challenge not only to Superman as a character, but to the basic structure of the franchise.]
Figure 3-3. July 1, 1906 Little Nemo strip. [The staircase-shaped panel at the bottom begins to extend into its last and shortest part, but is interrupted by the intrusion of the final panel.]
Figure 3-4. March 21, 1909 Little Nemo strip (detail). [The final panel obscures the action going on behind it - part of one fallen character peeks out around the side of the panel, but the actual scene of the characters tripping is obscured.]
Figure 3-5. October 29, 1905 Little Nemo strip. [This strip has its primary visual component – the diagonal line – anchored in the final panel in the lower-right, even as that panel breaks the structure of the descending staircase.]
Figure 3-6: September 23, 1906 Little Nemo strip. [This strip works by using the width of its panels as a limitation that shows the massive size of the elephant.]
Figure 3-7. July 13, 1941 Krazy Kat strip. [Here, the panel arrangement declines to even provide a clear reading order.]
Figure 3-8. May 30, 1943 Krazy Kat strip. [Here, the panel shapes are wholly eccentric and non-standard, determined by the shape of the page and the placement of the two central panels.]
Figure 3-9. Page from Acme Novelty Library. [Chris Ware’s intricate use of the page is shown in this 98-panel strip.]
Figure 3-10. “The Call of the Mild.” [In Drew Weing’s Pup, Kratzner’s journey is humorous in part because of the contrast between the scrolling necessary to follow his trip and the actual distance covered]

Figure 3-11. When I Am King. [A single chapter of Demian5’s When I Am King is sufficiently long (in the horizontal sense) that the reader loses a sense of the overall line as she or he scrolls through.]
Figure 3-12. The Right Number. [The nested panel structure seems in many ways to actively turn against McCloud’s own account of how comics function.]
CHAPTER 4
OUT OF THE SCREEN AND INTO THE THEATER

Popular 3-D film is perhaps one of the clearest case studies illustrating the nature of the demo. Over a period of more than fifty years, 3-D film has gone through multiple periods in which it was actively pushed as the future of film; ecstatic claims of its potential are plentiful. And yet, despite multiple pushes, frequently backed by large amounts of money and effort, 3-D film has not taken hold as a principal technology for popular film. This makes it an interesting case study both of the language and logic of demos and of the relation (or lack thereof) between the demoing a piece of media technology and its establishment as an influential medial form. 3-D film sharply illustrates the way in which the allure of the demo is distinct from the actual achievement and usefulness of the medium. Paradoxically, in the case of 3-D film, the technology is unusually well suited to conditions of demonstration, but, for almost the same reason, is ultimately not able to deliver on its promises.

Although several methods for creating moving 3-D images have been developed, for the purposes of film three basic technologies are used. The principal one used for theatrical release of 3-D is based on polarized light: two images are simultaneously projected onto the screen, each using light that is polarized in a different direction. Members of the audience wear glasses with polarized filters, each of which blocks one of the two projected images, generating a stereoscopic effect. This method has been used for most theatrical releases of 3-D films, but it has several significant disadvantages. The biggest of these is that it only works if the screen is painted with silver based paint that reflects light while maintaining its polarization. Such screens are
expensive and easily damaged, and cannot be easily transferred to smaller, intimate settings, such as private home viewing.

Accordingly, two other systems are also used. One, anaglyph, uses colored lenses in place of polarized light. One eye generally has a red filter, the other a blue. Instead of being polarized, the two image are tinted so that each eye is (nearly) blind to one. This format has the advantage of being usable for print and home use, or for theatrical use without a silver screen, however it does a poor job of preserving color fidelity, and the filters often fail to wholly block out a given image, resulting in muddy object boundaries and moiré effects. As a result, this is generally the cheaper alternative, and is more known for print applications than for film. The third system, called field sequential, uses a pair of glasses with LCD screens that flicker rapidly so that the viewer can only see out of one lens at a time. The image on the screen also flickers in sync with the glasses, thus sending one image to each eye. This system, used primarily for home systems, preserves accurate color information, but is associated with headaches and eyestrain and is notoriously finicky with regard to which televisions can support it and what conditions of viewing are best. The system is utterly unsuited to projection, and has fallen further out of favor with the rise of digital televisions, as it is incompatible with them.

Historically, most 3-D films were made via the polarized light method. In general, these films cluster in two distinct eras, with a third era currently underway. Although it is predated by numerous films using 3-D, most critics recognize Arch Oboler’s 1952 film Bwana Devil as the first major studio 3-D film. Its release set off the first 3-D craze, which lasted until 1954 and included several significant films. House of Wax, starring
Vincent Price, *Creature From the Black Lagoon* and its first sequel, *Revenge of the Creature*, *Dial M for Murder* (directed by Alfred Hitchcock), *It Came From Outer Space*, and *Kiss Me Kate* were all made in 3-D. John Wayne, Dean Martin, Jerry Lewis, Rock Hudson, Robert Mitchum, and Jane Russell all starred in 3-D films that have not survived with as much notability. Many reasons have been posited for the decline of 3-D in the 50s, with the major culprits being the expense of the projection equipment and the eyestrain that 3-D films inflicted on audiences.

In practice, the two phenomena were related – the 1950s 3-D films were filmed with two cameras, on two separate reels of film, and were then projected with two projectors, each casting polarized light. The camera setups were costly, as were the silver screens required to maintain the polarization of the light when it was reflected. Furthermore, because of the complexity of the two-projector system, films were projected not quite in sync, contributing greatly to audience eyestrain.

After 3-D film went out of fashion in 1954, it basically did not return to popular circulation for more than a decade. In their book *Amazing 3-D* Hal Morgan and Dan Symmes identify only seven 3-D films made during the 1960s. The last of these, *The Stewardesses*, marked a significant innovation in 3-D technologies, as it used Chris Condon's StereoVision process, which required only one camera system. The central innovation of this technique was to use one camera and one strip of film, recording separate images on the left and right sides of the film. (A comparable system, used in Oboler’s 1966 film *The Bubble*, recorded the images one on top of the other.) The film was shown using a single projector fitted with a mirror box that separately polarized the two images, and then merged them into a single projected image.
This technology took a while to really take off, although a few 3-D films were made using it over the course of the 1970s, most notably *Flesh For Frankenstein*, also known as *Andy Warhol's Frankenstein*. It was not until 1981’s *Comin' At Ya!* that a full-on, second 3-D craze was sparked. This wave of films included *Friday the 13th Part 3* (1982), *Amityville 3D* (1983), *Jaws 3* (1983), as well as lesser-known fare such as *Spacehunter: Adventures in the Forbidden Zone* (1983), and the first feature-length 3-D animated film, *Starchaser: The Legend of Orin* (1985), which marked the functional end of this second revival. Once again, many explanations for this failure of 3-D have been proposed, with one of the most notable being that the mirror box rigs significantly reduced the amount of light coming from the projector, making the films dark and unpleasant to watch.

From 1986 on, 3-D films were basically of two kinds. The first was as short films in amusement parks and other attractions. The most notable of these was perhaps 1986’s *Captain Eo*, a short film for Disney’s theme parks produced by George Lucas, directed by Francis Ford Coppola, and starring Michael Jackson. The other major form, also heralded in 1986, was the IMAX 3D – films projected on a massive, oversized screen, using a proprietary 70 MM film format. Both of these, however, were largely specialized novelties. It was not until 2005 that a new system for 3-D began to be rolled out, making its real debut in the summer of 2008. This system, called RealD, was invented by Lenny Lipton (also known for writing the lyrics for Peter, Paul, and Mary’s “Puff the Magic Dragon”). RealD is a digital system that combines the field sequential and polarized systems – the projector, instead of using mirrors, alternates rapidly between the two images, polarizing each differently. The rapid alternating provides the
illusion of a single image, which is then stereoscopically rendered by standard polarized glasses (although the modern glasses use circularly polarized light, thus removing an annoying feature of 3-D films where the images would go out of sync if you tilted your head). This system was used for several films, starting a new wave of 3-D films with 2007’s Beowulf, 2008’s Journey to the Center of the Earth, as well as for a rerelease of The Nightmare Before Christmas. This current wave seems at its peak, with Avatar (2009) becoming the top-grossing film of all time, and more and more films being shot or converted into 3-D.

Those who believe in 3-D film are unwavering in their convictions. Arch Oboler proclaims, for instance, that “Three-dimension is really the natural form. Once a person has been exposed to three dimensions no matter how badly done, unless their eyeballs are torn out of their sockets by very bad three-dimensional techniques, they want it again and again” (Zone, 3-D Filmmakers 2). James Cameron takes a more utopian view of the same line of thought, saying that “Everybody’s got two eyes, even down into the insect world. They’ve got a minimum of two. They might have eight. Everybody from lizards to fish has got two eyes because survival comes from being able to gauge how far away is the prey or the predator. If I’m a frog having to shoot a bug out of the air with my tongue, I have to know how far away it is. That’s how we see. Our two eyes are range finders. That’s how our brains process the world. So why shouldn’t movies reflect the way we visually process information?” (Zone, 3-D Filmmakers 143-44). Even Sergei Eisenstein, in his last published essay, written before Bwana Devil hit the screens,
proclaims that “in its striving for the realization of these latent needs, mankind has for centuries been moving towards stereoscopic cinema” (Eisenstein 37).

As utopian as claims of its enthusiasts may be, the marketing for 3-D films is even more impressively hyperbolic. The trailer for House of Wax captures its spirit perfectly via promises that “you are part of the living drama” whereby things “come off the screen right at you!” This, of course, invokes the classic urban legend of the audience of the Lumière Brothers’ L’Arrivé d’un train en gare de la Ciotat fleeing in terror in the belief that a train really was barreling off the screen at them. That myth has been thoroughly discredited – most directly by Martin Loiperdinger, who points out that in 1895 trains generally made noise, and had color, unlike the grainy Lumière short (Loiperdinger 96). But what is interesting is that the Lumière myth is also, at its core, a retelling of an earlier creation myth in media history that is of particular relevance to the 3-D demo, the myth of Brunelleschi’s panel of San Giovanni.

This story, related by Manetti in The Life of Brunelleschi, is straightforward enough. In order to demonstrate his new technique of perspective, Brunelleschi paints a small panel of the exterior of San Giovanni in Florence. He makes a small hole in the panel, and positions a mirror in front of it so that somebody looking through the hole sees the painted side reflected in the mirror. When the mirror is held at the right

---

40 Although Eisenstein’s essay predates Bwana Devil, it should be noted that Semyon Ivanov’s Robinson Crusoe had been filmed in Russia in 1941 (Zone, Stereoscopic Cinema and the Origins of 3-D Film 168). The film never saw a US release, and indeed, from Ivor Montagu’s description, didn’t see much of a Russian release either, due to Ivanov’s unique stereoscopic system. Montagu describes it thusly: “The screen is fronted by a grid consisting of myriads of vertical wires. The two separate images are projected at a slight angle with one another, so as to intersect near the grid – the projectors are cross-eyed, so to speak – the effect of the grid is to bring about the necessary separation so that one image is perceived by one eye and one by the other, without the need for a lorgnette or anything of the kind to be held up to by the face. Stereoscopic pictures on this principle have been running in Moscow for eighteen years, but only at one small 180-seat cinema” (Montagu 90-91). The disadvantages of this unwieldy technique are many, chief among them being that the illusion was broken if the spectators moved even slightly in their seats. Regardless, Eisenstein was clearly aware of the film, as he alludes to it in his essay.
distance, Manetti reports, “the spectator felt he saw the actual scene when he looked at the painting” (Manetti 42-44). The plausibility of this has, much like the Lumière legend, been challenged. Michael Kubovy has suggested that the effect was more pronounced because of the peculiar method of viewing, which, by removing stereoscopic depth cues, was unusually effective (Kubovy 39). But, much like the Lumière myth, the story does not hold up convincingly under prodding – and indeed, seems to fit into the Renaissance tradition of exaggerated claims of great Masters’ artistic triumphs.

In all of these cases, we can detect the myth-making logic of the demo. The special attraction of the third dimension is, after all, relatively limited, as it is already familiar to any sighted person. Despite the puzzling claim in the *House of Wax* trailer that the third dimension is “like nothing that has ever happened to you before,” three dimensional objects, like trains, buildings, bodies, spears or arrows moving toward the viewer, etc., are not in and of themselves sources of especial wonder. The aesthetic of immersion seems to be at work in the ballyhoo of such objects being seen as never before – a common enough thread in popular and critical media thought, at times embraced seriously, and other times more skeptically. For my part, I am firmly among the skeptics, due in no small part to the fundamental paradox of immersion: if the viewer is able to marvel at the “reality” of the immersive experience, she or he is no longer fully immersed. Tom Gunning explains films like the Lumière films as being based on an aesthetic of attraction and astonishment where “the spectator does not get lost in a fictional world and its drama, but remains aware of the act of looking, the excitement of curiosity and its fulfillment” (Gunning 869). This is very much the aesthetic of the demo.
a knowing gaze at the surface with a sense of astonishment not at what is seen, but at what could be seen, if one could see just beyond the limitations of the medium.

There is, however, something perverse about this aesthetic as it is applied to an allegedly immersive optical realism, and there is a significant disjunction between the myth of the Lumière film’ shocking realism and Gunning’s aesthetic of astonishment. This disjunction shifts into active disingenuity in the advertising for 3-D movies. And what is most puzzling is that the hyperbole of this marketing discourse has not appreciably diminished since the first wave of 3-D films. Decades after House of Wax, for instance, the trailer for Jaws 3 promised that the shark “won’t stop at the edge of the screen,” while, with the start of a third wave of 3-D films, one trailer for Journey to the Center of the Earth 3-D featured an inner-earth-dwelling dinosaur walking off screen into a movie theater. While film and perspectival drawing have developed a complex rhetoric beyond their initial myths of disruptive realism, 3-D film continues to hang up on this faux-naïve demo phase in which the film is looked at, and marveled at as an event of vision instead of as a communicative form.

The reason for this is closely tied to an essential difference between 3-D film and traditional film that is rooted in classical techniques and conventions of perspectival representation. The equation of the camera and perspectival vision is not, of course, accepted universally. David Bordwell mounts perhaps the most thorough attack on it, observing the various ways in which specific shots defy rules of the Albertian system. He focuses particularly on the way that the use of specific camera lenses will produce “realistic” shots that are not, in fact, composed in proper perspective. “If lens length has the capacity to create effects of ‘nonscientific’ perspective systems,” he argues, “it does
not matter that the camera is built on the Albertian model” (Bordwell 107-110). It is difficult to quite capture the bizarreness of this claim. Bordwell, in making it, seems to be rejecting the possibility that the Albertian model might be, rather than an unchanging doctrine, the starting point of a visual tradition, instead insisting that because telephoto lenses don’t quite fit a six hundred year old system, film must therefore not stem from this system.

It is not my goal here to provide (another) thorough account of the evolution of the Albertian model, developed for depiction of still images, into contemporary film. To do so would involve stepping into the established debate among suture theorists, apparatus theorists, neo-formalists, and other doctrinal approaches to film studies concerned chiefly with problems outside of my discussion here. Rather, I want to pick up one thread of reasoning or method from Alberti to traditional film, and contrast that thread with 3-D film: in principal, the way in which the Albertian window is arbitrarily related to the real-world space it occupies, and to the position of its viewer.

Painting, then, is fundamentally about the absence of the artist. Alberti’s mathematical schema for creating a spatial position for the artist/viewer in the painting serves to preserve the iterability of painting, but it does so by implicating the viewer into the geometry of the painting. The painting represents in this sense an act of seeing that occurs separately from the observer and the observed object: a pure act of vision. Thus the painting preserves itself when it is moved away from artist and subject, and even, to an extent, from its viewer. Although in the classical Albertian model the perspective of the painting makes use of a vanishing point that is imagined to collocate with the eye of the viewer, the painting can be approached from the wrong angle – from which the
viewer can instinctively reconstruct, and therefore become aware of, the artifice of the perspective. The Albertian window, then, is understandable as a device to iterate an act of vision and preserve it absent the physical conditions of viewing.

A view similar to this has been articulated by Anne Friedberg, who argues that the Albertian window is best understood “as a metaphor for the frame – the relationship of a fixed viewer to a framed view” (Friedburg 12). Friedberg persuasively reads the relevant passage of Alberti’s famous description of perspectival method, focusing on the way in which the Albertian metaphor is constructed. It is worth retracing her argument. Alberti explains that “on the surface on which I am going to paint, I draw a rectangle of whatever size I want, which I regard as an open window through which the subject to be painted it seen” (Alberti 54). Friedberg points out that this begins with the construction of the rectangle – the frame, and that the rest extends from this (Friedburg 30). She further argues that the window was clearly “a metaphoric trope, at odds with his own account of an architectural window” (Friedburg 32). To my mind, however, more important than the disparity between the window as Alberti describes it and the technology of 15th century Italian windows is the basic technological character of the window. The key concept here is that Alberti “regards” the frame as a window. The frame as window technically determines a metaphoric act – a substitution of vision by which the subject is no longer wholly present in the painting. Because the subject of the painting is, in this metaphoric frame, always displaced, it follows also that the fixed position of the viewer is a metaphoric construction. Lacan stresses this point as well in his discussion of the logic of pictures, noting that “I am not simply that punctiform being located at the geometrical point from which the perspective is grasped. No doubt, in the
The essential consequence of the frame and the creation of the implied viewer is that the actual viewer is decoupled from any necessary spatial relationship to the painting or its subject. What this means is that perspectival painting, because it encodes the spatial position of its implied viewer, no longer requires the viewer to actually occupy that space. The painting is instead interpretable via an imagined construction of the implied viewer who is other than the actual viewer. Hubert Damisch compares this process “to the linguistic one allowing us to change person, permitting us to pass from “I” to “you” or “he,” and from the subject of a statement to that of the speaker” (Damisch 51). Such a “one” is comparable to the long tradition of the implied reader of Reader-Response criticism, most particularly as promoted by Wayne Booth, Wolfgang Iser, and Peter Rabinowitz. All three recognize a reader that is not merely the incidental person upon whose eyes light reflected from the page is cast, but also a reader that has, as Iser puts it, a “role as a textual structure” (Iser 35), i.e., that is constructed actively by, and in relation to, the text. In just this way, perspectival painting and its descendents, are, at their heart, not primarily about putting the viewer into a “realistic” field of vision – that is, immersion – but about the viewer’s active recognition of and engagement with an act of vision that is fundamentally other.

This peculiar disintegration of the viewer and point of view can readily be picked up again in the case of film, and it is Bordwell’s inattentiveness to it (or, more

---

41 Michael Kubovy similarly argues that the spectator’s actual point of view is deliberately displaced from the viewpoint constructed by much renaissance art, and elevates this displacement to “a spiritual experience that cannot be obtained by any other means” (Kubovy 16).
accurately, his inconsistent attention to it) that gets him into trouble. For example, as part of his attempt to dismantle the Albertian model of cinema, Bordwell attacks Pudovkin’s model of the invisible observer. His attack is based largely on the improbability of an actual subject behaving as a filmic observer does – he critiques, for instance, the reading of one filmmaker’s low camera angles as “the viewpoint of an invisible guest,” noting that the filmmaker “uses this height indoors and out, in theaters and factories as well as homes, down the aisles of streetcars, and so forth. Why,” Bordwell asks, quite sensibly, “should an observer be squatting on the street or in an office corridor?” (Bordwell 10) Why indeed. But Bordwell’s objection here is really to an assumption that the camera angles are determined not by the viewer’s subjectivity but by a narrative subjectivity – in other words, that narrative cinema is structured… narratively. His insistence on extending that claim to the rejection of perspective is wholly unnecessary.

All that is required to retain a perspectival understanding of film (as disintegration of viewer and point of view) in the face of Bordwell’s objections is the interpretation of the camera not as corresponding to the gaze of a person but as a zero dimensional point located inside the lens of the camera, from which a cone of vision extends. This further decouples the Albertian window from actual space, as the view now lacks an essential relationship not only with the viewer but with the artist behind the camera, whose eye is no longer the point of origin of the scene. But this paradigm is already latent in the framed space of the Albertian window, which is what it is precisely because the end product is fundamentally separate from the artist, the objects depicted, and the eye of the spectator. Just as the painting is, by design, a depiction of an absent object, it
also is thus necessarily a depiction of that object from an absent vantage point. The invention of the camera simply provided the technical means to make this aspect of the Albertian paradigm conspicuous. The Albertian window becomes, in this reading, a delineated space where a view is represented – a way of separating the act of vision from both the eye and the object.

But Bordwell, because he does not seem to seriously consider any evolution of perspective since Alberti, ends up rejecting this approach. He similarly tries to refute perspectival theories of cinema by pointing to frames of films that are not constructed according to Alberti’s rules. This is all well and good, but it is not as though the rules of perspective define the extent of the Albertian revolution. They provided the practical, geometric means to define the implied position of the viewer, and these means became axiomatic in much of painting practice, but after centuries of using that model, the rigid geometry is no longer essential for us to deal with framed images as a concept. Bordwell, for instance, makes much of images taken with a telephoto lens. But Rudolf Arnheim has already given us the tools to deal with this by observing that film is, due to its lack of depth, fundamentally unreal, and “neither absolutely two-dimensional nor absolutely three-dimensional, but something between. Film pictures are at once plane and solid” (Arnheim 12). Arnheim argues that this interplay between depth and surface is at the heart of film as a medium, and the compensations needed to accommodate it similarly account for many of Bordwell’s objections to a strictly Albertian model while

---

42 Indeed, the decoupled vantage point has a storied history when one goes to look at it. The planetary observations of Galileo and the microscope of Robert Hooke both depend on the use of (technological) vantage points that are distinctly different from Galileo and Hooke’s (organic) eyes. In these cases lenses are used to alter the possible cone of vision, and the new cone of vision is then transmitted to the viewer’s eye. When photography was finally invented, this phenomena finally had a conceptual apparatus such that it could become paradigmatic.
retaining the basic conceptual framework of perspective. And much as Bordwell tries to
distance himself from a view of “the spectator as the apex of a literal or metaphorical
pyramid of vision” (Bordwell 99), he ends up returning to a view along those lines when
explaining continuity editing in Film Art, declaring that “the viewer always knows where
he or she is with respect to the story action” (Bordwell and Thompson 313). This
suggests that, despite his protestations, there is something strangely intractable about
the perspectival model.

Film, then, can be said to follow a conceptual tradition that can be traced back to
Albertian perspective and the basic principles of perspective. A key element of that
tradition is that the relationship between the viewer’s eyes and the origin point of the
image is variable. Central to this is the framed Albertian window, in film provided by the
screen upon which the image is projected. The screen serves as a border between the
diegetic space and the space of the theater, which is merely a collection of seats
organized around the screen to facilitate seeing it. The window serves not merely as the
medium that holds the image, but as the delineation between the necessarily structured
space of the image, and the variable space of the viewer.

3-D film, however, violates the fundamental delineation of space enforced by the
screen. Because objects appear project off of the screen, the space in front of the
screen – that is, the apparent colocation of the viewer and the ideal point of view – is no
longer arbitrary. Quite the opposite, because objects are routinely pushed into a virtual
space that is located in front of the screen, the viewer’s actual physical relationship to
the screen is materially relevant. The screen is no longer a barrier between the diegesis
and the spectator, but merely a single technological point in a system that now extends
both past the screen and into the (determinate) space theater. The system is now rooted in the bodily position and anatomical eyes of the viewer in a way that appears to be the case in classic Albertian theory (but is not always the case), and, instead of simply framing a view of an absent object with an absent viewer, 3-D depends on the actual presence of viewer and object. When an object extends off of the delineated space and into the theater the object attains a real presence, in an actual relationship with the apex of vision, which, instead of being an arbitrary point, is now the actual viewer’s point of view.

On the surface, this may look like a justification for the claims of 3-D filmmakers that 3-D is more immersive than 2-D film, in that the viewer now has a more direct and intimate relation with the filmic image. But in practice, this relation is more problematic, for a number of reasons. For one, in any given theater relatively few seats are actually ideal situated for the 3-D effect. Even Chris Condon, who is generally as pro-3-D as one can possibly get, admits that the spatial configuration of theaters – generally designed for 2-D films – is a problem for 3-D (Zone, *3-D Filmmakers* 12-13). This is a simple technological problem – because the 3-D effects work best at a specific distance and angle to the screen, large areas of theater seating are less than ideal, reducing the effectiveness of 3-D. Condon muses about efforts to better design theaters, but the problem is perhaps intractable.43

Further complicating the semiotics of 3-D film is the fact that the visual cone in 3-D movies, though its origin point is co-located with the viewer’s physical eyes, cannot

---

43 Though the actual ideal position may vary by film and by shot. Condon and Zone discuss the fact that, for instance, *House of Wax* had a relatively constrained range of layers, only separating its layers by 2–3 inches, whereas *Flesh for Frankenstein* has several feet of parallax, making the film watchable only from a distance.
fully coincide with the viewer’s field of vision. This is true for the simple reason that a 3-D film is still projected onto a screen. Thus the viewer’s actual cone of vision extends outward and encompasses space off the sides of the screen which the visual cone of the film cannot reach. This is not a problem for traditional film – not because the field of vision is not cut off, but because the lost field of vision is roughly equivalent to the peripheral vision that the history of painting and photography has trained us to make do without for centuries.

But for 3-D film, the peripheral space is material because the cone of vision, extending now from the viewer’s eye, encompasses more than the screen. Since no images can actually be projected off the screen, this produces perceptual dead areas that, effectively, have diegetic significance, but which are invisible to the viewer despite the fact that they exist in a virtual space that is co-located with the actual space that the viewer can see. Furthermore, because the cone of vision extends into the space represented on and “behind” the screen, other dead areas are created by areas blocked by the walls around the screen, in much the same way that some lines of sight are blocked when looking through a window.

The illustration below shows the basic shape of this space. The viewer’s overall cone of vision is represented in the light grey. The darker shaded section is the portion of that cone of vision where an object in the film can appear to exist. Areas that are lightly shaded are within the viewer’s cone of vision, but fall within a dead space for as far as the film is concerned. Because objects are still comprised only of a composite of two images on the screen, no object can be projected past the frame of the screen. Thus the virtual space begins as a rectangular space and, as it moves closer to the
viewer becomes a conical space. Then, once the cone of vision reaches the screen, the shape of the space changes fundamentally – when objects are pushed into the screen such that they occupy further away points, the visible space becomes a frustum, operating like a window. Thus points that are physically outside the frame of the screen become visible if they are far enough back from the screen to fall within the viewer’s cone of vision. The result of these overlapping and excluded fields, as shown in the figure, is a highly erratic and arbitrarily shaped space.

The arbitrary contours of this space have little to do with normal vision. The space behind the screen still functions as a classical Albertian window, but the space in front of the screen is an unfamiliar shape, unique to 3-D film, and the two spaces have very different spatial contours in a way that is quite problematic – objects behind the screen will, depending on their position, push out past the screen or simply vanish past the edges of the frame in a way that is, in terms of the diegetic space, arbitrary.

Furthermore, the shape of the space changes depending on the viewer’s position in the theater. If they move too close, the range in which objects can be pushed out at them diminishes significantly, and large portions of the frustum are visually dead space, unless the viewer changes her or his position, by for example, turning the head. (I have, in this figure, left the shape of the frustum in place to show the amount of spatial information that is lost from this position.) That the viewer can change position in this way to make up portions of the lost space does not solve all the problems involved in this visual space; as we will see, such angled vision is problematic in its own right. Furthermore, such motion increases the eyestrain involved in watching 3-D film, and, for 3-D technology before the most recent version, often led to the image going out of
alignment if the viewer tilted her or his head so that the eyes were not level with the screen.

The disconnect between the overlapping visual fields becomes particularly jarring if the viewer moves to the side of the theater. Here the space skews, with the perceptual space in which objects can be pushed becoming lopsided. Furthermore, the frustum bends away from the viewer, creating a noticeable turn in the shape of the visual space. This is notably a problem when one considers that the projected image is the same for this position as for the optimal position in the first figure. That is, unlike watching a play where moving to one edge of the theater shows a new side of the objects on stage, the objects in the film have still been shot from the same forward on angle, and are still projected from the same position in the theater – and so instead of being turned towards the viewer in their angled position, they simply skew slightly, but noticeably.\(^4\) The complex relationship between the material space of the theater and the diegetic space of the film deepens the necessary relationship between the two.

The relevance of the material space in which the film is projected and watched is also key to understanding what, in practice, demos of 3-D film were purporting to show their audiences. As I observed earlier, after the success of \textit{Bwana Devil}, a wave of 3-D films using the same 3-D technology followed. Warner Brothers’ \textit{House of Wax} was one of the first put into production, and is the first even remotely enduring 3-D film, but

\(^4\) A comparable effect happened in video games such as \textit{Doom} that used a pseudo-3-D space. The enemies in \textit{Doom} were not 3-D models, but rather two dimensional sprites. Thus as the player’s avatar moved around the enemies, they simply always turned to face the avatar. This became problematic when multiple enemies advanced towards the player from a distance, all of them seemingly moving straight forward, but all also angled towards the player. Furthermore, in some situations it was possible to create a glitch in the game such that enemies did not turn, leading them to visibly be paper thin. The result was a mimicked 3-D space that was convincing much of the time, but still glitchy and at times even laughable. Because 3-D films are still fundamentally flat surfaces that are having depth read into them, similar problems exist when the surfaces are not looked at straight on.
Warner Brothers was scooped by Columbia’s *Man in the Dark*, a black and white film that was rush-produced in only 11 days and released two days before *House of Wax* (Morgan and Symmes 57). Neither *Bwana Devil* nor *Man in the Dark* has been released for home viewing and were not among 3-D films re-released in the mirrorbox form in the 1980s, although it is possible to find anaglyph bootlegs of *Bwana Devil*.

Why one would want to do so, however, is another matter. In Hal Morgan and Dan Symmes’s account of it, *Bwana Devil* opened to universally bad reviews (Morgan and Symmes 56), including a memorable *New York Times* review that described it as “Robert Stack, Barbara Britton, Nigel Bruce and a cast of solemn black men (not to mention a couple of droopy lions) plunging about in torpid fashion, without making sense or suspense” (Crowther). Even R.M. Hayes, who manages to find redeeming value even in such wretched films as *Rottweiler: The Dogs of Hell*, describes *Bwana Devil* as watchable “from a historical perspective only” (Hayes 146). I am cannot disagree with these critics: *Bwana Devil* is awful. But what is interesting, in watching it, is how different its awfulness is from what one might expect – particularly if one compared it to the film that kicked off the second 3-D craze, *Comin’ At Ya!*. Where *Comin’ At Ya!* is described by Morgan and Symmes as “more like a 3-D demonstration than a narrative movie,” (Morgan and Symmes 162), *Bwana Devil* is surprisingly

---

45 I ought sound a cautionary note regarding Hayes’ book. Among the 3-D enthusiasts with whom I have spoken, the book, and Hayes himself, are the subject of almost universal derision. That said, while there are moments of clear sloppiness (such as misidentifying *Starchaser: The Legend of Orin* as *Starchaser: The Legend of Orion*) and some dubious claims about the technical details of specific camera and audio setups, the book generally seems as carefully researched as is possible in this area, given the extreme difficulty in finding 3-D prints of most of the early films and the means to screen them. I suspect that at least some of the derision of Hayes comes from his frankly bizarre taste in film: he derides *Dial M for Murder* and *Kiss Me Kate*, while praising the all-but-unwatchable *Rottweiler*. In any case, Hayes is responsible for one of two comprehensive filmographies of 3-D film, and his is far more thorough and complete than Eddie Sammons’s 1992 *The World of 3-D Movies*. Whatever its flaws, Hayes’ book remains indispensable to students of 3-D films. All the same, I’ve tried to limit my reliance on it to only non-evaluative claims.
subdued in its 3-D effects – only a few shots engage in pop-out effects, and the film almost completely avoids the ostentatiousness that has become a cliché of the genre.

Indeed, the film is strikingly without any real self-absorption. This cannot be explained by suggesting that its director, Arch Oboler, did not sense that pop-out effects could be thrilling audience pleasers. After all, he does include several of them, most notably some shots of spears being pushed or thrown out at the audience. Rather, it seems to be the case that Oboler is truly uninterested in playing with the technology for its own sake. This is borne out by Ray Zone’s interview with Oboler. Unlike other interviewees, Oboler does not stress the immersive realism of 3-D, and in fact largely criticizes 3-D film as a sort of prelude to what he views as the real future of 3-D, holography, which, in his view, “will wipe out optical three-dimension as we know it” (Zone, 3-D Filmmakers 3). It is also notable that Oboler, after the 3-D craze of the 50s died, was one of the few creators making 3-D films in the 60s and 70s, most notably 1966’s The Bubble (also released as Fantastic Invasion of Planet Earth). It seems that Oboler was not trying to create a cash cow with Bwana Devil, nor to spark 3-D as a profitable institution (as Warners was with House of Wax). Oboler, by all appearances, truly believed in 3-D, and simply set out to make a 3-D film as a film, without bothering with obvious demos. Unfortunately, Oboler was, in the end, a poor writer and director; for all the earnestness with which he approached filming 3-D, his first work in the genre was a wreck.

Despite its lack of quality, however, the basic novelty of Bwana Devil took off, and studios were hungry to follow suit. The reason for this was ultimately one of convenience – in 1953, 3-D vied with another major technical shift in filmviewing,
extremely large, wide screen formats such as Cinerama. But, as Morgan and Symmes point out, such new formats were prohibitively expensive to stall – in the case of Cinerama, requiring a new screen and a complete overhaul of the projection system to encompass three separate projection booths, at a typical upgrade cost of $70,000 in 1952 (Morgan and Symmes 54). Although 3-D required significant financial investments for both studios and theaters, these were nowhere near the cost of the large-screen formats, and so presented a credible alternative.

But it is crucial to understand why, in 1953, there was such an interest in new film formats. The answer, as Morgan and Symmes point out, is that the establishment of television five years earlier had led to a steep decline in the popularity of film, with attendance dropping by as much as 2/3 (Morgan and Symmes 53). The degree to which the technologies directly competed with television is established by Anne Friedberg, who describes trade advertisements of the time that stress how film presents images 330 times as large as television, in vivid color. “NO ONE CAN SQUEEZE IT 330 TIMES!”, as one advertisement declares it (Friedburg 176).

Thus the move to establish 3-D as a viable and novel mode of filmic expression is tied directly to the physical space of the movie theater, and the desire to make existing theaters a profitable. It is not coincidental that the two resurgences of 3-D film – the 1980s revival heralded by Comin’ At Ya! and the current revival – also followed technological developments in home viewing. The 80s craze followed close on the heels of the VCR’s mass success, and the current wave follows on the development of high

---

46 As Friedberg points out, Cinerama was not the only super-large screen format of the era. She cites Cinemascope, Todd-AO, and Vistavision as later, more commercially-successful formats (Friedburg 173).

47 For comparison, that figure amounts to over half a million dollars today.
definition television and fears of online piracy. Furthermore, all three eras corresponded
to recessions in the United States that led to a need to salvage and sustain existing
business ventures in the face of the economic difficulty of selling or rebuilding an
existing movie theater. This makes sense – when home media technology improves,
thearers return to a mode that is intimately and fundamentally tied to the theaters – both
because home 3-D systems must, at least for the present, make use of inferior
anaglyph or field sequential viewing systems and because, given the ways which 3-D
film violates the fundamental metaphor of the Albertian window in favor of one where
the material space of viewing and the act of spectatorship are actively engaged, larger
projection spaces such as theaters are better suited to the format.

But in fact, this aspect of stereoscopy predates film significantly. Ray Zone
begins his history of stereoscopic illusion with Charles Wheatstone’s 1830 invention of
the reflecting mirror stereoscope, which was demonstrated to the Royal Society in 1838
(Zone, *Stereoscopic Cinema and the Origins of 3-D Film* 7).\(^{48}\) Despite tracking the
illusion that far back, Zone identifies the period up until the release of *Bwana Devil* as a
novelty period “characterized by an emphasis on the technology of 3-D or the ‘gimmick’
of off-the-screen imagery” (Zone, *Stereoscopic Cinema and the Origins of 3-D Film* 1).
He argues that the reason for this is that the technology required to create a continuous
stereographic production proved problematic. But his own evidence contradicts this – he
is able to identify three feature length 3-D films produced before 1952, and he also

\(^{48}\) Although Michael Kubovy makes a strange but intriguing argument against this view, claiming that
stereoscopy is, through its absence, central to Bruneleschi’s panel of the San Giovanni (Kubovy 49).
discusses multiple sets of shorts that were widely available before 1952.\footnote{One set of shorts identified by Zone, the Plastigrams shorts of the 1920s, are claimed by Hayes to have run “continuously in New York City for almost two years” (Hayes 286).} Why, then, was the technology for these shorts and feature films adopted more broadly? Certainly, for each individual case, a technological or historical reason can be marshaled. But this is, on the other hand, unpersuasive. After all, stereoscopic technology had a significant history of commercial success outside of theatrical projection. Reese Jenkins claims that in the late 1850s stereoscopic photography had tremendous commercial success. This technology was simple and, within its limits, effective, as it consisted of a card with a pair of photographs on a single viewing surface, and a viewing apparatus that directed one photograph to each eye of the spectator. But the technology was, in Jenkins’s words, “one of the early major mass consumer items,” comparable to the television set today (Jenkins 50). If stereoscopic photography was so big, why did the technology translate poorly to film?

The flaw in Zone’s argument, I think, comes in his assumption that stereoscopic photography was ever treated as a simple variation of photography. This assumption ignores a crucial aspect of early stereoscopic photography, in the role of a physical apparatus in the viewing. The stereographic cards viewed in post-Civil War homes were not equivalent to photographs, but were instead viewed through complex apparatuses that allowed the stereo effect to take place.

The most obvious feature of these stereoscopes is that the process of framing crucial to the Albertian metaphor (and to conventional photography) is removed. The stereoscopic card is fundamentally not a medium based on the spectator’s looking at a single framed image (the realism of which is founded on the spectator’s colocation
with an ideal point of view), but is about an engagement with operations of a specific apparatus – it is, in other words, essentially about the relation of the spectator’s body to the image. Stereoscopy succeeded when it was most directly enmeshed in the physical apparatus, but as it progressed to magic lantern shows and traditional cinema, as Zone notes, it fell out of favor, being used only for occasional gimmicks. It was not, ultimately, until the 1950s where the threat of television required that theaters re-assert themselves not merely as a mode of entertainment but as a physical place that stereoscopic projection wedded itself briefly to film.

Given that 3-D film is fundamentally concerned with the space of the theater, and more broadly with the theater as a conspicuous and visible field of agency, 3-D is fundamentally (if surprisingly to its advocates) a non-immersive form. 3-D film is a thing (or a series of things) to be looked at, in the form of an event. Thus 3-D film was largely hard pressed to ever get beyond demos, for the simple reason that what was being demonstrated by a 3-D film was not stereoscopic projection, but rather the long-existent institution of the movie theater. 3-D film is thus unusually disingenuous even for a demo, because the form of the demo is in fact being used to prop up an existing medial institution in danger of commercial failure. This tension can be seen explicitly in House of Wax, the first film to truly use 3-D as a demo for the movie theater, in its new conflict with television. The crucial demo of this film consists of a pair of sequences in which an impresario does tricks with a paddleball, bouncing the ball out towards the audience repeatedly

It is tempting to read these sequences as extraneous to the film. They are, after all, irrelevant to the plot, and jarring in their self-awareness, as they deponent the
paddleball man’s direct address of the audience as the ball is being bounced out at the audience, looking at the camera and saying, “well, there’s someone with a bag of popcorn! Close your mouth, it’s the bag I’m aiming at, not your tonsils! Here she comes!” But reading this sequence as a dropped-in crowd-pleaser that shows the novelty of the new format, as critics have often done, mistakes its importance. Thematically, the sequence fits in smoothly with the remainder of the film in that it continues the theme of the demo.

The film opens with an argument between Jarrod, a wax sculptor (Vincent Price), and his financial partner, Matthew (Roy Roberts), over the future of the museum. “There are people in the world who love beauty,” Jarrod protests, to which his partner counters that there are “more who want sensation, shock!” This art vs. commerce debate centers on whether Jarrod will add a chamber of horrors to the museum. The introduction to the film ends with Matthew torching the museum to collect the insurance money, sparking the main plot of the film.

That this art vs. commerce debate is staged in a crashing, unsubtle 3-D film might seem an ironic coincidence were it not for the staging of the paddleball sequences. As the first sequence takes place, a group of three women is seen entering the wax museum. After this paddleball sequence ends, the action moves inside the museum as Jarrod gives a tour, particularly of the chamber of horrors which he has added to the museum. During this sequence, in a comic scene, one of the women seen previously faints in shock at the horrors on display. When we return to the outside of the museum for the second paddleball sequence, it is intercut with shots of the fainting woman looking increasingly woozy. The sequence ends with the woman fainting a
second time, as her companion groans “oh no, not again!” Thus the commercial shocks of the chamber of horrors is explicitly linked to the ostensibly extradiegetic demonstration of 3-D effects. Looking at the film this way, it is also significant that it is the introduction of the first major 3-D sequence, the fire, that pushes both Jarrod and the film down the road of commercial gain – Jarrod as he embarks on his plan that includes a commercial wax museum, the film as it becomes a straightforward horror film.

The paddleball sequence, then, serves as an ideal point to look at how this aesthetic of spectatorship and astonishment – the aesthetic that Gunning associates with the early period of cinema – is constituted, and particularly how poorly it fits with the traditional conventions of narrative cinema. This is the crucial problem of 3-D film as a technology that must also entertain in the specific context of a movie theater – the technology is supported by an aesthetic that is, by the time it is debuting, already 50 years outdated, and must show its belated innovation within the context of narrative film, a framework that replaced and supplanted the original aesthetic that shaped the 3-D innovation. Unsurprisingly, this works out awkwardly.

For instance, the paddleball sequences establish a clear template for the projection of objects into the virtual space of the theater. Because the film does not project real objects into an actual space there is a gap in the virtual space in which objects cannot be placed – they cannot, that is, move in a direction perpendicular to the surface of the screen, straight at the audience effectively. This is largely because, at a certain point, the fact that the object does not exist becomes problematic – as, for instance, it fails to collide with the viewer. Instead, objects that are being pushed out of
the screen move out towards the edges. Thus as the object moves outwards it does not have to occupy space that is physically in front of the audience – instead, objects move along lines that, if continued, would push them around the audience, essentially forming a reversal of the audience’s cone of vision where, instead of converging on the point of the audience’s vision, objects diverge out around the viewer. This can be seen in the figure below, where I have taken the trajectories of all of the bounces of the paddleball from a single scene and moved them to a common origin point. The trajectories are never the short line straight out towards the audience, but are instead propelled downwards as they move out along the z-axis so that they vanish into the effective dead space below the screen just as they would become spatially problematic.50

The template established by the paddleball scene rapidly became a convention for 3-D effects. I do not wish to belabor this point, but these stills from Dial M for Murder, Revenge of the Creature, and Kiss Me Kate ought serve to illustrate the point – all three are scenes with significant push-out effects, and in all three cases, the object pushed out extends in a direction where, for a centrally positioned viewer, the object will appear to pass into peripheral vision before it becomes spatially problematic. This effect is so pronounced that it becomes, in many cases, the defining spatial organization of 3-D scenes. For instance, the lengthy sequence in which the deformed Jarrod chases Cathy through the streets several times appearing to require a shot along diagonals even though no effects are being pushed out. Certainly this is not an inherently problematic

50 Some technical details on the figure. The trajectories are those from the second paddle ball sequence of the film, where the man repeatedly bounces the ball out at the audience before catching it in his mouth. This sequence was selected because the paddle moved relatively little during it, and because the paddle was located fairly centrally on the screen. All the same, it was necessary to correct for the slight movements of the paddle by moving the lines such that they touched at a single origin point. Thus, in practice the ball does not always leave the screen in the left hand side, but progresses far closer to the right, giving a wider spread, but retaining the characteristic long diagonals of 3-D effects.
framing – it’s often quite a good framing. But in 3-D film, in order to accommodate the 3-D effects, it becomes a constraint that cuts off a wide variety of other choices.

The other primary convention for dealing with potentially problematic objects, again established back in *House of Wax*, is to use the top and bottom borders of the screen to swallow the problematic objects. *House of Wax* uses this method in another one of its famous sequences, the dancing girls sequence. As the camera pulls ever closer to the girls, their kicking legs start to extend further into the audience. But once this becomes spatially problematic, the legs, when fully extended, also go high enough that they are cut off by the top of the screen. A similar effect occurs in *Kiss Me Kate* as a pair of acrobats leap towards the screen and arc downwards so they vanish off the bottom of the screen instead of continuing outwards. This technique not often used – in no small part because it is conceptually problematic. The film is, in these situations, left with two equally unsatisfying options. Either the film can have objects disappear into a diegetic space that corresponds to the viewer’s cone of vision, leading to ambiguity as to where the object is, or the film can violate the illusion of the stereoscopic effect.

Obviously, I am not arguing that one cannot make sense of the relation of visual fields of 3-D films to their narrative registers. A 3-D film can be followed on a narrative level as easily (or not as easily) as a 2-D film, or a film in one of the wide formats promoted during the period of 3-D’s first wave. And as Bordwell has argued, persuasively, the spatiality of traditional film is no less problematic than is the spatiality of 3-D. But in traditional film, the frame of the Albertian window – the border of the screen – serves as a clearly delineated threshold. The problematic spatiality of traditional film is confined to its diegesis. In 3-D film, because the film invades the space
of the theater, there is no longer a confining of problematic optical projections outside of
the frame. The result does not render the films incoherent. It simply makes the film more
incongruous. It is more something that is stared at, and reinforcing the aesthetic of
astonishment.

The problem of the viewer’s material-spatial relationship to an immaterial-spatial
object also poses problems with regard to technique for the basic narrative construction
and editing of film. David Bordwell and others have discussed structural aspects of
narrative film, and how they are edited and put together. But a major semiotic
component of film – the cut – is significantly more problematic in 3-D film. Because the
viewer’s physical position in the theater is of specific relevance to the success of the
illusion, cuts within 3-D films can be much more jarring and difficult to follow than in 2-D
films, as they involve much larger reorientations of space. In watching 3-D films,
excessively fast cutting produces troublesome physical sensations, as the viewer’s eyes
struggle to re-focus on elements of the new scene fast enough. Shot-reverse-shot and
other basic conventions of continuity editing become untenable. Because of this, a
gamut of established semiotic codes for cinema are simply inaccessible to 3-D film.

As a result 3-D film tends to regress in its use of narrative conventions. Instead of
controlling focus and close-ups to allow subtle acting, 3-D films are forced into an
almost theatrical tableau that is unsatisfyingly composed. In this still from House of Wax
the female character is forced to physically turn back and forth to address the two
people she is speaking to, while the male character on the right is unable to use
nuanced facial expressions. Furthermore, the crowded shot is an unsatisfying visual
that is forced to rely on the slight pushing out of the 3-D perspective to have any sort of
control over the viewer’s eye. A similarly crowded shot can be seen in *Creature From the Black Lagoon*, where a dialogue sequence requires five characters to be crammed into the frame, all facing the camera.

Other 3-D films address the problem of continuity editing in other ways. The recent *Journey to the Center of the Earth 3-D* (2008) splits the difference somewhat, both relying on continuity editing despite the physical shock of turning space, on tableau sequences like the one from *House of Wax* above, and on numerous shots of the main characters lying flat on their backs and staring up at the camera while they talk. This framing is visually satisfying, but clearly narratively limiting in that it requires a plot in which the characters fall down deep holes and tumble out of things more or less constantly. As *Journey to the Center of the Earth 3-D* shows, such a plot, while possible to construct, is not very compelling.

For other films, limitations in what can be assembled and separated by edits is tremendously inconvenient. One of the few musicals to be released in 3-D, MGM’s *Kiss Me Kate*, shows the unfortunate effects of the editing forced by 3-D production. The entire dance sequence for “We Open in Venice,” for instance, is comprised of four shots, the first of which comprises half the song. None of the three cuts serve to change the angle substantially – they’re just zooms in and out of the conveyer belt that is used to provide what little sense of motion and dynamism the sequence has. Musical sequences without many cuts were not uncommon for the time – *Singin’ in the Rain’s* famous title number has fewer than ten cuts during its entire four minute length. But nothing in *Kiss Me Kate* even approaches the sweeping sense of motion and the gracefully looping sequences of Gene Kelly’s dancing and singing in a sudden
rainstorm. Indeed, since stereoscopic objects cannot move as quickly as in traditional film without causing the viewer to lose track of their locations, the dancing sequences in *Kiss Me Kate* tend to be bland and slow.51

Beyond effects that come off the screen, 3-D film offers one other significant visual technique: a sense of depth within the field of the screen. For the most part, this effect works better than pop-out tricks, mostly because it is more innocuous. The shape of available space for depth-projected objects ultimately mirrors and resembles the Albertian window, and as long as objects are only being pushed into the screen, the frame of the screen can still serve to delineate diegetic from non-diegetic space. Furthermore, as long as the surface of the screen is maintained, cuts and editing are less disruptive, drawing on some of the semiotics of traditional film.

This does not mean that depth effects are without problems, however. 3-D objects often have a strange quality of two-dimensionality, due largely to the fact that the camera does not capture the sides of an object; when an object is viewed from any perspective other than straight-on, it seems strangely flattened. Furthermore, because the top and bottom of the screen often cut off the floor or ceiling, 3-D films often provide unsatisfying cues for depth perception. Without these continual surfaces to give a sense of scale, the viewer’s understanding of depth comes entirely from the stereoscopic effects. In practice, however, this is not usually how normal vision works, as the perception of depth in fact depends on the interplay of stereoscopic vision with other cues. When stereoscopic vision is present, but these other visual cues disappear, the

51 This problem with fast-moving objects is particularly challenging for action sequences. Indeed, for all the commercial success of a film like *Avatar*, many viewers (myself included) have commented on having been slightly nauseated by the film’s 3-D effects. One wonders about why the film had such massive success given this unwanted side-effect. But on the other hand, perhaps it is the fact that film rarely creates a physical sensation in the viewer that makes *Avatar* seem more “immersive” to many critics.
effect can be unsettling. For instance, compare the two stills from *Dial M for Murder* below. In the left-hand one, the lack of a visible floor or ceiling removes what would be, for a person actually standing in the room, important depth cues. When stereoscopic effects are added to give a strong sense of depth, however, this added information is not enough to resolve the image fully. As a result, the perceived depth between objects seems strange and difficult to estimate, increasing the effective flatness of the objects. In the end objects in such shots look vaguely like cardboard cutouts that are being stacked at various distances from one another. In the second still, the tiled floor provides a visual continuity across the shot, allowing for an estimation of depth, leading the uncanny effect to disappear. Because there is a continual surface moving across the depth, the shot feels much more like normal vision.

But in practice, not all shots in 3-D films are so well framed, and cardboard cutout shots are not uncommon. The result is that pushing in often looks markedly artificial, resembling theatrical sets instead of realistic images. Thus, instead of being forward-looking, depth shots in 3-D films tend to evoke the older medium of theater – especially when combined with the tableau-like dialogue that is the product of limited opportunities for cross-cutting. In this regard, *Dial M for Murder* was particularly well-suited to 3-D, given that it was based on a play, and Hitchcock could (and did) use a theatrical staging, moving actors around the set instead of relying heavily on camera motions. The use of a single set for the most of the film, the long takes necessitated by 3-D, and the tendency to stage shots so that the action is framed by a collection of objects in the foreground (visible in both images above, but particularly the left one) all serve to give the film a notably theatrical feel. Hitchcock understood well the limits of the medium and
used them productively. This theatrical staging perhaps reaches its apex in Kiss Me Kate, where one of the most impressive shots (repeated three times in the film) is a view of the play-within-a-film from the back of the theater in which it is supposedly being performed. Thus the effect appears to continue the movie theater into the screen, positioning the audience in an upper balcony looking down on the stage. Film, in other words, is meant to disappear in this shot, replaced by the older theatrical medium.

For the most part, however, this backwards-looking approach is unsuitable for demos, as it does not convey the qualities of innovation that are required of the shiny demonstration. The most notable exception to this comes in the film Starchaser: The Legend of Orin, the only full-length animated film done in a hand-drawn style. The film contains almost no push-out effects; only film's the logo and a few (frankly tedious) spaceship shots fall into that category. Beyond that, every effect in the film is a depth effect.

Although Starchaser is not a very a good film, its use of 3-D is genuinely arresting in a way that differs from other films. Much of this is because hand-drawn animation turns out to be an excellent fit with depth effects. Because the animation already has an inherent sense of flatness to it, the flattening that can sometimes be generated by 3-D effects is not nearly as jarring. Since animation is based on a metaphor of moving drawings, the fact that the staging of the film resembles drawn surfaces separated by indeterminate amounts of space is not a problem. In fact, the best shots in the film – the ones of the Mineworld at the beginning of the film – are the ones that take this effect as far as possible. The basic layout of a cave planet plays into
this effect, allowing long tunnels, the ends of which seem unfathomably far away, while also allowing outcroppings in the foreground. The result is visually impressive.52

Unfortunately, as effective a demo as Starchaser was, it was in no way a major film – in fact, it’s sufficiently forgotten that advertisements for the 2008 3-D animated film Fly Me to the Moon were able to claim, inaccurately, that it was the first 3-D animated film. This neglect of Starchaser cannot be attributed simply to the fact that it is not a good film – after all, neither was Bwana Devil. Some of its failure can be attributed to its release date – 1985, at the absolute tail-end of the 80s 3-D craze. As a result, it did not generate the sense of wonder necessary to make a poor movie into a hit. On top of that, the process of creating a 3-D film primarily out of hand-drawn animation is enormously difficult and expensive. Starchaser was made via a process where each frame of film has two images – one at the top of the frame, the other at the bottom, which are split through a mirror box, polarized, and then projected. To create the animated film, the animators went through and drew the top image for every frame, then went back and added the bottom image into the empty spaces.

The basic visual qualities of Starchaser, however, were not original to it. In the 3-D craze of the 1950s numerous 3-D animated were produced, including several by Disney. All took advantage of the layered paper aesthetic that subsequently worked in Starchaser. Perhaps more significant, however, was the 1953 release of the first 3-D

52 Although Mineworld is, as a concept, perfect for the technology it’s being used to demo, the idea was not developed for that purpose. The screenwriter, Jeffrey Scott, informed me that the efficacy of Mineworld for the 3-D process is pure coincidence, as the decision to produce Starchaser in 3-D was made by the director, Steven Hahn, after Scott had written the script. Interestingly, however, Scott also suggests that he, speaking with Hahn, suggested that he would like to make a 3-D animated movie, and that this gave Hahn the idea to do Starchaser in 3-D. Scott, however, was largely displeased with the visual effects of Starchaser and considered them as a distracting gimmick. In an interesting historical coincidence, Scott is the son of Norman Maurer, who, along with Joe Kubert, co-created the first 3-D comic book.
comic book, created by Joe Kubert and Norman Maurer. Although the first comic in this format was a Mighty Mouse comic, one of the first characters for which Kubert and Maurer developed the process was Kubert’s creation: Tor.\(^{53}\) Interestingly, Tor, a caveman character, used the same visual effect that would make \textit{Starchaser} visually appealing 30 years later – complex cave settings.

3-D comics ended up being even more of a transient fad than 3-D films, starting to crash only a few months after the release of the initial Mighty Mouse comic. But their visual style was very much in line with what would later be accomplished with \textit{Starchaser} – a focus on depth effects, with few if any pop-out effects. The effect was somewhat dismissively described by Morgan and Symmes as a “cardboard cutout look,” (Morgan and Symmes 125) but, given that photo-realistic artwork had (and always has had) relatively limited sway in comics, this line of criticism seems beside the point.\(^{54}\) Regardless, despite the striking visual effects, with the exception of occasional one-off gimmicks comics released by DC, 3-D comics and the visual style of \textit{Starchaser}, have never taken off. They provide only an interesting footnote to the larger history of stereoscopic technology.

No doubt some of this is historical accident. The expensive failure of \textit{Starchaser}, coupled with the decline of hand-drawn animation between 1985 and the present 3-D revival, has meant that contemporary 3-D animated films such as \textit{Fly Me to the Moon} and \textit{Bolt} are created with 3-D computer-rendered objects, which are free of the flatness

\(^{53}\) See Morgan and Symmes 107–9 for a thorough history of the development of the 3-D process used.

\(^{54}\) Although, admittedly, Kubert’s artistic style was considerably more photo-realistic than that of his peers, given that prominent entries in the 3-D comics field included Mighty Mouse, a Jack Kirby character called Captain 3-D, and an early example of Curt Swan’s Superman art, to claim that the comics were aspiring to any sort of immersive realism seems silly.
that characterizes the hand-drawn objects. The brief spike of 3-D comics in 1953 was quickly followed by the meltdown of the comics industry in 1954, in the aftermath of to Fredric Wertham’s *Seduction of the Innocent*, and the moral panic it produced. This resulted in the contraction of the market to only two major players – Marvel and DC – who went on to dominate the market with the lone genre of superhero comics, in a fundamentally more conservative form that saw little need to invest in new technologies like 3-D. In part, this serves as an important lesson – an unsuccessful demoing of technology can sink the technology’s future development, but a successful demo is not sufficient to make the technology prevail. The relationship between the act of demoing and actual economic success is complex and inconsistent, to say the least.

*Starchaser* is not the only effective and successful 3-D film. Indeed, several films use 3-D technology in ways that are, at least for those specific films, aesthetically successful. However these films do not, generally speaking, provide a clear sense of the technology as a future form. They do not, in short, work as demos.

*Creature From the Black Lagoon*, for instance, is rightly considered a classic horror film, and uses 3-D to enticing effect. 3-D is still fundamentally limiting for the film – the tableau style of dialogue remains as unsatisfying as it would be in any film. But the signature underwater sequences, in which the Gill-Man tracks his human prey or does battle with them, are tremendously satisfying in 3-D. Much of this is due the fact that underwater filming turns out to be ideal for 3-D technology, as the range of motion by underwater shots makes eccentricities of space involved in 3-D film considerably less jarring. Furthermore, because water slows down motion, objects move slowly, which makes them easier for the eye to track. The problem, of course, is that this is such an
idiosyncratic use of 3-D that it does not serve as a demo at all. This sense is heightened by the fact that *Creature From the Black Lagoon* was filmed in black and white. Although this was not uncommon in 1954, it is in sharp contrast with the dominant rhetoric of 3-D, which was all about spectacle and realism. Indeed, although the posters for *Creature From the Black Lagoon* mention that the film is in 3-D, they lack the gusto and bravado of other posters from the era. The film, then, does not try to participate in the overall discourse of the demo, instead creating an interesting and compelling effect of its own.

*Dial M for Murder*, on the other hand, ultimately works as a 3-D film simply because it largely declines to make much use of its 3-D technology. The film has only two significant shots in which objects are pushed out into the audience – the attack scene in which Grace Kelly reaches out into the audience as she is pushed backwards over the desk, and the later scene where the inspector finds the key under the mat and holds it out to the audience. The lack of significant use of 3-D seems to be due, at least in part, to Hitchcock’s skepticism of the format. Morgan and Symmes suggest that it way “by some accounts… pushed on Hitchcock,” (Morgan and Symmes 103) and R.M. Hayes claims that “Hitchcock wasn’t happy that Warners demanded he shoot the film in their WarnerVision process, and he deliberately had the cameras toed in to only a 1.5 inch separation, effectively flattening the screen image to almost no 3-D at all” (Hayes 173). Regardless, the first of the film’s committed use of push-out – the attack sequence – is rightly regarded as one of the best uses of 3-D in popular film. The effect of the scene is clear – it comes after a masterful slow build of tension, such that the attack on

---

55 Images of the posters for *Creature From the Black Lagoon* can be found in (Hayes 167) and (Morgan and Symmes 94).
Kelly is a strong crisis moment of the narrative. As she is attacked, pushed down across a desk by her attacker as he attempts to strangle her. She reaches out into the audience and, from within that space, manages to grab the scissors and defend herself. The sequence is set up to elicit the audience to all but cheer for Kelly. She pierces the boundary of the screen (which remains largely impenetrable in the film despite its being 3-D) and, drawing on that effect, is able to defend herself. Distinct from the crass spectacle of most pop-out effects, this one serves not to assault the audience, but to pull them into the film.

*Flesh For Frankenstein* takes the opposite approach. Whereas *Dial M for Murder* exercises restraint in its use of 3-D effects, *Flesh for Frankenstein* uses them flamboyantly and to extremity. The degree of parallax in use in the film is staggering, and some portions (particularly the opening credits) are almost unwatchable because of the difficulty of focusing the viewer’s eyes on on-screen elements. What is interesting about *Flesh for Frankenstein*, however, is that it does not use 3-D effects in the ostentatious way of the demo. With the exception of one gratuitous sequence in which characters are attacked by bats, there is very little in the way of paddleball-style pop-out shots of the sort that mark both *House of Wax* and most 3-D movies of the 180s. Instead, *Flesh for Frankenstein* constructs at times bewildering 3-D stagings that push far into the virtual space of the theater. They largely violate the principles of diagonal motion and show almost no mindfulness of the top and bottom of the screen.

For example, in the still below, the glass shelf upon which the surgical implements sit is, when projected in 3-D, pushed out into the audience. But the still is part of a panning shot – the camera moves left to right across the back of the shelf. And
so objects that are pushed out into the theater move off the sides of the screen – even though the viewer can see the space into which they, were it not for the limitations of 3-D projection, would move into. Thus parts of the shelf simply vanish off the sides of the screen into the dead space. A similar effect, of course, happens in the dancing girls sequence of House of Wax, but there the transition is quick, and accompanied by motion out towards the viewer. The objects do not simply vanish, but are swallowed just as they would come too close to the viewer. The disappearance is thus less noticeable, because it happens quickly and attempts to draw a visceral response from the viewer.

In Flesh for Frankenstein, however, the panning is slow, and the disappearance conspicuous. The result is that the viewer is aware of how the shelf should extend into space, making the shelf seem to hang impossibly in the theater, as though anchored to nothing. The film is full of such shots. In another, as R.M. Hayes describes it, “One character spies on another through a hole, while we saw not only the peeper, but his subject, the area around both and a reflection of the same in a mirror all of which was shot so that it all floated in the theatre space before your eyes... I have never seen such a wacko 3-D shot” (Hayes 187). In this case, Hayes does not exaggerate – the shot in question is utterly bewildering, making use of the virtual space in ways that simply do not make spatial sense.

It would be easy to dismiss Flesh for Frankenstein as a poorly-made film because of effects like this. After all, Spacehunter: Adventures in the Forbidden Zone, another 3-D film with similarly bizarre shots is almost universally panned.56 And Flesh

---

56 Spacehunter is actually a strange case – multiple commentators such as Chris Condon have referred to it as a stunning example of “what not to do when making a 3-D movie” (Zone, 3-D Filmmakers 13). But exactly what went wrong is unclear. The projectionist I spoke with told me that the mirrorbox on the camera had been calibrated backwards, so that all of the effects were reversed, leading to bizarre and
for Frankenstein does have its critics – Chris Condon describes it as “bad use of 3-D” (Zone, 3-D Filmmakers 16). But on the other hand, Condon seems to have some measure of respect for the film. When Zone mentions it in an interview with Condon, Condon’s response is to laugh and say “Well, that’s a cult film, and it’s not for everybody, because some people take it seriously. They think it’s in bad taste, and some people are very sensitive to all the sheep guts and everything” (Zone, 3-D Filmmakers 13). Which does get to the heart of the matte: Flesh For Frankenstein is an over-the-top film in all regards. It is extravagantly blood-filled and gory, full of lurid sex, and, for all its interesting cinematography, is probably better known for the utter bizarreness of a single line – Dr. Frankenstein, after having sex with his monster, proclaims that “To know death, Otto, you have to fuck life in the gall bladder.” The extravagant and at times seemingly willfully inept 3-D effects are, in the end, part and parcel of its aesthetic. The film is designed to be a pastiche of gory, lurid horror films, and 3-D heightens the degree to which the film is a spectacle – evidence of its meta-perspective on the genre with which it’s playing.

unwatchable framings. But Chris Condon, in his interview with Zone, accuses the problem of being a poorly-used dual-camera system. R.M. Hayes confirms that the film was made with a dual-camera system (Hayes 99), but claims that all the reports of the film’s unwatchability are nonsense, and that “the stereo-process employed worked perfectly throughout” (Hayes 323). He suggests that the film was simply “heavily criticized by supporters of single-strip photography,” (Hayes 101) a group that would certainly include Condon, who was one of the primary developers of the mirrorbox technology, and who accuses the filmmakers of dismissing his advice. Although one must usually take Hayes with a grain of salt, in this case he describes having watched the film, lending some credence to his claims that it is more or less error-free. On the other hand, the projectionist I spoke with described sitting in the projection booth frantically trying to adjust the mirrorbox on the fly to correct the errors in the film, suggesting that there was something wrong. Unfortunately, Spacehunter was not among the films I’ve been able to see in 3-D, and so I am unable to provide the last word on this, but it remains a puzzling and controversial moment in 3-D history, given the status of the film an example of bad 3-D. Condon, in fact, implies that its failures are part of why the 3-D book of the 80s failed to take – though, again, Condon was heavily financially invested in the technology used at the time.
But what is telling about these three successes is how idiosyncratic they are. *Creature From the Black Lagoon*, *Dial M for Murder*, and *Flesh for Frankenstein* are not demos for one simple reason – they do not point forwards. Unlike Englebart’s document reading simply “Word” over and over again, such that the audience can project any document onto the screen presented, these films present very specific, delineated uses of 3-D technology, within very specific genre conventions. The fact that 3-D is interesting and fun to watch for underwater shots does not really offer a clear path to a new grammar of film. Nor does *Flesh for Frankenstein*’s use of 3-D to heighten its over-the-top pastiche of horror movies really have much future outside of a meta-commentary on genres. The case is slightly harder to make for *Dial M for Murder*, but given that the 3-D in that film mostly comes down to a single (albeit famous) shot, it is on the whole more of a case against 3-D than for it. However effective the attack sequence is in 3-D, the fact of the matter is, it’s the only part of the film that makes use of 3-D to any degree. Given that the film quickly became beloved even though it had virtually no 3-D engagements in its first run (Morgan and Symmes suggest that it may only have played 3-D in St. Louis (Morgan and Symmes 104)), with the shot of Kelly pushed back over the table being its iconic image, it’s clear that even that shot does not, strictly speaking, “need” 3-D.

This gets at the heart of a key aspect of the demo: it is, manifestly not particular, not idiosyncratic. Because the purpose of the demo is to direct focus towards future texts, the actual demo must be somewhat understated in a crucial regards. It should not – or not openly – showcase its own cleverness or ingenuity, but rather suggest that it may function as a template, for which a clever or ingenious expression could be
created. For this reason, perhaps counter-intuitively, actually clever and interesting uses of the technology are less than ideal for the purposes of the demot. *Dial M for Murder’s* iconic scene is so good on its own merits that the quality of the idea and the execution overshadows the technology. In the end, it demonstrates not 3-D film, but Alfred Hitchcock’s mastery of mise-en-scène.

This paradox is a fundamental problem for the demo, in that it runs counter to the presumed purpose of communicative media. The medium, instead of striving towards transparency, must announce itself, but in a way that is generally, not idiomatically, meaningful. The problem is, as Heidegger would suggest, is that “conspicuousness presents the thing at hand in a certain unhandiness” (Heidegger 68). Shininess, of course, entails a level of visibility and conspicuousness. Therefore, in order to show the potential of a medium a demo must be less than absolutely communicative, and less than ingeniously functional. If the demo is too artfully performed than the art is more conspicuous than the form. The real art of the demo – illustrated by masters of the form like Steve Jobs and Douglas Engelbart – is to cannily hide that which is unique to its performance.

This is why *House of Wax* serves as a better demo of 3-D than a film like *Creature From the Black Lagoon*, despite the fact that the latter is justifiably viewed as the better film. Because while *House of Wax* is merely a competent horror film, its drab conventionality allows it to be a film of surfaces. Because the demo is fundamentally a proleptic form, it must itself be somewhat unmemorable in any one application, in order to make way for the medial future it implies.
It is this paradox of the demo that 3-D film gets hung up on. The demo must be both looked at and looked past. Its shininess functions both as allure and as a mirror that reflects the viewer’s thoughts about what could be done with the medium in a conjectural future. 3-D movies illustrate the gap that occurs between this first step – allure – and the second step – defining a canny rhetoric for future uses of the technology. Ray Zone implicitly admits this when he expresses his desire for “a critical framework for a stereoscopic grammar of moving pictures. 3-D images present a heightened realism – a visual allure so powerful that they can easily overwhelm the story and subvert the narrative” (Zone, Stereoscopic Cinema and the Origins of 3-D Film 4). Zone is right that the visual allure of 3-D overwhelms narrative. But he’s wrong to suggest that no grammar of stereoscopic cinema exists. Quite the contrary – a grammar clearly exists, and was more or less codified as far back as House of Wax. And although some films are able to transcend, ignore, or take advantage of this grammar, in the end, that grammar is based not on narrative or story, and certainly not on immersive realism, regardless of the advertising discourse of the medium. 3-D film, in the end, is a medium of demos, and, as a result, of gimmicks that must be promising, but not too specific to the desired illusion. Nowhere is this clearer than in the basic pop-out effect, where an object appears to come perilously close to the viewer. The natural reaction, of course, is for the viewer to flinch: to look away from the screen. Which is, in the end, the point of the technology – to re-establish movie theaters not as mere places where one can consume a visual narrative – one could do that, and viewers increasingly do, with a television set – but as places of spectacle and wonder. In the end, 3-D film is
not about the supposed realism of the objects it depicts, but about the physical space and economic paratext in which it seems to project them.
Figure 4-1. Use of space in 3-D films. [The distinction between viewer’s cone of vision and the space in which objects in the film are visible.]

Figure 4-2. Use of space in 3-D films for a viewer near the screen. [The relationship between the cone of vision and the projectable space alters as the viewer moves closer to the screen.]
Figure 4-3. Use of space in 3-D films for a viewer at the side of the theater. [As the viewer is moved to the side of the theater, the projectable space skews and becomes more distorted.]

Figure 4-4. 19th century stereoscope viewers.
Figure 4-5. Trajectories of the paddleball sequence from *House of Wax*, moved to a common origin point.

Figure 4-6. Still from *Dial M for Murder*. [This shows how 3-D effects are pushed out of the screen at an angle.]
Figure 4-7. Still from Revenge of the Creature. [This shows how 3-D effects are pushed out of the screen at an angle.]

Figure 4-8. Still from Kiss Me Kate. [This shows how 3-D effects are pushed out of the screen at an angle.]
Figure 4-9. Still from *House of Wax*. [This illustrates the use of diagonal staging, even when no 3-D effects are being employed.]

Figure 4-10. Still from *House of Wax*. [This illustrates how objects are extended off the top or bottom of the screen when they become spatially problematic.]
Figure 4-11. Still from *Kiss Me Kate*. [This illustrates how objects are extended off the top or bottom of the screen when they become spatially problematic.]

Figure 4-12. Still from *House of Wax*. [The awkward staging of dialogue sequences in 3-D films.]
Figure 4-13. Still from *Creature From the Black Lagoon*. [The awkward staging of dialogue sequences in 3-D films.]

Figure 4-14. Stills from *Dial M for Murder*. [A backdrop such as the floor is needed to give additional depth cues lacking in scenes like the first image.]
Figure 4-15. Still from *Kiss Me Kate*. [The use of theatrical staging in 3-D films.]

Figure 4-16. Still from *Starchaser: The Legend of Orin*. [Cave settings are particularly suited to the depth effects in this film]
Figure 4-17. Joe Kubert art from a 3-D Tor comic. [An earlier use of caves for 3-D effects.]

Figure 4-18. Still from Flesh for Frankenstein. [This illustrates the complex 3-D stagings of that film.]
I want to conclude by looking at an example of media technology that not only was successful in generating an initial allure, but has shown a measure of actual success in engendering a paradigm shift in medial development. I have discussed two such inventions already – the World Wide Web and the Macintosh. But here I want to look broadly at the entire range of a demo – the full cultural paratext that surrounds a major product release, and the technical components of that product – in order to provide an account of what successful progress looks like. To that end, I will look at the most recent video game console released by Nintendo, the Wii, and how it melds a utopian rhetoric in its demos with a meticulous and incremental approach to perfecting existing technologies.

The Wii is one of three console systems that dominate the current generation of video game play – the other two being Microsoft’s Xbox 360, and Sony’s Playstation 3. Unlike its competitors, which offered significant improvements in graphics and processing power over their previous iterations, the Wii offered only a modest graphical improvement over Nintendo’s previous console, the Gamecube. But it offered a new control scheme – where both the Xbox 360 and Playstation 3 were based on traditional controllers, the Wii utilized motion based controls as a primary facet of its interface, such that the player had to physically move the remote-control shaped controller around in order to interact with Wii games.

Unlike infinite canvas webcomics and the first two waves of 3-D film, the Wii is notable for being an almost unqualified critical and commercial success. Although Nintendo was by far the dominant force in video games from the mid-80s to the early
90s – through the release of the Nintendo Entertainment System (NES) and Super
Nintendo Entertainment System (SNES) – its position of supremacy was overtaken by
Sony’s Playstation, which, due to a series of poor hardware decisions on Nintendo’s
part, locked down a number of high-profile, exclusive titles that the Nintendo console
lacked. By the early 00s, Nintendo had dropped to a distant third place console
manufacturer, and was kept afloat primarily through its success in the portable market.
With the Wii, Nintendo has swiftly reversed that trend, and the Wii is now by far the
biggest seller of the current generation. Both Microsoft and Sony, who criticized the
Wii’s motion control idea when it was announced, have since implemented similar
control mechanisms for their consoles, with Sony releasing the Playstation Move and
Microsoft developing Project Natal, a motion control system that does not require a
controller at all. The Wii, then, has quickly established itself as the primary cause of a
major shift in the video game as a medium.

The Wii is also notable for being staggeringly unsubtle in its demonstrations. For
most of its development, it was widely known by Nintendo’s internal code-name for the
device, the Revolution.\textsuperscript{57} Nintendo’s marketing has been unapologetic about positioning
the system as a radical shift towards a conjectural future of video games. This is all the
more significant because video games, steeped as they are both in the computer tech
tradition from which the image of the modern demo originates and in a particularly swift
upgrade curve, are already a demo-heavy medium. Nintendo’s focus on the system as
both a rejuvenation of the company and as a major change to the way that video games
work is of extreme importance in the evolution of the video game demo.

\textsuperscript{57} The code name lasted so long that the part numbers for Wii components are still prefaced by the three-
letter internal code RVL.
The first official announcement of the Wii – then called “Revolution” – came in May of 2004. The scope of the announcement as of this date was vague; Nintendo announced merely that they would show off the console at the 2005 Electronic Entertainment Expo (E3), that the new system was not simply an upgrade of Nintendo’s Gamecube, and, most cryptically, that it would introduce a new way of playing games. Between that announcement and September of 2006, there were basically no significant announcements from Nintendo about the hardware or capabilities of the new system. Revolution, nonetheless, remained in the gaming news media through this period largely due to exuberant speculation and rumors from fans and industry insiders. Rumors, unsurprisingly, tended towards a rhetoric of virtual reality, with various accounts of holography, 3-D projection, and headset based systems making the rounds on rumor sites and forums.

It is worth stressing the degree to which the rumor mill surrounding console video games is based on an ability to grab headlines in the absence of concrete information. Photoshopped “concept art,” wholly fictitious technical specs, and so-called analyst reports are widely circulated, though they often have little basis in reality. Typically, at times during its development, the Wii was characterized as a virtual reality system based on motion controls, or touch controls, and implementing any one of a dozen different designs. It was to be called the Nintendo Nexus, or perhaps the Nintendo On, and, depending on analyst reports, would do fantastically well, or sell only a few millions of units before quickly disappearing from the market. All of this rumor and innuendo is

---

58 Similarly, its launch titles were set, at various times, to include a Zelda game (as was the case), but also a new Mario game called Mario 128 (a rumored game that has been confirmed never to have actually been in development; the actual Mario game for the Wii, Super Mario Galaxy, shipped a year
germane to understanding the demo aspect of the Wii because, although these speculations about the console were not merely disingenuous but sometimes outright frauds, they served to sustain a near-constant state of excited desire for the new technology such that, when the actual device arrived it fit neatly into an already well-developed fantasy narrative. In other words, products of the Nintendo rumor mill, absurd as it may now appear in retrospect, served the strange purpose of establishing a condition of consumer desire for the product in the absence of much clear information regarding what the product might actually be or do.

Nintendo’s promise to unveil the console at the 2005 E3 was only partially met. The motion controls of the unfinished devices suffered from lingering glitches; rather than risk the negative publicity of an unsatisfying demo, Nintendo simply showed off the body of the new console, announced its backward compatibility and Virtual Console features, and promised the controller for later release. The controller was finally revealed in September of 2005 at the Tokyo Games Show. Finally, in April of 2006 Nintendo announced the official name of the console to be the *Wii* – an announcement that was initially met with wide derision due to the urological implications of the name, similar to the brief fad of menstruation-related jokes following Apple’s announcement of the iPad.59

---

59 This lengthy rollout was in many ways an expansion of what Nintendo had done a few months earlier with the Nintendo DS, which they first pre-announced in November of 2003 as a new console that would fill a niche between the Gamecube and the Game Boy Advance. (In practice it was the replacement for the Game Boy Advance). Two months later, they announced that the console was to be called the Nintendo DS, and would feature two screens. This was originally touted as the main feature of the forthcoming device, with the fact that one of the screens would be touch-sensitive held off from publicity until May of 2004. By the time that the system was released in November of 2004, Nintendo was marketing it with the slogan “Touching is Good,” and stressing the touch-sensitive aspects of the system, which, in hindsight, served as a philosophical predecessor to the Wii.
From the moment its full feature set of the device was announced, the critical and commercial rhetoric of the Wii focused on the eternally displaced myth of virtual reality. *Business Week*, for instance, spoke of how “In a sense, it’s as if your hand is placed inside the TV set itself and is manipulating the virtual world” (GameDaily).

The rhetoric was taken up by fans of the upcoming system, particularly in the form of widespread anticipation of a *Star Wars* game that would feature Wii remote lightsaber duels, despite the fact that no game of that kind had been announced, nor would one become available until Lucasarts released *Star Wars: The Force Unleashed* in September of 2008. The view continued, reaching its most absurd height in an editorial on the game *Manhunt 2* in *USA Today*, which made the claim that “Since the Wii version uses the motion-sensitive controllers, it literally gives players the hands of a killer” (Snider).

The virtual reality fantasy, in the rhetoric of video games and, more generally, in the rhetoric of new media, is not specific to video game journalism, though it is strikingly common there. It finds its purest expression in Janet Murray’s 1997 *Hamlet on the Holodeck*. Murray treats video games as predecessors of immersive virtual narratives, of which the fictional and far-future invention of the Holodeck in the television series *Star Trek: The Next Generation* is, anachronistically, the archetypal example. Murray divides this virtual experience into three key components – immersion, agency, and transformation. Immersion is defined as “the experience of being transported to an elaborately simulated place,” which is to say, that the diegetic world of the game must constitute a coherent world into which one can step (Murray 98). Agency is defined as “the satisfying power to take meaningful action and see the results of our decisions and
choices.” (Murray 126). Finally, transformation is defined as the alteration of the self into something else – Murray uses the example where “putting on a virtual reality helmet, we earthbound interactors find ourselves transmuted into soaring crows” (Murray 154). In each case, then, what is stressed about this fantasy is the literalness of the player’s immersion in a fictional world.

With regard to the widespread application of this fantasy to video games, we ought turn to Allison McMahan, who specifically addresses the immersive fantasy within the play discourse of 3-D video games. She claims that video games reach a point of higher immersion when the player is “incorporated into the space” of the game, using the example of showing the avatar’s hand holding a gun in first person shooters such as Doom (McMahan 71). If the incorporation of the player into the diegetic space of the game is to be taken as a key step towards a realization of the virtual reality fantasy that theorists like Murray and McMahan see as the future of gaming and narrative, then the Wii’s responsiveness to the player’s embodied movements in actual space would have to be seen as a dramatic leap forward in that direction.

In the case of the Wii, this fantasy is perhaps more sustainable than for other gaming systems, given the fact that it is all too easy to confuse embodied engagement with the gameworld with a true mimetic immersion. Just as I suggested that 3-D films generate some of their apparent immersivity by the physical toll they take on the viewer’s visual system, there is a strong body of thought in game studies that treats the more foregrounded role of embodiment in video game play as opposed to, say, the relative stillness of the body while reading a novel, as evidence of a greater degree of immersion of video games. This approach is most evident Martti Lahti’s essay “As We
Become Machines,” in which she slides freely between describing “the cyborgian pleasure of games” (Lahti 163) evinced by tactile peripherals such as light guns, and “immersion into the fictional world” (Lahti 164). I confess to some puzzlement over how this mistake could be made as generally as it seems to be. Yes, it is certainly the case that adding a more explicit embodied dimension to medial engagement increases the engagement of sensorimotor perception in play. But this statement barely rises above the level of tautology – increasing engagement… increases engagement. What is baffling to me is the collapse of all forms of engagement to a single point such that narrative-mimetic immersion and physical engagement, despite having no necessary connection, are equated with one another60.

If video game critics have been remiss on this point, Nintendo has, for its part, been more on the ball, in that their marketing of the Wii focused more on the supposed accessibility of the system. The major ad campaign for the Wii was entitled “Wii Would Like to Play,” and featured people showing up at houses or, in later ads, in settings like airports and movie theaters, and inviting people to play the Wii. The ads feature numerous shots of non-traditional video gaming audiences – young children and the elderly – showing players swinging Wii remotes around as on game footage as much or

60 It should be noted that I am not, in making this observation, embracing the major counterpoint of the so-called ludological approaches to video games. The most extreme critics in this school of thought, although they recognize the difference between physical and narrative immersion, seem to make an assumption that is equally dubious as the equation of physical with narrative-mimetic immersion: that because physical immersion is not narrative immersion, video games must have no narrative immersion; indeed, they barely signify narratively at all. For more developed treatments of this problematic debate, see (give short citations here; add full citations to the Works Cited): Ryan, Marie-Laure. “Computer Games as Narrative: The Ludology versus Narrativism Controversy.” diachrony-digital 1/2006 (2006) <http://www.dichtung-digital.org/2006/1-Ryan.htm>; Harpold, Terry. “Digital Narrative.” Routledge Encyclopedia of Narrative Theory. Eds. David Herman, Manfred Jahn, and Marie-Laure Ryan. New York: Routledge, 2005. 108–12.
more than actual game footage. As a result, play mechanics, and not qualities of games, were heavily emphasized.

All of this was a part of what was, for Nintendo, an unprecedented degree of control and marketing of the gaming system. The sense of the Wii as a coherent and designed experience is stressed in part by a strong consistency in design. The design for the Wii consistently features the image of a rectangle with one corner cut off. The Wii itself features this design in two dimensions. All three of the plugs in the back are shaped that way, as is the transformer on the power cord. Notably, Nintendo abandoned the proprietary video connector they’d been using for sixteen years, since the release of the Super Nintendo, in favor of a new connector in the same cut-off rectangle shape. This attention to fine detail is reminiscent of Steve Jobs’s legendary approach to Apple products – a connection that is further strengthened by the myriad of ways in which the Wii imitated the look of Macintosh computers of the period, in its use of an external white plastic housing and its interface’s evocation of certain elements of Mac OS X. It is clear both that Nintendo firmly intended to position the Wii as a coherent and radical vision of the future of video games, and that Nintendo was aware that the virtual reality narrative of immersion, while it provided some of the Wii’s allure, was not the extent of the Wii’s invention.

It is worth comparing this awareness on Nintendo’s part in their explicit comments on the Wii to Scott McCloud’s utopian rhetoric concerning the future of comics in Reinventing Comics. Where McCloud embraces the substance of medial utopianism, Nintendo embraces only the form of utopianism, accepting that some

---

61 The original wrist straps for the controllers featured the design as well. When the wrist straps were redesigned to be sturdier this was abandoned in favor of a locking clip mechanism.
aspects of their technology resemble utopian fantasies and that this generates some level of desire. This savvy handling of this rhetoric is characteristic of the most effective demos – consider, for instance, the deftness with which Jobs foregrounds the MacInTalk software without actually making the (unjustified) claim that MacInTalk is the future of computing.

Nintendo was able to handle this particularly deftly because of the workings of the rumor mill: they could count on less savvy developers to emphasize outlandish utopian claims for them, allowing unreasonable desires to be stoked without Nintendo having to promote them directly. And indeed, game developers have provided utopianism in spades. *Trauma Center: Second Opinion*, for instance, promises that it “turns your living room into an O.R.!” *Harry Potter and the Half-Blood Prince* promises that the Wii Remote and nunchuk will in fact become your broomstick for Quidditch matches. And *Red Steel* proposes that the player use the Wii controller “as an extension of your own body,” and shows people in martial arts garb holding Wii controllers, thus stressing the idea that some border between the world of the game and the real world are blurred by gameplay.

We can see here the double, disingenuous logic of the demo, as the ecstatic promise of virtual reality is raised in the absence of an actual capacity to deliver on that promise. But unlike 3-D film and the infinite canvas comics, in the case of the Wii we also see an active effort by the creator of the technology to temper that desire, perhaps bourne of concerns of commercial blowback from over-promising user satisfaction. Just as Steve Jobs’s demo of the Macintosh blended coyly utopian claims with far lower key examples that offered real and vibrant promise, the discourse of the Wii, combining
manufacturers’ and developers’ different characterizations of the device, deftly moves back and forth between the immersive fantasy and a far less glitzy but ultimately more sustainable vision of the capabilities of the new system.

This is clearest in the strange case of the “Mii”, the stylized representation of the player used as an avatar or other element of many Wii games. Any discussion of immersion and the Wii has to consider the role of the Mii. On one level, the Mii seems like obvious evidence for some kind of immersive capability of the device. After all, it creates a literal link between player and avatar that does not otherwise exist. And the Miis are quite well done in this regard – they are solidly recognizable as versions of the entity they are supposed to represent. But there is a massive gap between recognizability – a kind of imaginative projection – and actual achievement of the implicit promise of immersivity; the Mii falls squarely into that gap. In *Wii Sports*, for example, while the Mii is clearly a representation of the player, it has no arms and hands, is able to levitate magically into the air, and has an unchanging facial expression. In other games it changes – only the face is unchanged from game to game – but always remains a cartoonish representation of the player.

It is also worth noting that the Mii is often not employed as an avatar. Many games – *Wii Sports* included – use the Miis of other people on your Wii as the faces for crowd scenes and backgrounds, mixing them in with generic Miis. These uses serve a strange purpose. On the one hand, when a friend’s Mii shows up suddenly in a game, there is a moment of recognition and pleasure in the recognition. But the experience is also uncanny. It is one thing to have the active player of the game represented visually within the game; it is quite another to have some third party uninvolved in playing the
These Miis are clearly from outside the game, and rather than fostering immersion, their inclusion in gameplay can be jarring. Yet, upon reflection, this can be no more jarring than the player’s Mii is often made out to be. This is clearest in *Mario Kart Wii* (2008), which, while a later game for the system, illustrates the strangeness of the Mii. As one might expect from the title, *Mario Kart* is a racing game focused on characters from the Mario franchise. But in *Mario Kart Wii*, after beating the game on the second highest difficulty level, one unlocks the ability to race as one’s Mii. This feature is clearly not the main aim of the game, or else it would not be an unlockable bonus. And again, it strains the versimilitude of the metaphor to have this plain simulacrum of the player interacting with the Mario characters, who, the player knows are fictional entities. While it makes sense to have a representation of the player engaging in a mundane activity like playing tennis, when the same representation drives a go-cart on a course with dinosaurs and ghosts and throws flying blue turtle shells, the underlying mimesis seems rather more of a stretch. Other uses of Miis are even stranger. One’s Mii shows up periodically in strange situations in *Wario Ware*, where the fast-paced flow of the game makes the appearance of the player’s face a quick visual gag. Perhaps the weirdest use of a Mii is in *Metroid Prime 3: Corruption*, an otherwise fairly gritty sci-fi game, in which one can unlock a bobblehead doll of one’s Mii that sits on a spaceship dashboard.

The Mii, then, is not an agent of immersion in a truly meaningful sense. It is tempting to simply stop there, but the Mii is heavily foregrounded in the Wii, and so it seems important to understand it. The Mii, more often than not, is a distracting presence – its inclusion in most games is either visibly stylized or dissonant with qualities of the
game. Thus the inclusion of the Mii signals both a moment of recognition and of alienation – a sort of mirror stage moment, in which the player as avatar of the gameworld, and as something else – an actual person in the extra-gameworld? – are conjoined. The player sees him- or herself in the game, but it is a misrecognition, and the effect is to highlight the basic artifice of the player’s intervention in the gameworld. The Mii is thus actively, if paradoxically, non-immersive. It serves to interrupt the immersive fantasy, both focusing the player more on the experience of play and hedging against the immersive fantasy. What is particularly clever about uses of the Mii to accomplish this hedge is that the immersive fantasy is muted by the apparently literal inclusion of the player in the game.

It is worth asking, though, what the alternative to the immersive fantasy might be. For this, we may turn to Ian Bogost’s conception of “unit operations.” Bogost defines unit operations as “modes of meaning-making that privilege discrete, disconnected actions” (Bogost). For instance, a unit operation encompasses things such as the laws of physics within a game, the properties of individual items and enemies, or particular functions of the avatar. One notable aspect of the focus on unit operations is that it foregrounds thinking of video games as a system rather than as an immersive experience. The approach mirrors approaches such as those of McKenzie Wark, who argues that video games should be understood as a process by which gamers develop “an intuitive relationship to the algorithm” (Wark 30). In this regard Wark sets up a parallel to the figure of the hacker from his earlier work. This understanding of video games sees their primary reward not as immersion in a (fictional, simulated) gameworld, but as a sort of physiological mastery of the body whereby the player skillfully links the
algorithmic system underlying the game to his or her digits, with which she or he manipulates the controller. It is also found, perhaps in its most thorough form, in the work of Alexander Galloway, who provides an immensely detailed dissection of types of video games that works entirely from the premise that “video games are actions” (Galloway 2).

This focus on the small components of interaction is not unique to the Wii, but represents a broader movement in contemporary video game design. Increasingly, games of this sort have been critically praised, as in the case of Namco’s Katamari Damacy and Valve’s Portal. Both were relatively short games that traded heavily on the novelty of their play mechanics. Similar praise has been reserved for smaller independent games such as Braid, Flower, and VVVVVV, all of which focus primarily on the manipulation of relatively simple play mechanics. These games are not necessarily easy to master – VVVVVV is in fact widely recognized as an extremely difficult game. But they are procedurally simple, in that they focus on single play mechanics that are manipulated in various different ways.

Portal, likely the most praised of these games, is a particularly interesting case. Much of the praise for the game has been for its humorous tone. But playing through the game with the director’s commentary enabled (a charming feature that I wish more games had) illustrates the degree to which the game was carefully built around teaching players the ways in which the game’s play mechanics could be used. This stands in contrast to another major strain of video game design, in which games are praised more for narrative aspirations, graphical richness, and drama. For instance, along with Portal the game most often identified as the best game of 2007 is Bioshock, thought nearly
every review of the game has strongly criticized significant parts of the actual play experience. However, because the game has a rich setting and some interesting uses of narrative and play ethics, it has been heavily praised for those traits.

Central to the conceptual and commercial success of the Wii, however, is an investment in games of the former type, and furthermore the implication that the competing systems – the Xbox 360 and the Playstation 3 – are associated with games that are based on something other than the mechanics of play such as graphical richness or nuance. During the Wii’s lengthy unveiling, the announcement that it would not have the graphical processing or HDTV compatibility of Microsoft and Sony’s consoles was explicitly spun by Nintendo rejections of console features that do not enable good games, and so are not important the way that the control scheme is.62

The Wii, then, focuses on the fine mechanisms of control Bogost describes as unit operations so as to foreground its engagement with this particular philosophy of game design. The logic of the demo I have been outlining here is uniquely well suited to this, because the demo, with its emphasis on the fantasmatic allure of shininess, is more or less allied with the unit operation’s focus on the system and interface. One common thread in many of the early Wii games is a focus on relatively constrained physical motions. Wii Sports’s five minigames are all controlled more or less entirely by a small range of allowable motions. Tennis consists entirely of wrist flicks, Golf of a broad full-arm swinging motion, Bowling by a forward swinging motion, Boxing by quickly extending the hand out, and Baseball by a combination of wrist flicks and a sideways swinging motion. Although several of the games involved some button

62 The association of the Xbox 360 and Playstation 3 with these games is not entirely fair – indeed, of the list of critically praised games I gave above, none was for Nintendo systems.
pushing as well, in each case these specific motions defined the bulk of the player’s interaction with the game. Perhaps more to the point, these motions are not close reproductions of the actual motions of play in the sports simulated by the games. This limited control scheme serves to draw attention to physical motions that are possible within, and which define the game, and thus reinforce the specific operations of the Wii’s control scheme, thus emphasizing its novelty and uniqueness.

The release of *WarioWare: Smooth Moves* a month and a half after the Wii further cemented this connection of the Wii’s control scheme to how gameplay is represented. *WarioWare* consists of a rapid-fire series of what the game’s literature calls microgames – short games lasting only a few seconds in which the player has to accomplish a relatively simple task. For instance, a game might involve catching a certain number of falling items, evading a threat, finding a hidden object, etc. In the Wii version of the game, the microgames are divided up based on the “pose” that is required for them. The poses are simply the way in which the player is required to hold the Wii remote for a given game. They range from the straightforward – holding it like a remote control, or holding it sideways in your fist – to the outright silly – holding it in front of your nose or on top of your head. There are eighteen in all, and a given level’s games are generally restricted to two of the poses. Furthermore, before each microgame begins the player is informed what pose is next required, and is shown a picture illustrating the pose. This explicit focusing of the game on one or two motions at any given moment serves to draw the player’s attention to the embodied aspects of play, increasing her or his consciousness of that characteristic of the Wii.
Even games that are not explicitly focused on emphasizing specific motions generate a high sense of physical awareness. *Trauma Center*, for instance, is a game primarily about intricate and careful motions that make the player keenly aware of his or her body. *Super Monkey Ball: Banana Blitz* accomplishes a similar effect by forcing the player to carefully and precisely tip the Wii controller to steer a rolling ball through a maze. *Excite Truck* demands that the player twist the controller in space to steer a truck, a motion that requires shoulder motion, and thus causes the game control to become a full body experience – an effect that is ultimately perfected with the release of the Wii Balance Board along with the extremely popular *Wii Fit* game.

Another approach to focusing on unit operations is the mandatory tutorial with which many Wii games begin. *Red Steel*, for instance, begins with a tutorial about the movement controls in which the main character’s girlfriend orders him to look at various fish in a fish tank as she tries to pick her favorite. *Excite Truck* has a mandatory tutorial on vehicle controls. These sorts of tutorials are not uncommon in video games, but they still serve to add a moment where the player’s attention is explicitly draw to elements of the control scheme. A similar effect is achieved in games like *Trauma Center* where, at some points in the game, images that directly represent the controller and nunchuck appear on the screen to guide you.

This focus on unit operations is, however, opposed to the logic of immersive fantasy at a fundamental level. The immersive fantasy holds that the game controls should be a more or less seamless operation of the game world that becomes invisible, as it disappears into the normal physics of that world. Unit operations, on the other hand, demand a specific awareness of the controller as controller. The Wii, however,
clearly does not offer a seamless metaphor for its interfaces. This is best illustrated by looking at the games that use the controller and nunchuck in combination. These can further be divided into first person and third person games.

I will begin with first person games, and two early Wii releases, Konami’s *Elebits* and Ubisoft’s *Red Steel*. In *Elebits*, the control stick on the nunchuck is used to move the main character forward, backward, left, and right. The buttons on the nunchuck are used to crouch and stand up straight. The main Wii controller is pointed at the screen and moved around to look left, right, up, and down. The Wii controller also serves as the targeting system for the player’s “capture gun,” in which context it can be used to shoot things and pick up and move objects. So the Wii remote serves double duty as part of the motion of the character and as a representation of the gun the character holds. The act of looking around is split between the nunchuck and the Wii remote. And furthermore, the Wii remote has to serve both as a targeting gun and as a representation of the object the gun holds. The Wii remote thus simultaneously is and is not the mirror of the capture gun, while the other part of the player’s controller, the nunchuck, does not operate as such in the game world. (This inconsistency is openly marked in the game: when the capture gun is depicted in the game it has a two-part structure that visually resembles the Wii remote and nunchuck combination.)

I do not mean to suggest that the control scheme of *Elebits* is poorly-designed or difficult to use. It is neither. But it is manifestly not a seamless and transparent metaphor for what the player’s avatar is doing in the game world. The interface of *Elebits* is dependent on a complex set of metaphors and representations that are not straightforward doubles of their corresponding effects in the gameworld.
Red Steel, another early first person shooting game, relies on similarly complex controller gestures. Looking around is handled entirely by the Wii remote, while motion is handled by the nunchuck. Looking around is tied to the player’s gun, which moves around with the Wii remote. However, moving the Wii remote towards the screen zooms in on a target – a puzzling consequence that disrupts the coherence of the game’s representation of actions of the player’s avatar. Furthermore, although the nunchuck is primarily for movement, shaking it is used as the command to pick objects up or open doors. Red Steel also involves swordfights, which have equally eccentric controlling gestures – as one might expect, swinging the Wii remote swings the sword, but the nunchuck is used for what seems like a wholly arbitrary set of modifying commands – dodging, blocking, and moving around the opponent are all controlled via combinations of buttons, the control stick, and shaking of the nunchuck, while the Wii remote really does just swing the sword. Any shake of the Wii remote executes a sword swing, and the player has no control over the angle or direction of the swing, which is chosen automatically.

Some of these approaches are perhaps simply poor game design; Red Steel was a widely panned game. But they are also indicative of necessary limitations of the Wii’s motion-sensitive technology. A full sword-fighting simulation would be impossible with a Wii remote, simply because actual sword fighting requires some sensation of the resistance of the opposing sword when the two swords meet. Given that the Wii cannot conjure a physical opponent in the player’s living room, or reproduce the pushback of the opponent’s sword, it is impossible to accurately reproduce sword-fighting or similar sorts of contact weaponry. And even if it were to permit something of this kind, holding
the Wii remote as a sword would necessitate keeping it in a position that would make controlling the character’s motion – which must also be directed by the controller – awkward at best. The Wii is simply not capable of the sort of verisimilitude necessary to adopt an approach significantly different from that of Red Steel.

The method of control is no more seamless in games such as Super Mario Galaxy and The Legend of Zelda: Twilight Princess, in which the player takes a third person point of view. The control schemes of both games are similar, with some adjustments for the fact that they have different styles of movement in the gameworld, as Super Mario Galaxy is much more based on jumping and maneuvering. Both use the control stick on the nunchuck for maneuvering, while using the Wii remote for controls. Both games feature an on-screen cursor, though Zelda’s serves no purpose, and is unacknowledged by the game despite the fact that it is, by all appearances, a fairy that accompanies Link. The cursor is presumably intended to provide a reminder of the motion sensitivity for the player, given that Twilight Princess was by far the highest profile launch game for the system.

In Zelda, the Wii remote serves as a rough analog for Link’s sword, and swinging it around causes him to swing the sword around. But shaking the nunchuck around causes Link to make a spinning attack. And so the sword functions are in fact split between the two aspects of the controller, with no particular rhyme or reason for how split is made.

Significantly, these splits of function between left and right portions of the controller are not only unintuitive, but mark a significant shift from the traditional layout of console game controllers, which have since the NES used the left side of the controller almost
exclusively for motion and the right side for other interactions. Thus putting the spin
attacks on the left controller is not only inconsistent with the a more general – even
conventional – metaphor for control in the game, it has an unclear relationship with
legacy interfaces as well. This is not inherently a problem; there is, after all, no
necessary link between walking and the left hand. And I am not suggesting that either
control scheme is flawed; only that it is inaccurate to suggest that the metaphor can be
said to transparently map onto operations of the gameworld.

**Super Mario Galaxy**, interestingly, changes the control scheme from Zelda in this
regard. In **Mario**, the spin attack is accomplished by shaking the Wii remote, and the
nunchuck is used for basic motion. The reason for this switch is likely that the spin
attack in Mario is also used as a second jump, and thus it makes sense to have it be on
the same part of the controller as the first jump, as jumping with the A button on the Wii
remote and then shaking the nunchuck for a second jump would be awkward. Even
here, however, the metaphoric inconsistency remains, because the button for crouching
and for performing a ground slam in midair is moved to the nunchuck, which is
otherwise irrelevant for jumping.

What is most interesting about the controls for **Super Mario Galaxy**, however, is
that the Wii remote serves both as the device for jumping and as a pointer to pick up
“star bits,” small colorful objects that can then be shot at the level using the Wii Remote
to aim and fire, allowing easy stunning of enemies or destroying of many projectiles.
This is not a coherent metaphor for two reasons. First, no diegetic explanation is given
for the cursor function of the Wii Remote. When star bits are pointed at, they fly across

---

63 Indeed, there is a small but vocal market of third party controllers with the directional and button
controls reversed, generally sold as “left-handed ”controllers.
the level to Mario, but when they are fired they seem to come from in front of the screen. So the cursor amounts to an unexplained element of the game that can drag objects across the level to Mario, and then fire them separately from Mario, who presumably would be holding them given that they flew to him.

Secondly, and more broadly, as with Zelda, the Wii Remote in *Super Mario Galaxy* serves two distinct and unrelated functions. On the one hand, it is an analogue for Mario’s body where shaking it moves Mario. On the other, it is a separate controller that points at and acquires star bits. Again, this is not a bad interface – a new player to *Super Mario Galaxy* is far more likely to be put out by the sometimes dizzying mechanics of running around small spherical planets than by mechanics of the Wii Remote. And the game even introduces a rudimentary two-player mode, where a second player can use a Wii Remote to grab and fire star bits, thus giving someone who would otherwise be a spectator something to do, and allowing less experienced players to get involved, at times very usefully.

Even in the simplest and most straightforward games, controller-related metaphorical eccentricities abound. In the bowling game of *Wii Sports*, it is frustratingly easy to accidentally drop the ball instead of rolling it – an event, arguably, that is rare in actual bowling. And Nintendo is well aware of this: the game programming includes a reaction from the crowd if the player accidentally throws the ball backwards at them – again, something that does not happen with any frequency in actual bowling. Because the Wii controller is far less heavy than an actual bowling ball, throwing the “ball” in a realistic way is necessarily very different. Similarly, in the tennis game, the game
consists entirely of swinging the racket – the business of running and positioning one’s self on the court is handled automatically.

Thus, the frequent claim that the Wii offers a simpler, more transparent and obvious method of control of objects and events in the gameworld is tenuous at best. The Wii controller with the Nunchuck attached, as is often required, has nine buttons, an analog stick, and a directional pad, along with motion control. This is comparable to other current console systems, and continues the trend of steadily increasing the complexity of controllers over time. For reference, I have provided a table of controller complexities for the full range of Nintendo, Sony, Sega, and Microsoft consoles. Nintendo, like every console manufacturer, has trended towards more and more complex controllers that keep up with the growing technical complexity of video games. Although the Wii’s controller is less complex in this regard than those of Sony’s or Microsoft’s latest consoles, it is clearly misleading to suggest that the Wii represents a meaningful simplification from the GameCube, or a significant breaking of a trend towards more and more complex controllers, especially given that Nintendo controllers have historically been less complex than those of competing systems.

Furthermore, although the motion detection on the Wii controller is very good, it is far from perfect. Significantly, this is often not treated as a barrier or a shortcoming by the games for the Wii. Quite the contrary, many of them generate their difficulty and manifest actions of players’ avatars through deliberate applications of the awkwardness of the game’s motion controls. Both Elebits and Trauma Center, for example, require careful manipulation of objects at various points in the game. In Elebits, one frequently has to grasp an object and maneuver it via pushing, pulling, and twisting into a specific
location. These sections are often the most challenging of the game, and it is easy to drop the object or accidentally throw it across the level. Trauma Center goes a step further, utilizing precise fine motor control as its primary gameplay mechanic, making the player perform simulated surgeries with the Wii remote serving as scalpel, forceps, etc.

It is worth noting here that these inconsistencies of gameplay and gameworld physics are not examples of the Wii not living up to its promise. That would suggest that the games must have extremely precise controls and fall short of that goal. In fact, the games work exactly as intended – the controls are supposed to be difficult to master. We may be reminded of Heidegger’s observation that “when we discover its unusability, the thing becomes conspicuous” (Heidegger 68). I have observed elsewhere that this unusability is central to the pleasure of video games (Sandifer). Video games are in this respect a notably atavistic medium, in that they depend far more on malfunction and dissonance than on harmonious control. This is in some ways ironic given the steepness of their upgrade curve, but it makes sense – the steep upgrade curve, after all, requires the near-constant demoing of new technology, which itself requires a continual focus on limitations of the technology. And these limitations are easily encapsulated via references to the history of the video game industry.

In their introduction to the collection Playing the Past, Zach Whalen and Laurie Taylor describe this sort of nostalgia as “a process of looking back into an unattainable past and trying to bring that past into the present” (Whalen and Taylor 3). Further in the collection, Sean Fenty specifically ties this unattainable past to “the mind-altering experience of being in a game for the first time” (Fenty 23). Fenty does not mean “being
in a game” in the sense of a Janet Murray-esque immersion. Rather, he means it in the sense of falling into the “patterns and rhythms” of the game, so that players “want to do” things with the game (Fenty 25). That is, the nostalgia underpinning the desire for old gaming experiences is for the reclamation of the experience of discovering and mastering a mechanic of play in an earlier moment, perhaps during the adult gamer’s childhood. In Fenty’s view, the past serves as a scene in which a fantasy of complete mastery over the system may be realized. Because the past is unobtainable, locating this complete fusion of the requirements of gameplay with the gameworld in the past relieves contemporary games of the impossible (and undesirable) burden of fulfilling that fantasy.

One aspect of the Wii’s marketing that has been overlooked is the degree to which nostalgia has always been an explicit part of the system’s presentation. Indeed, when the system was first revealed at the 2005 E3 convention, the attribute of the Revolution most promoted by Nintendo was the new device’s ability to play classic games from earlier Nintendo systems on what was eventually called the Virtual Console.

It is important to understand the centrality of the Virtual Console to the Wii’s early appeal. When the Wii launched, it immediately put the celebrated “classic” games The Legend of Zelda (1986), F-Zero (1990), Super Mario 64 (1996), and Donkey Kong (1981) up on the Virtual Console, as well as, through Sega, the equally storied Sonic the Hedgehog (1991). By Christmas, just over a month after release, Super Mario

---

64 The assimilation of Sega’s classic mascot into Nintendo’s stable is an interesting detail in the history of the company. When Sega exited the console business following the successive failures of the Saturn and Dreamcast consoles – need some cites here, it began producing games for other consoles. Its most recognizable franchise, Sonic the Hedgehog, has become heavily identifiable with Nintendo, however,
Bros. (1986), Street Fighter II (1991), and Super Castlevania IV (1991) were added to the stable of “retro” games supported by the Wii. A year later, with the Wii still selling out within hours of arriving at any given store, Super Mario Bros 2 (1988), Super Mario Bros 3 (1990), Super Mario World (1990), Zelda II (1987), Legend of Zelda, A Link to the Past (1981), The Legend of Zelda: Ocarina of Time (1998), Metroid (1986), Super Metroid (1994), Mario Kart 64 (1997), and the entire Donkey Kong Country series (1994-96) had all been released for Virtual Console. This impressive line-up of re-released games, some 10 and 20 years after their original releases, was a major draw for buyers of the Wii.  

The prominence given in advertising for and press discussions of the console’s support of legacy gaming highlights the degree to which the system was explicitly situated in a rhetoric of Nintendo’s historical significance as a video game company. Moreover, Nintendo’s releases for the Wii have notably slanted towards this construction of the game as a legacy device: Nintendo has published 25 games for the Wii belonging to franchises that had their origins on earlier systems other, versus seven from franchises that originated on the Wii (two of which – Wii Sports Resort and Wii Fit Plus – are sequels to earlier Wii games). To date, Nintendo is trading hard on video game players’ nostalgia for an earlier era of games.

due to of the many Nintendo-exclusive games in the series, as well as the appearance of Sonic in games of other Nintendo franchises, such as Super Smash Bros. Brawl and Mario and Sonic at the Olympic Games. Because Sonic was the icon of Nintendo's primary rival during its period of industry dominance in the early 1990s, the absorption of Sonic into the Nintendo canon serves to reinforce the idea that Nintendo is the rightful master of that historical moment in video gaming.

In comparison, the equivalent service for the PS3 launched with exactly two games; Sony did not release any classic games at first for the PS3. The equivalent XBox service was more developed, but it had also already been around for a year at that point. At present, however, the Nintendo digital games service is by far the largest of the three.
This invocation of nostalgia goes beyond merely repurposing Nintendo’s intellectual property and providing an emulation service, however commercially savvy that may be. It is worth noting that the most frequently touted portion of *Wii Sports* was its tennis game. There are several reasons for this. The grip of a tennis racket and the Wii controller are of comparable sizes to begin with, making the idea of the controller as a virtual tennis racket a relatively easy one to adopt. The game is fun – along with bowling, it is arguably the best *Wii Sports* has to offer. And it is genuinely simple: swing the controller to control the game. Despite these fairly self-evident applications of the controller’s affordances, for anyone with a historical grasp of the medium, there is something uncanny about the choice of a tennis game to represent the first experience with the system:. tennis portion of *Wii Sports* is in effect little more than a souped-up version of *Pong*, itself the first mass demo of the video game in 1972. This uncanny citation of a primal scene of gaming, and of the game demo, is in many ways emblematic of the way that the Wii’s demo works. For every way in which the Wii positions itself as a revolutionary, transformative technology, there is a corresponding callback to the legacy and history of the medium, and to Nintendo’s long role in it. The Wii seeks to provide a way forward through nostalgia – a recapturing of elements of a past history of video games.

In this regard, one cannot treat the nostalgic and forward-looking aspects of the Wii as outright contradictions. Rather, Nintendo is actively tying the central idea behind the Wii as creating a scene of interaction – an explicit focus on play mechanics – into a history of gaming, and the player’s nostalgia for classic games – that is, for other

---

66 Indeed, it is non-coincidental that Nintendo opted to put Tennis first on the menu of games in *Wii Sports*, foregrounding it as the initial play experience for the console.
scenes of gaming. In this view, the Wii’s aspirations for futurity and for nostalgia are closely allied. Furthermore, the link between these two elements is intimately tied to the Nintendo brand. Because Nintendo is the primary brand with which that nostalgia for classic video gaming is associated (since it was the dominant market brand for a ten year period from 1985–1995), the company is able to position itself as the rightful owner of that nostalgic desire. The Wii is thus positioned as a device for reclaiming the classic fun of vintage video games, and thereby provide the lost fun that should be a trait of the future of video games. This is more complex than simply using Nintendo’s name as a marketing device – after all, the Nintendo brand lost a lot of its luster in the preceding two generations of video games. Rather, it is an attempt to recontextualize the history of the medium and brand in a way that both revitalizes the Nintendo brand and deligitimizes other brands.

Indeed, the most significant technological advancement of the Wii is, on the whole, far less revolutionary than the marketing rhetoric suggests. The Wii controller has numerous technological antecedents. It determines position through a combination of internal accelerometers that detect if and when the controller is moved and a sensor at the front of the controller. This sensor receives data from the misleadingly named “sensor bar,” which is attached to the Wii but in fact receives no data. The sensor bar merely draws power from the Wii to light four infrared LEDs. The Wii controller relies on these LEDs to locate its spatial position in relation to the sensor bar.

---

67 In fact, the sensor bar is so simple that it can be replaced by several alternative devices, including battery powered ones for screens far removed from the Wii, USB-powered ones that allow the Wii controller to be used to control computers, and even an arrangement of candles that provide enough infrared light to serve as a de facto sensor bar.
The Wii’s accelerometer technology had been utilized by Nintendo in several earlier portable games, including *WarioWare: Twisted* and *Kirby Tilt ‘n’ Tumble*. And the positional technology also had been used by several earlier devices. Perhaps the most direct antecedent of the Wii in this regard is the Power Glove, a 1989 peripheral for the Nintendo Entertainment System. The Power Glove had a pair of microphones on the glove that would receive ultrasonic tone data from three speakers placed around the user’s television to determine its location, and this data in turn could be used to control gaming responses. Before the Power Glove, Nintendo’s Zapper light gun used a method similar to that of the Wii controller. Contrary to its name, the Zapper was in fact a rudimentary camera. When the trigger is pulled, the screen goes black and then flashes a white light where the targets are. The Zapper can detect this change in light, and thus report whether it was aimed at a valid target. Before Nintendo used this technology in the Zapper, however, it had already appeared in the Coleco Telstar Marksman, as far back as 1978. If one broadens ones definition of video games away from digital entertainment, the Seeburg Ray-O-Lite, released in 1936 as a carnival game, provides an even earlier model – and, much like the Zapper, was in fact used for a duck hunting game.

Accompanying these technological antecedents is a more fundamental design antecedent involving a specific conception of the avatar, a major figure in video game theory. The avatar marks the contact point between the player’s actions and the diegesis of the game. The avatar should be broadly considered, including both the visual representation of the player’s “character,” the diegetic and narrative function of this character, but also the overall procedural system of actions in the gameworld of
which the player is capable. This has always included, at least tacitly, some consideration of the player’s physical body as she or he interacts with the controller. For instance, early on it became typical of NES games to have the B button “fire” and the A button “jump.” This is because the B button is on the right side of the controller, and is thus accessed by the right hand, but is to the left of the A button. Having B fire and A jump allows players to effectively hold down or rapidly press B, firing constantly, while rolling the right thumb and striking the jump button with the lower part of the finger while still firing. This design is part of the avatar in that it is a part of the overall scope of how the player interacts with the game.

The Wii certainly foregrounds the role of player’s body movements more than its predecessors, by virtue of having a more kinesthetic control scheme. But it does not do so at the expense of a distinctly realized external avatar. There are essentially three types of avatars in Wii games. The first type is, for our purposes, relatively uninteresting – it consists of avatars in games where the motion controls are basically not used, or are used in ways such that the player’s actions are not meaningfully mirrored by the avatar’s. For example, in Nintendo’s Super Paper Mario, the player holds the controller sideways and uses it as a normal gamepad, relying on motion control only in limited circumstances.

The second and third types are more interesting. In the second type, the setting of the game is implied to extend forward past the monitor and into the actual space of the room in which the player is located (much like 3-D film’s extension of the visual

---

68 The counter-intuitive layout of having the buttons read alphabetically from right to left is due to the fact that the NES is a version of the Japanese Famicom Disc System. As Japanese reads right to left, the buttons were oriented that way, and not changed for American production.
space of the filmed scene into the space of the theater). In these games, the location of
the avatar in the game is made to coincide with the physical location of the player. This
approach is analogous to the role of the spectator in classical Albertian perspective,
whereby the painting has an implied viewer occupying an imagined location outside of
the painting, and the viewer is invited to imagine themselves in that location and role. It
is used in first person games such as Elebits, Metroid Prime 3, or the bowling portion of
Wii Sports. These games present the game from a first-person perspective. The
avatar’s body is thus positioned just past the screen, where the player is located,
seeming thus to overlap with the player’s physical space.

The third type of avatar on the Wii superficially resembles typical those of third-
person perspective games. In the tennis portion of Wii Sports, and the Wii games The
Legend of Zelda: Twilight Princess, and Super Mario Galaxy, the avatar is a distinct
character on the screen, but the player controls the avatar’s movements by physical
motions, which are mirrored by the avatar. For example, in Wii Sports the player moves
around and swings the Wii controller, and the avatar mirrors these motions, swinging
the tennis racket in an analogous arc. In this case the avatar remains, as with traditional
video games, a separate persona, but one whose conjectural embodied actions
persona directly mirrors those of the player.

This mirroring of motion has several pre-Wii antecedents. An avatar that is
apparently located outside of the screen is a component of all first person shooters, and
has been common since at least 1974. Indeed, Duck Hunt, already mentioned as a

---

69 For the most part, video games are divided into two perspectives – a first person perspective, in which
the screen displays what the player’s character would see, or a third person perspective, in which the
character’s body is visible. A handful of games, most notably Rare’s 1991 game Battletoads, have utilized
a second person perspective, in which the screen displays what the enemy you are fighting would see,
and your character is displayed through its eyes.
technological antecedent of the Wii, uses a first person avatar of exactly this sort. The mirrored avatar also has precedent in games such as \textit{Dance Dance Revolution}, which the player controls by moving around a pressure-sensitive floorpad, and in Nintendo’s own \textit{World Classes Track Meet}, which used the Power Pad to move the avatar in synch with the player’s running movements on the pad. These games share minimal technical aspects with the Wii, but still approach the basic metaphor for its interface.

It is too soon to tell whether the Wii represents a successful, lasting medial shift or not. Certainly, however, it has been successful in the short term, having tripled the sales of Nintendo’s previous console, and outsold every previous non-handheld Nintendo console. Both Sony and Microsoft have rushed to embrace similar motion controls in their console gaming systems. In the Wii, then, we can see something that our previous case studies were unable to show us – a demo that is both successful as a demo and as a product.

There is no doubt that the Wii is enormously shiny. But where 3-D films and infinite canvas webcomics use their shininess to try to promise variants of a medial utopia, the Wii ultimately offers a more modest approach, yet one that is open to being extended into fantasies of revolutionary import. Yes, it teases with the immersive fantasy. But in the end, the rewards of playing the Wii are tied to a pleasure of surfaces – not of a seamless virtual world, but rather of the active and material engagement with the specific, even capricious, affordances of a medium. What is fun about the Wii is not its ability to disappear, but rather the irreducible presence of the Wii and its elegant control schemes in the event of gameplay. This is the demo done right. The player is drawn in by the shininess of the Wii. But in the end, the imaginative consequences of that
shininess are a product of the player’s imagination. Anything below the reflective surface is a fantasy.

As I noted at the beginning, progress – actual progress – is a messy, incremental business. But to conceive of progress, it has to at least implicitly tend towards a utopian point – of perfect communication, seamless immersion, direct and lasting pleasure in use, etc. There has to be a goal that is progressed towards. The aspiration to progress has to navigate between its utopian aims (not always stated but always present) and its messy execution (often clumsy, even derided by users). The problem with demos like 3-D film is that they are too neatly tied up in a utopian aim that they cannot, by virtue of seemingly irreducible facts about the human body and human optical system, achieve. In fact it is the messiness of the Wii demos – pointing both forwards and backwards, stressing the physicality of the medium even as it gestures at virtual reality – that shows why the Wii succeeded.

In the end, the Wii lives up to the promise of its code name because of the modesty of its revolution. As Henry Petroski has observed, “there can never be an end to the quest for the perfect design” (Petroski 9). But that does not stop one from advocating for design that is good enough for the present. Petroski uses the following analogy: “The pole-vaulter who sets a new record is no less of a champion because he does not clear the next bar height… we applaud what he did achieve, with the expectation that someday he or some other athlete may design a better pole or vaulting technique and so set a new record. That is the nature of design” (Petroski 16). If there is one absolute lesson about shininess, it is that anybody can concoct a naive fantasy of
immediacy and technical perfection. There is, perhaps, nothing quite as innovative as fine-tuning that which is already present in design.
Figure 5-1. An early Nintendo advertisement for the Wii, proclaiming that “playing = believing.”

Figure 5-2. One of the many fake images of the Wii (then known as the Revolution) to be spread around the Internet.
Figure 5-3. Image from a Wii advertisement. [The Wii advertising focused more on the image of people having fun with the controllers than on any invocation of virtual reality.]

Figure 5-4. The Wii console, its front facing down on the table. [The cut-off rectangle design is visible both on its front panel and in the larger corner cut off in the rear, as well as in the three ports on the back.]

Figure 5-5. A Mii in the process of creation
Figure 5-6. Screenshot from Metroid Prime 3. [The appearance of a bobblehead doll with the face of the player’s Mii in the otherwise gritty sci-fi world of Metroid Prime 3 is jarring, rather than immersive.]

Figure 5-7. Screenshot from Elebits. [The cord coming out of the capture gun (held in the character’s right hand) connects to a nunchuck-like device on his belt that serves no logical purpose except to mirror the structure of the Wii’s controller.]
Figure 5-8. Screenshot from Red Steel. [The gun is an analog for the player’s Wii remote, and moves around in the game world in sync with the player’s movement of the controller.]

Figure 5-9. Screenshot from The Legend of Zelda: Twilight Princess. [The blue fairy, visible at the bottom of the screenshot, serves no purpose other than as a continual reminder that one is holding a motion sensitive controller.]
<table>
<thead>
<tr>
<th>System</th>
<th>Buttons</th>
<th>Directional Inputs</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>NES</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sega Master System</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Super Nintendo</td>
<td>8</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sega Genesis</td>
<td>6 (9 in later versions)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Playstation</td>
<td>10 (11 in later versions)</td>
<td>1 (3 in later versions)</td>
<td></td>
</tr>
<tr>
<td>Sega Saturn</td>
<td>9</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Nintendo 64</td>
<td>10</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Playstation 2</td>
<td>13</td>
<td>3</td>
<td>Two directional inputs doubled as buttons</td>
</tr>
<tr>
<td>Xbox</td>
<td>10</td>
<td>3</td>
<td>Two directional inputs doubled as buttons</td>
</tr>
<tr>
<td>Sega Dreamcast</td>
<td>7</td>
<td>2</td>
<td>Memory card had additional controls on it</td>
</tr>
<tr>
<td>Nintendo Gamecube</td>
<td>7</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Xbox 360</td>
<td>11</td>
<td>3</td>
<td>Two direction inputs doubled as buttons</td>
</tr>
<tr>
<td>Playstation 3</td>
<td>13</td>
<td>3</td>
<td>Two direction inputs doubled as buttons, Motion Controls</td>
</tr>
<tr>
<td>Nintendo Wii</td>
<td>7 (9 with Nunchuck)</td>
<td>1 (2 with Nunchuck)</td>
<td>Motion controls</td>
</tr>
</tbody>
</table>

Table 5-1. Table of video game controller complexities. [The Wii is no exception to the trend of continually more complex video game controllers.]
LIST OF REFERENCES

“Talking Movies.” Associated Press 9/3/26,


BIOGRAPHICAL SKETCH

Charles Philip Sandifer received a Bachelor of Arts in English from the College of Wooster, working with Peter Havholm on his senior thesis focusing on the aesthetic effects of tragedy and their modern equivalents. He received a Master of Arts in the humanities from the University of Chicago, working with Bill Brown on his Masters Thesis on slash fiction. He then enrolled at the University of Florida and completed his doctorate in English in the summer of 2010, focusing on media theory, and working under Terry Harpold.