THE LENSMAKER'S EQUATION:

TRACING A HISTORY OF VISUAL CULTURE THROUGH RICHARD POWERS' *THREE FARMERS ON THEIR WAY TO A DANCE* AND *PLOWING THE DARK*

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3F *Three Farmers on their Way to a Dance*

PD *Plowing the Dark*

Terms from *Plowing the Dark*:

VR Virtual Reality

RL   Reality Lab

Critical Theory by Baudrillard:

IE *The Intelligence of Evil or the Lucidity Pact*

SS *Simulacra and Simulation*

Critical Theory by Virilio:

VM *The Vision Machine*

W&C *War and Cinema*

S&*P Speed and Politics*

ABSTRACT

The novels discussed here address two technologies of representation (photography and virtual reality) from separate eras often recalled for their rapid technological change. I examine this conception of technological progression using the critical theory of Virilio, Baudrillard, and others and discuss how these 'advances' were accompanied by significant shifts in the 'modes of seeing' that the visual culture of an era is based on. Across the novels a diachronic shift can be traced from an analog-based visual culture, that elicits an interpretative response, to one that is increasingly based on simulation and I examine what the implications of that may be. My main focus is on visual media but I argue that these technologies have progressed alongside other capitalist-industrial complexes almost always related to warfare. My research agenda thus raises questions about what 'visual culture' may be, on the level of social-cultural phenomena, but also as an object or field of study.

INTRODUCTION:

THE LENSMAKER'S EQUATION

A picture is worth a thousand words.

Richard Powers is one of the most critically acclaimed contemporary American novelists. His interest in technology and its intersection with the politics of present day capitalism, coupled with a keen sense of American culture as it pertains to the global, has put him high on the list of writers discussed by academics and students of Literature for some years. In this work I discuss two of his novels which are concerned primarily with the same overarching theme: the technologies of representation and the worlds that create them as well as the worlds created by them. Richard Powers' novels, *Three Farmers on Their Way to a Dance* (1985) and *Plowing the Dark* (2000) address two technologies of representation, photography and virtual reality respectively, in two separate eras: the early twentieth century and the late nineteen eighties. The settings of both novels are particular moments in history that, in hindsight, are often perceived as times that of rapid technological progress. *Three Farmers* (hereafter referred to as 3F) focuses on photography, and a large part of the novel takes place in the early twentieth century. Although it was not a novel technology by then, photography was propelled by events of the turn of the century into its own as a medium of mass communication. Similarly, the action of *Plowing the Dark* (shortened to PD for the rest of this thesis) takes place at the close of the twentieth century and its main theme is the Silicon Valley boom at the end of the Cold War and into the new post-Cold War America.

Using the critical theory of Paul Virilio, Jean Baudrillard, Walter Benjamin and others, my intent here is to examine and expand upon the theme of technological progression that arises in Powers' novels. Following the trajectory traced by Powers brings to light that these particular moments in the history of technology were couched in the rhetoric of development or "advancement". I critically examine this idea of advancement and argue that the rapid increase in the widespread use of photography and subsequently digital imagery were pivotal

in creating significant shifts in the "modes of seeing", that becomes the visual culture of an era. My main argument is that innovations in the technologies of representation need to be assessed critically rather than being bound to this celebratory logic of development. I will expand on this point further into this introduction but first need to say a word about my use of the category "visual culture".

Visual Culture as a field of study has recently (post-2000) become the focus of academics from a variety of fields including Literature, Sociology, Philosophy and History but also from a number of more hybrid (for want of a better term) academics with titles such as cultural historian and visual sociologist. Vision has been a popular and pertinent topic throughout the history of Western philosophy and theory but there has recently been a formalization of an academic discourse on the topic that is concurrent with the explosion of electronic, and subsequently, digital media in the age of information technology that we are living in today. The need for such a scholarship is more than partly due to the rhetoric of corporate, national and popular discourse on the topic driven by the sudden ubiquity of such media in contemporary daily life. For instance, demand for Internet service is high and has become elevated almost to the status of a basic human right in large parts of the world. However, the debates surrounding technologies of representation are in no way new. To cite just a few instances, the ancient Greeks hotly debated the new technology of writing, the novel was considered a dangerous pastime for women in Victorian England and censorship of images and moving images have been and are still being carried out by countless empires and dictatorial regimes.

Rather than studying the digital as a new phenomenon in and of itself, my project envisions the digital image in relation to the particular trajectory taken by the technologies of representation since the late nineteenth century. Thus, the idea and rhetoric of "progress" and "progression" and how they are mobilized are key to my project of investigating how the current regime of digital cultures came to be and what its implications for visual culture are.

As such, my use of the term visual culture is meant to encompass the contemporary culture of vision and the image as it is currently deployed by academics of visual media, but I also hope to invoke that this comes of a tradition of technologies of representation and their paricular engagement of human perception and understanding of the world.

This work is broken down into three main sections (with concluding notes at the end) and follows the novels' chronologies as a guide to discuss the developments of the technologies of representation throughout the twentieth century. I argue that through Powers' fiction the shift from a visual culture based on the wide circulation of and exposure to analog images to one that is increasingly created by the more denotative digital media, based on simulation, can be traced as taking place on a diachronic level. I propose that this trajectory of the image and the study of the image, or Visual Culture Studies, closely follows industry trends. For instance, the analog photograph is a reflection of the Industrial Revolution, linked with the development of chemical and mechanical industry just as the digital image is driven by the Information Technology revolution and computer industry of the late twentieth century. Through my readings of Powers' novels, I argue that the technologies used to produce images do not stand alone and have progressed alongside other capitalist, industrial, complexes almost always related to warfare. My research agenda thus raises questions about what a 'visual culture' based on these pillars may be, on the level of social-cultural phenomena, but also, as an object or field of study.

The main focus of study of this thesis is visual media (defined very loosely as being comprised of the images produced by mechanical means from the beginning of the twentieth century on) approached through the lens of Powers' novels. It is an examination of the processes by which particular mechanical tools consstruct their end products, namely analog photography as produced by a camera and digital images produced by a processor. When the two Powers novels are read together they can be seen as an examination of two 'tiers' of representation as follows. In the first tier, the technologies of representation are

transformative due to the inculcation of the images they produce within the collective imagination of the twentieth century. With the subsequent turn to the digital, the new (digital) techniques of production and escalated dissemination of images, leads to a transformation of the visual effects being circulated and consumed. The second tier then deals with the subsequent emergence of a public, collective imagination that is based on the transformation that the image as a public text, has undergone. As such, the focus of this research project is an examination of the operation of the analog and subsequently the digital image in order to tease out the contexts and productions of where we are today. My study of the intersection of the rhetoric of innovation, industry, and academia address just how integral these images are to the processes we use to relate to the world but also expose how the collective imagination is driven by the particular form of images that are in circulation.

For the purposes of setting up this set of issues I would like to invoke, as an exmple, an argument that appears to be critical but ultimately justifies a particular reductionist mode of thinking about representation from which stems a dangerous disavowal of the reality of the operation of the digital image in contemporary culture. In "The Discrete Image" Stiegler mobilizes Roland Barthes' theory of photography in order to point out the difference between analog and digital photographs (which he calls the analogico-digital). He conceptualizes this difference in terms of belief in the intentionality of the image, which, to him, is inextricable from what he calls its mode of production. I too am making a similar move in this thesis when I argue that the mode of production (analog or digital) creates distinct products which need to be analyzed in relation to each other. Stiegler's position on the digital photograph eventually leading to a "more knowing belief" (150) that may "attain its properly critical stage" (157) is based, he claims, on the entrenchment of doubt created by the infinite manipulability of the digital image. This manipulability for him is the perceived default essence of the digital photograph. However, his argument ignores the promise and desire of the digital image that has become inextricable from the analogico-digital image today: the promise of freedom from the "this was" or, in other words, the real.

While his analysis of the process of production of the digital photograph and its effect on the status of collective belief has merit, the work of this thesis will prove that the awakening or path to a "knowing belief" that he speaks of is an idealization and a myth. Underlying Stiegler's argument is the fantasy that a technological advancement in and of itself leads to the transformation of human relation to the world for the better. His argument assumes an automation of the reception of the image that is in "real-time" with the technology that is producing it. This is the very type of argument that is made to "progress" new technologies such as those discussed in PD. While I am not (and nor is Powers) in principle against technological development, I believe that the message of Stiegler's argument is a dangerous one in that it encourages a blind following of innovation for its own sake.

Let me use some images to further elaborate my point. Images i and ii below represent the analog and digital respectively. Image i, the Magritte painting (although an analogico-digital print here), was completed in the mid-twentieth century and is a perfect illustration of the issues being discussed in relation to the analog image here. The painting of the landscape has replaced the view that it represents, but the clues that alert the viewer to the deception are deliberate; the easel, tape measure and hat suspended in 'mid-air'. One reading of Magritte's painting is that it is a commentary on the constructed nature of the photographic image and an argument against the general perception of the photograph as "the truth" (an issue I discuss at length in chapter one). However, in relation to the analog vs. digital image, the painting's critique of the tendency of the representation to be mistaken for that which it represents could be re-invented and understood as a performance of the analog in relation to the digital. That is, the analog is a fabrication, a nostalgic form constructed by the digital.

i. Magritte, "The Human Condition"   ii Maxwell Render

The second image is what is called a "maxwell render." It is created completely digitally using software aiming to replace the need for photography mainly for the convenience of the advertising and entertainment industries. It's Computer Generated Imagery (CGI) used to overcome the budgetery or other physcal constraints of photographing an object. Rather than the expense of hiring a photographer, setting up the correct lighting and props, the story can be digitally drawn to look "real." It is hyperreality in the Baudrillardian sense that it has no referent in the real world but rather is constructing its own reality. Even though they are both reduced here to the analogico-digital copy, these two images are both literally and figuratively, representative of the two eras I am discussing in this thesis. The Magritte painting stands doubly for the analog photograph because photography has been largely superceded by the computer generated digital image which is being produced in order to eliminate the need for photography. Just as in Baudrillard's stages of the image, hyperreality is succeeding the more 'direct' representation.

Coming back to Stiegler's argument about the discretization of the image, this hyperreality of the digital image, shows a misreading on his part about the "critical stage" (157) the

observer is supposed to reach on viewing the digitally treated image. Take for example the advertisement below:

iii. Advertisement for "Power by 50"

In the first image, the man's body is airbrushed to the high shine that has become the dominant aesthetic of what Stiegler calls the analogico-digital image. This print ad is an image of hip-hop star 50cent for a cologne linked to his personal brand. He is the picture of male physical perfection in this image and implicitly also a symbol of financial success. The manipulation of the image works to highlight his muscular frame and exposed skin for maximum sex appeal. The look is achieved by a combination of photography and post-production editing in which the light being shone on his chest is strategically placed and enhanced. The play of light has always been an important element in photography, with lighting at the moment of exposure being key to many 'tricks 'of analog photography. Lighting is an area that when correctly applied to the constructed image gives an air of reality that digital imagery has picked up on and lighting in digital photography and the post-production of images is one of the keys to obtaining a "photo-realistic" CGI image. As can be

seen from this ad, just like the analog image did before, the analogico-digital image has come to represent the ideal both in terms of what aesthetics are of value in the production of images but also, in how the subject matter of the images hold up the same ideals of physical beauty. Although unfortunately, I do not have more room within this project to further explore the particular aesthetics of digital images, it is this nature of the image to create a role for itself beyond simply being a function of the mode of its production that is the very purpose of my examination of digital culture here.

As Stiegler recognizes, this comparison of the analog and digital photographs is not meant to propose that the manipulation of images was not possible before the digital image or that images of this type in circulation were previously "true to life" or unstaged. Many of them were staged using props and lighting techniques as the image was being photographed and they were *believed* to be true. But, as pointed out in the early twentieth century by avant-garde photographers, painters and even novelists and other artists, there was no essential truth to them; they were still constructed images. If the work of this community is to be given its due, then it becomes apparent that the "this was" of the analog photograph was indeed a suspension of disbelief, just like theatre for example. How then, could the apparently obvious constructedness of the digital photograph be perceived any differently by the common observer? Rather than a replacement of false belief with a "critical" and "aware" belief, I believe the digital age provides the reasoning for the departure from belief that is based on reality. This is Baudrillard's main argument with regard to hyperreality and Integral Reality which I discuss in detail in the second and third chapters. Thus, what is significant about the digital images I am showcasing here is the ease with which the contemporary digital image and the particular aesthetic associated with it has become the norm. Page after page of magazines feature these advertisements that look far more like CGI than a straight-out-of-the-camera images and television and cinematic images are no different and are perhaps even more productively so with the obvious special effects used. My point is that the original desire to mimic reality that drove the analog has become transformed with the digital. What

began as an enterprise to mimic photography has swallowed the photographic image into its own sphere and has become productive in its own right without appearing to be so.

Stiegler's careful arguments about the various types of images and their effects on perception then show up as somewhat short-sighted because although his line of argument is clear, its logic is too succinct and allows no room for the shading that is required when dealing with the subject matter of images and how they are produced and perceived on a macro scale. The definites he uses to judge belief and perception in terms of awareness simply do not hold up when it comes to the wide circulation of images in contemporary life. The careful analysis of Powers texts, quoted artwork and examination of visual culture as an area of academic inquiry in this thesis come together to propose a more nuanced stance with regard to the digital image and the culture being produced by it.

This brings me to my own division of the analog and digital into binary oppositions. My examples and discussions often mobilize the two ends of the pole. While I do this deliberately in order to illustrate my arguments about the desire inherent within the movement into the digital, I must point out that I am aware that I am skipping over the analogico-digital rather quickly in the process. In order to move my argument forward I have had to leave out several significant media that traverse the poles, most obviously moving pictures. The medium of film and the cinematic experience is a topic that is pertinent to this discussion but one that is extensive in its reach and requires a larger portion of a research agenda than I had room for here. This should not give the impression that I mean that the digital turn came swiftly down on the analog, wiping it clean or replacing it completely by the twenty first century. Rather, like Baudrillard's stages of the image, which can be productively used to describe these phenomena, these varying forms of images co-exist and co-mingle. However, due to the sheer volume and ubiquity of digital images and their pervasiveness in every aspect of contemporary (particularly urban) life, I believe, as do Baudrillard, Virilio and Powers, that there is an urgent need for a voice that is critical and analytical in relation to this topic. This is compounded by the fact that the 'digital experience' is one that is completely normalized and unquestioned beyond being viewed as a necessity which all students, workers and all

productive, functioning members of society must be versed in. With screen culture being so widespread, exposure to and enchantment with digital images is virtually inescapable. In addition to exponentially increased amounts of time being spent on video games, YouTube and social networking sites on the Internet, billboards projected on the facades of buildings, 3D cinematic experiences and HD television are commonplace in a majority of cities across the globe. However, voices that are critical are few and far between and often lumped into the same category as the dystopic Hollywood fantasies that often in the end reinforce the positive stereotypes about technological innovation. The idea that there needs to be a more thoughtful response to the digital barrage is often responded to with the proposal of "interactive" media that will supposedly generate new relationships between producer and consumer. The problem with this approach is that the technology is still largely dictating and the user responds to it on its own terms. As Baudrillard argues, once the line is crossed into hyperreality, given the sheer volume and scale of ubiquity of such images, it seems like all other types of images and forms of communication take a back seat; just as the very definition of analog can only be conceptualized in terms of the digital.

Concerned with the older technology of analog photography, *Three Farmers* reads almost like a historical context for *Plowing the Dark* as it traces the beginning of the proliferation of the photo-realistic image. Powers links the digital media that becomes the primary concern of his later novel to the cheap reproducibility of the analog image (as seen in 3F) which has everything to do with the ultimate development of the broadcast media industry going into the IT boom of the late twentieth century. In chapter one, I examine Powers' discussion of the photographic image in *Three Farmers* to argue that his demonstration of the re-appropriation of the photograph (the state of photography as well as August Sander's print of the three young men) works on several levels in the novel to address the dismantling of nineteenth century empiricism in the early twentieth century. Powers says that it is the framing (the composition and selection) of a representation that allows for the imagination to do this work, and not any intrinsic 'graphic' nature of the image. Because of what the selection implies or suggests to the consumer of that image, "the reproduction must be enough like the original to

start a string of associations in the viewer, but enough unlike the original to leave the viewer room to flesh out and furnish the frame with belief" (*Three Farmers*, 249). He argues that the representation's magic lies more in its connotative effects, those that evoke an imaginative response from its viewer, than its explicit content. Thus, he proposes that "The true power of photography and motion pictures, the trick that allows us to live in the frame, is not the perfection of technique but the selective obscuring of it" (*Three Farmers*, 249). Given the backdrop of the Great War and the movement further toward a capitalist, industrial global society, I discuss how Virilio's concerns, or "catastrophic perception of technology" as John Armitage puts it, are manifested, and play out in the novel to highlight the link that I see Powers making between visual technologies and the move towards an ever more violent capitalist-industrial society (Armitage, 2008). This particular visual culture of a historically violent early to mid-twentieth century, then becomes the base from which the contemporary media climate evolves.

While there are of course exceptions to the bleak arguments made by philosophers of technology such as Virilio and Baudrillard about contemporary digital technologies, my reading of 3F pegs the development and proliferation of the analog image as the forerunner in a range of technologies of vision that lead to their possibility. However, I do not mean to propose that photographic or cinematic images are in some way intrinsically culpable for their use by military and corporate establishments. Rather, I hope to convince that in an age during which the image has become a basic currency of communication and information, all the hype surrounding its proliferation means that too little attention is given to thinking through the implications of letting the culture of the image that has been set in motion play itself out. Representations, visual or otherwise, are always imbued with a multiplicity of subtle ideologies that are embedded in them at the moment of their creation. Even though images often seem to be productions, their cumulative presence as we experience today mean that they are just as much productive in how they affect our consciousness, understanding of and relation to the world.

Virilio's concern about the emergence of a certain type of imagining that is the result of human vision being mediated by prostheses (both products of the technologies of the lens as well as the digital frame) and how the internalization of such a way of seeing dominates future knowledge formation, gets close to the mediation of the mental image that is at the core of my interest in the operation of media. In chapter two I look at how Powers uses the particular form of the novel, the narrative, to highlight the questions raised by the emergence of "new media" technologies but also manages to implicitly place them within a lineage of technologies of representation. I argue that in PD Powers' exploration of virtual reality technologies is a playing out of Baudrillard's arguments about simulation, highlighting the shift that is taking place from a visual culture based on connotative representation (as photography is in *Three Farmers*) to a hyperreal world based on simulation. Powers not only highlights the questions that arise with the proliferation of new media but also brings into focus the function of questioning itself, and the particular role of the intellectual in encountering technological developments. However, what emerges through my analysis is that despite any debates often couched in the terminology of progress, the motivation embedded within the technology remains and proliferates along with its products. This motivation is the desire to capture the moment of experience ever more accurately and to bring it closer (in this case surrounding oneself with it) by recreating it in superlative detail. Baudrillard calls this the drive of Integral Reality. By outlining the decline of the analog image and following the concurrent rise of the digital image, Powers highlights the increased power of simulation to construct the daily experience of the real world and questions what that world might consist of. As the stakes become apparent, a fallacy emerges: while the digital image or the computer coded world seems to be opening up endless possibilities, it is in fact, also closing in on potential alternative imaginations of the world through its Integral Reality. If we are to accept my assertion that Powers' fiction proposes that the debates about new technologies of representation and the media created by them, however topical, are innefective in addressing the larger nature of the their operative modes, what roles are left for the academic and the writer of fiction?

In examining the current technological trajectory it becomes imperative to examine its inherited legacy, which is why the study of *Plowing the Dark* is incomplete without also looking at *Three Farmers* as I have done here. In chapter three I take on the trajectory proposed by Powers' novels, written ten years apart, and ask how they address the question of how best to engage the technological given the issues to do with progression I have laid out here. Concentrating on key passages from each of the two novels, I show that Powers chronological-historical narrative told alongside the detailed exploration of the working of the human imagination, are constructed so as to propose an argument for an expansion of function of the imagination rather than a closing in as is usually the case when the senses are dictated to by virtual reality.

My arguments are made possible in no small part by Powers' keen understanding of the processes of the individual and larger collective processing of these visual cultures and the consistency of his thought with regard to the production and consumption of images in the twentieth century. For instance, in chapter one, I discuss in detail how he situates the development of the photograph in the psyche of his turn-of-the-century characters. The text of 3F lends itself to a dissection of the photographic subject, object and observer but also provides a continuum from which the reader can infer the larger impacts and implications of the culture of the analog image. This continuum continues into PD which examines the transformation of the analog to digital not necessarily with the intent of being accurate but rather putting into play the desires and perceived potential of CGI and virtual reality technologies in a way that can be then understood critically, as I do in this research project. And yet, Powers still manages to remain ambiguous about the positive or negative connotations inherent in his analysis and that is what leaves room for my extrapolation and commentary.

Just as Powers' fiction allows us to get at the state of perception at the particular historical moments in which his novels take place, I attempt to use his representations to tell the story of how the twenty first century obsession with electronic media came to be and what some of the implications might be. Of course it is not as simple as a causal, historical account, but the

beginnings of an attempt to address a need for a more careful critical examination of digital images and the cultures producing them and produced by them. While voices hailing the digital age as the brightest and best humanity has seen yet far outweigh the critical, I hope that insights about how this culture of the technological (centered around the image) has come to be, and arguments about the implications will be productive in furthering visual culture studies as a space in these issues can be discussed. The lensmaker's equation then is an analogy I am using for what I am hoping to accomplish with this work. The (theoretical) formula attempts to find the focal length of a lens given its properties such as thickness, curvature and refractive index in relation to its distance from a source of light, the idea being that getting this equation right will provide the answer to creating a lens that will be perfectly in focus. The lens stands for the analysis needed to bring into focus the issues brought up by the texts I am using here.

Powers' philosophy if crystallized then lies much closer to Baudrillard's than to Virilio's because he recognizes that there is no experience that is not mediated in some way and that while there are forces much like cause and effect that are in operation (which is why the historical is so important), there is no agency or higher level of control that can be aspired to or realized.

BEHIND THE CROSSHAIRS:
THE DELINEATION OF VISION BY THE APPARATUS OF SIGHT

- Rene Magritte

"We say that the world's magnificence has been enriched by a new beauty; the beauty of speed."
- F. T. Marinetti

"A technological rationale is the rationale of domination itself. It is the coercive nature of society alienated from itself. Automobiles, bombs, and movies keep the whole thing together until their leveling element shows its strength in the very wrong which it furthered."
- Theodor Adorno and Max Horkheimer

Powers says that it is the framing (the composition and selection) of a representation that allows for the imagination to do its work. It is representative not because of the image's graphic nature but because of what the selection implies or suggests to the consumer of that image, "the reproduction must be enough like the original to start a string of associations in the viewer, but enough unlike the original to leave the viewer room to flesh out and furnish the frame with belief" (*Three Farmers*, 249). He argues that the representation's magic lies more in its connotative effects than its explicit ones. Thus, "The true power of photography and motion pictures, the trick that allows us to live in the frame, is not the perfection of technique but the selective obscuring of it." (*Three Farmers*, 249). There is a gap between an object being sighted and the perception of that object that allows for the viewer to internalize

and make sense of what they are seeing. Representation is possible because the likeness between the object and the representation is provided by the imagination of the person in the act of cognition. In this chapter, I use the theory of Paul Virilio, who makes the connection between technologies of the image and the modern machinery of warfare, to discuss Powers' treatment of the photographic image in *Three Farmers*.

Powers' discussion of the photograph in *Three Farmers* takes the reader from the empiricist discourse governing vision in the nineteenth century into the twentieth century, with the figure of the photographer August Sander and his photography acting as the pivot. I argue that Powers' demonstration of the re-appropriation of the photograph (the state of photography as well as Sander's print of the three young men) works on several levels in the novel to illustrate not only the mode of operation of the analog photograph but also how its development and proliferation as a technology of representation was the forerunner in a range of technologies of vision which leads to where we are today. I propose that photography, as Powers treats it here, allows us to get at the state of perception at that particular historical moment which will illuminate the discussion of the shift from a visual culture based on connotative representation to a more denotative one based on simulation that is central to this thesis.

I

The photographic print as depicted by Powers in 3F is deeply evocative and its connotative effects are operative on many levels. First, there is the print of Sander's original photograph which depicts the three young men of the early twentieth century which Powers takes on to envision the twentieth century world of his novel. Then there is the narrator in one of the strands of the novel who is inspired by the print to discover more about the photograph and its author. There is also the immigrant woman who is so taken with the photograph that she invents an identity surrounding it. And finally, there is the descendant of one of the subjects of the photograph who discovers his relation because of serendipitous exposure to another

photograph from the same era. Just like Barthes' observation on Alexander Gardner's portrait of Lewis Payne that, "he is dead" *and* "he is going to die" (Barthes, 96). Powers says, "photos interest us mostly because they look back' (3F, 258) and it is this interaction, this perceived dialogue that engages the viewer, just as Sander's print does the narrator of 3F. Thus, the fiction created here by Powers acts as a metaphor for the connotative effects at play in the art of the analog photograph, just as the boys' gaze invoke a deeper engagement from the narrator with the circumstances surrounding the moment of its creation.

Despite the camera having been around for at least four hundred years before the still photograph came about, it only took fifty years after that for film to be invented. For Virilio, there is a clear distinction between photography and cinema, "There is a breaking point between photography and cinema on the one hand and television and virtual reality on the other hand." (CTheory.net). Despite its encoding as an empirical document, the analog photograph was (and is) in effect a less didactic form of media than film. As Virilio describes in *War & Cinema,* as the techniques of filming the motion picture developed, they could not escape the Futurist ethics of speed and disjuncture and it seems to be more than coincidental that Marinetti's *Futurist Manifesto* was published in 1909. Virilio's discussion of Pastrone's 1914 film *Cabiria* outlines the perspective of the movie camera:

> Ever since Marey's experiments, the shooting camera had been mobile - stability had no longer implied fixity. After Pastrone, however, what was 'false' in cinema was no longer the effect of accelerated perspective but the very depth itself, the temporal distance of the projected space. Many years later, the electronic light of laser holography and integrated-circuit computer graphics would confirm this relativity in which speed appears as the primal magnitude of the image and thus the source of its depth." (W&C, 16).

The trajectory of the photograph-cinema-computer graphic then is a narrative about a literal and metaphorical 'zoom' effect. First the selection of the frame, followed by the zooming in of the film camera implying depth and then the simulation performed by computer graphics, which eliminates all else but the virtual world. Film was perhaps unable to distance itself from the disjuncture that was so valued by the Futurists because its basis is precisely the manipulation of pictures. On the basic level of its operation, using speed to stitch together still frames to appear as though they are a continuous moving image and also using the motion of

the camera and the technique of cuts to produce a cognition of those images which allows the eye to 'see' in ways that the human eye can not naturally see[1]. Aside from the technicalities of cinematography, cinema as a genre also seized upon the narrative potential of the moving picture almost immediately after its invention, and added simultaneous sound soon after, so that the story of photography diverges from that of film on that level too although I will contain my discussion to photography here and comment on the 'cinematic effect' later in this chapter.

Although Sander is portrayed in 3F as a pioneer outdoor photographer, Powers also points out that Sander's work remains within the genre of nineteenth century realism. Powers refers to the irony that the impossibility of the task Sander undertook for himself as his life's work saying that, "his work completes itself in failure" (3F, 43):

> From integrations over tens of thousands of mechanically reproduced prints, extant, maliciously destroyed, or never taken, emerges a sitter by turns willing, self-destructive, reticent, demure, but never, not even in the sum of all its summable parts, not through naming and categorizing and endless industrious compilation, never, ultimately catchable. The incomplete reference book is the most accurate. (3F, 44)

Powers' observation is illustrative of my argument that due to its mode of operation the analog photograph as a medium could only provide Sander with a means of framing, selectively, a document that was evocative but ultimately connotative rather than denotative of the subject. Of Sander's attempt to document the state of humanity, Powers writes, "It took a man of the nineteenth century to truly conceive of *Man of the Twentieth Century*" (3F, 39). Sander's "social realism" (3F, 40), thus remained uncompleted[2] in Kafkaesque fashion, "shattered, overambitious, unfinished" (3F, 43). Powers' fiction here is making the point that with the advent of photography the image and its affects were already beginning to shift, and is reminiscent of Baudrillard's statement about reality, that "when you begin to believe in it that is because it is already disappearing" (IE, 19). Just as it is invented, the photographic image was already being re-appropriated from the project of documenting reality as-is.

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[1] This is of course related to PD's discussion on VR and I will discuss it further in the next chapter.
[2] A seven-volume collection of Sander's photographs was published in 2002, by the August Sander Archiv and Susanne Lange comprising some 650 of his photographs (*August Sander: People of the 20th Century*, Harry N. Abrams).

Just as the work of the surrealists, was an antidote to the Enlightenment's understanding of the senses, especially vision, as absolute truth, Sanders' ultimate failure was perhaps most indicative of the *techné* of photography. In the section in 3F about Sander's life and work, Sander's narrates the experience of taking his first photograph in which he thought there was a double exposure on the plate revealing a reflection of the village he was photographing in the clouds above it, "When the plate was dry I went with it to our village physician and told him what had happened. The doctor said it was not a double exposure but a Fata Morgana- a mirage, a reflection in the air. This was my first photograph." (3F, 47). There seems to be a form of technological determinism that comes through in this incident that in the technical process of capturing the image there is more than what the photographer initially sees when making the exposure. Whether the reflection in Sander's photograph was really a mirage or an accident of the lens is unclear as we are left with simply the subjective opinion of this un-named physician, but, the idea of the trick of the lens, whether accidental or intentional is integral to the discussion of the mechanically produced (and reproduced) image because it is precisely on this hinge of intent versus accident that the distinction between the connotative and denotative operation of images lies. The accident thus becomes an opportunity, a space for interpretation and intervention.

With what he calls "the logistics of perception", Virilio gets close to the mediation of the mental image that Powers is discussing in 3F and that is at the core of my interest in media. Virilio's concern is about the emergence of a certain type of imagining that is the result of human vision being mediated by prostheses, mainly products of the technologies of the lens, and how the internalization of such a way of seeing dominates future knowledge-formation through the conditioning of vision. It is similar to the point Powers is making about perception through Sander's failed attempt at objectivity; "To see an object from a distance, is already to act on it, to change it, to be changed." (3F, 47). Not only is the image conditional rather than absolute in the way that Sander (as depicted by Powers) perhaps intended, but also, in the act of cognition there is already an encoding that is brought to what is being

viewed. Thus, not only is the photographic image open to interpretation from its viewer, but because of its "nearness" to reality as compared to painting or sculpture, it is perceived as holding some "truth". Powers says this is why:

> we try with the aid of the lens, understanding neither technical mechanism nor philosophical import, to beat the annihilation of time, to shore up against loss, not just the loss of the subject matter [...] but the death of the instant vision, the death of the eye, which without the permanent record made by the machine, gradually loses the quality revealed to it in the moment of seeing. (3F, 256)

The photograph then is being perceived as memento mori, as documentary against the fleeting nature of the moment of experience, but, as Powers illustrates in his stories about Sander's photograph, there is no concrete 'truth' to the image that remains. The 'truth' or meaning is just as multiple, accidental, subjective, and fleeting as the mental image against which is it being used as insurance.

Virilio is clear about this in *The Vision Machine:*

> since every object is for us merely the sum of the qualities we attribute to it, the sum of information we derive from it at any given moment, the objective world could only exist as what we represent it to be and as more or less enduring mental construct. (22).

Virilio highlights this in a way that helps to outline what is at stake then in the manipulation of vision by the artificial eye of the lens as it freezes time in the frame of the photograph:

> what does one see when one's eyes are reduced to a state of rigid and practical immobility? One can only see instantaneous sections seized by the cyclops eye of the lens. *Vision, once substantial becomes accidental*. (VM, 25)

As Virilio is pointing out, in the debates that surrounded the status of photography in the nineteenth century, the fact that the conditioning of our response to visual stimulation goes alongside the proliferation of these technologies often gets subsumed. Martin Jay outlines the three issues that emerged with the proliferation of the analog photograph:

> The first concerned the relation between photographs and optical truth or illusion. The second introduced the vexed question, is photography art? It had its corollary, what is the impact of photography on painting and vice versa? And the third addressed the impact on society of the new invention" (Jay, 126).

However, the concern of Virilio is based precisely on what Jay proposes, "that, in grappling with these issues, nineteenth-century thinkers helped prepare the way for the twentieth-century interrogation of vision in its wider senses" (127). The debate does not create any real impact on the way images are produced and consumed, and according to Virilio, is totally missing the point:

> Despite the elaborate debate surrounding the problem of the objectivity of mental or instrumental images, this revolutionary change in the regime of vision was not clearly perceived and the fusion-confusion of eye and camera lens, the passage from vision to visualization, settled easily into accepted norms. (VM, 13. [italics his]).

This shift in the "regime of vision" is what is being marked by Powers in *Three Farmers* across into *Plowing the Dark*. The inability of the nineteenth century intellectuals to see it is perhaps explained by the gap that Walter Benjamin identifies between cultural phenomena and the conditions of their production in "The Work of Art in the Age of Mechanical Reproduction" where he addresses not just the photograph as artifact but its operation as a social phenomenon. However, the problem for us then is that due to the acceleration of the rate of technological change the space for intervention shrinks rapidly as we will always be dealing with effects rather than causes, the discussion of which is the primary concern of the third chapter of this thesis.

However, despite being the main point of discussion here, photography is not the cause of the shift from "vision to visualization", but its development and rapid rise to ubiquity was a sign of it and this comes through in Powers fiction which is itself a snapshot of a particular moment as envisioned from within the discourse of another. Powers uses Benjamin's essay as a basis to outline two standpoints with regard to the proliferation of the product of technologies of representation, "The anti-mechanicals lament the debasing of author to the level of mass audience. The pro-mechanicals celebrate the elevating of mass audience to the level of authority" (3F, 255). However, I do not agree with Powers' reading of Benjamin as being in the camp "that believes that equating rareness with beauty, worshipping art in museums instead of using it in homes, keeping the market free of imitations to drive up the

price of the original have for too long deprived too many people" (3F, 254). In my reading, Benjamin is marking the same shift that Virilio (and Baudrillard too, as I will discuss in the next chapter) is, that in, "the desire of contemporary masses to bring things 'closer' spatially and humanly," is "the mark of a perception whose 'sense of the universal equality of things' has increased to such a degree that it extracts it even from a unique object by means of reproduction" and that "the adjustment of reality to the masses and of the masses to reality is a process of unlimited scope, as much for thinking as for perception." (Benjamin, 4). Admittedly, Benjamin's Marxist predisposition comes through in the essay, especially at the end where he juxtaposes Fascism and Communism. However, I find it hard to believe that Powers himself is not aware of the dialectical nature of Benjamin's essay in which he too outlines the two sides of the debate about the relationship between technology and the status of art, just as Powers does in *Three Farmers*. I think this is an instance in which Powers takes the liberty extended to him by the medium of the novel in which the narrator performs a specific function, and here it is to complicate the binary opposition of 'pro' and 'anti' technologists. As Virilio highlights there is no 'winning' in this type of debate as both sides are rather like Nero playing the fiddle while Rome is burning. Powers too goes on, "Between these two groups, the vast majority of us go about using our cameras without realizing the consequences at stake" (3F, 265). What is at stake here, as is the concern of Powers, Virilio, and Benjamin is the *mental image*, and how the prostheses of vision supposedly developed to be use as a complement, ultimately shapes that internal world.

By linking Peter Mays' brief glimpse (which is the equivalent of a 'mental snapshot') of the redhead to Sarah Bernhardt, whom he says was one of the first widely photographed celebrities (3F, 173) Powers outlines the relationship between the mental image and the mechanically reproduced one. The obsession of Mays with the 'antique' redhead illustrates that the way the mental image operates, that it is both optical truth *in the moment it is experienced* but also illusion in how it is responded to and recalled. Just as Mrs. Schrek embellishes the photograph of the 'three farmers' with her own narrative, Mays takes a fancy

to the redhead creating in his mind a fantasy surrounding that one distant glimpse of her. That his obsession turned out to be with Sarah Berhardt was one of the cleverest twists in the plot of 3F as she is the perfect figure to complement the theme of photography and World War One. The technology of representation that enabled the capturing of the photorealistic image, not only created the possibility of celebrity of that scale but also the possibility of the fake, the illusion, the copy. Just as Benjamin's conception of the Aura cannot exist without the copy, for there would not be a basis for the idea of the authentic, the creation of the 'star' is possible because, just like the photographic print, the essence of the star is captured, recorded on film and in gossip. With this "information negative" Bernhardt had become infinitely repeatable by other actresses in the twentieth century. Thus the image Mays had in his mind was an optical truth, in that he saw the actress playing Bernhardt, but the image was a two-fold illusion: she was an embodied representation of Bernhardt but one that was also based on the representations of Bernhardt on photographs and film. Here Powers highlights that, "we can but chase the reproduction backwards for some misunderstood resemblance" (3F, 172). Meaning that it is not possible, due to the very nature of perception and memory, for the mental image to be subject to the same binaries that the photograph can be and often is.

Of the modernist avant-garde Powers says, "Even the cold machine of the camera was turned, by the true moderns, to the cause of surrealism, absurdity, and abstraction by such devices as composite doctoring, odd and illusory angles, or trick exposures. (3F, 44). The work of early twentieth century artists working with photography such as Man Ray, Lee Miller, Eugene Atget and Hans Bellmer exposed the power of suggestion in photography by focusing on the abstract, the shocking and the absent that exposed how much of the information provided by a photograph had to be injected by the viewer. As Virilio observes, "The logistics of perception in fact destroy what earlier modes of representation preserved of this original, ideally human happiness, the 'I can' of sight, which kept art from being obscene." (VM, 7) this is why perhaps by highlighting the obscene, surrealist artists could comment on the logistics of perception, much like an inversion of Baudrillard's comment

about Disneyland existing in order to make the world outside of it seem like reality (SS). As Jay points out about Barthes' structuralist reading of Bataille's *Story of the Eye*, "whether understood literally or metaphorically, the eye is toppled from its privileged place in the sensual hierarchy to be linked instead with objects and functions more normally associated with 'baser' human behaviors. This is, indeed the most ignoble eye imaginable" (Jay, 221). Powers discussion of Alfred Jarry's work performs a similar function:

> Jarry merely emphasized the underside of the intimacy brought on by mechanical reproduction: the camera in encouraging us to identify with the photographed scene, *always* lied. It cropped, it recolored, it double exposed. Lenses blurred the distinction between private dream and public, mass-reproduced logic.

As such, in his intentionally Dionysian life Jarry performed the 'anti-Sarah' in that he took the public adoration of the image of Bernhardt to its extreme, exposing that it was the concept of her that was the attraction rather than any tangible, material quality.

The story of Peter of the early twentieth century, in his passage from photographic subject to the accidental reporter from the war-front, traces the passage of the "masses" (as Powers, keeps referring to the general public) from in front of the camera to behind the crosshairs. Peter comes into his own when he is forced to make the choice to "shoot snapshots or shoot rifles" (3F, 256) and chooses snapshots albeit not from any sense of altruism. His disenchantment with the telling of fact that became his calling, despite his reluctance, came soon after his realization that the photographic image was connotative rather than empirical:

> It was, at the same time, precisely what Peter had seen through the viewfinder and yet radically different. So much more took place now than then-- the play of detail, the crumpled form of halftimes, the thing's utter silence. More than he'd seen in the original, yet exactly what he'd imagined on opening the shutter. (3F, 276)

What is revealing in this moment is that despite his empirical motivation to have 'proof' of the war for his paper and the eager public by photographing the 'reality', his image was one that was deeply evocative. It held a narrative that he meant to tell but had not expected the photograph to be able to do on its own. However, when he is not allowed to provide it to his paper for publication he does not keep to his intentions but opts instead for diversion. This

brings the idea of "the masses" behind the viewfinder back full-circle as it is marking the passage of the soldier who was once filled with idealism about defeating the enemy who realizes once behind the crosshairs of his gun that the fight is futile and death is the only certain outcome.

II

Given the novel's backdrop of the Great War and a sense of the movement further toward a capitalist, industrial, global society, Virilio's conception of society as based on military technology is illustrated perfectly in 3F. Powers conception of technology reads almost like the excerpt from Virilio's *Speed and Politics* in that he equates technological innovation in warfare with social development:

> Changes in warfare- the tank, warplane, submarine, poison gas- incomparable horrors, remain at best, tactical devices, quickly outdated in terror and effectiveness by the arms of the next generation. War in this century has been largely a field test for new technologies." (3F, 87).

What is most pertinent to the discussion here of technology and perception is the connection Virilio makes in *War and Cinema* between the operational logic of modern weaponry and representation, "There is no war, then, without representation, no sophisticated weaponry without psychological mystification" (W&C, 6). To defeat the enemy is to not only do violence to their physical bodies but also their senses, to defeat them they need to believe that they have been defeated. This was the logic of the Cold War that led to the escalation of weapons to the extent of Mutually Assured Destruction, that Virilio and Powers situate here as beginning in the technological warfare of World War One.

More pertinent to the argument here about the state of collective perception as experienced by the individual, is the interaction of the technologies of reproduction and the apparatus of sight. By the term apparatus of sight, I mean to conflate two things, the act of framing by the lens (such as that of the camera and reticle) of that which 'shoots' and the act of the eye and brain in the moment of cognition. Virilio highlights this interaction on the mode of perception

in a personal anecdote in *War & Cinema.* He talks about serving in WWII with a survivor of WWI and how the more experienced serviceman could gain a clear understanding of the status of the battle despite the sensory overload of heated combat, whereas to Virilio it was just "special effects" (W&C, 48). Virilio, being a generation later than his older compatriot, was not able to get away from the mode of a particular sensory experience that he had grown up with which was governed by a cinematic perception. For him, just like the American GIs he quotes from the Second World War, going to war was akin to "we're off to the movies" (W&C, 48). Thus, in a very short time-frame, cinematic reality, a reality produced by the framing of the camera and editing, had imposed its way of seeing upon the mode of consciousness that in turn inflected on everything perceived from then on out.

To prevent falling into a purely causal argument that Baudrillard would call nostalgic, and to show that this process of shifting perception is pertinent to more than simply a discussion about technologies of vision, I would like to call upon Virilio's invocation of Einstein's theory of relativity. Virilio says, "the objective world could only exist as what we represent it to be and as more or less enduring mental construct:"

> Einstein took this reasoning to its logical conclusion by showing that space and time are forms of intuition that are now as much a part of our consciousness as concepts like form, colour, size and so on. Einstein's theory did not contradict classical physics. It simply revealed its limits which were those of any science linked to man's sensory experience, to the general sense of spatial relationships which the logistics of perception have been secretly undercutting since the Renaissance and especially in the nineteenth century. (VM, 22)

Thus the conceptualization of the senses as absolute truth, which was the very basis of the empiricist discourse of the sciences, is shown to be based on *a priori* logic, the limits of which Einstein (according to Virilio) revealed. I think it is no accident that in his examination

of the shifting of the mode of perception, Powers invokes Jarry who was the inventor of Pataphysics, the surrealist antidote to traditional physics[3].

The incident of Hubert's death while "fighting the Germans" illustrates on one hand the accident as conceptualized by Virilio and on the other brings the reader to the stark realization of Virilio's statement that, "For men at war the function of the weapon is the function of the eye" (W&C, 20). In the messy misunderstanding involving a stolen shotgun, a bicycle, dynamite and a machine gun, the raw power of the machine gun comes through, "an incredulous gunner opened up an automatic small arm in the direction of the bicyclist. The repeating weapon continued to go off, nervously, even after vacancy had taken hold in the air" (3F, 66). The logic of the weapon here is clear, regardless of its target being, "no professional soldier... but a boy with a French face, Dutch shotgun and Belgian cigarettes" (3F, 92). The Virilian "accident" in this instance is clear, the machine gun and the soldier wielding it is unable to distinguish between friend or foe and begets the killing of the bumbling and ill-equipped boy who was unfortunately mistaken regarding the explosions he had heard. The viewpoint of the soldiers was being governed by the "sight-line" of their weapons, not just literally but metaphorically as the logic of war comes into play; kill or be killed. It is this shift that Virilio discusses in VM:

> The year 1914 not only saw the physical deportation of millions of men to the battlefields. With the apocalypse created by the deregulation of perception came a different type of diaspora, the moment of panic when the mass of Americans and Europeans could no longer believe their eyes, when their *faith in perception* became slave to the faith in the technical *sightline* [line of faith]: in other words, the visual field was reduced to the line of a sighting device. (VM, 13)

Powers' narrative highlights Virilio's proposal further by muddying the moral grounds usually cited by the proponents of military technology, of protecting the innocent and upholding sovereign honor. The disavowal of the violence imposed on the body, physically and mentally are thus laid bare, as Powers juxtaposes the event with the German violation of "Luxembourg

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[3] I am aware that the surrealist movement was not as unified as I suggest by using the label and that many artists referred to her joined and left the 'official' surrealist movement several times in their careers.

at a town called Trois Vierges: the Three Graces or virgins" (3F, 66), this can also be read as a metaphor for the three young men who were farmers on their way to a dance just months before.

Powers' prose highlights the inadequacy of the Hollywood narrative of the Great War with his story of the three farmers being one of violence and death, but told in the genre of tragicomedy where the events that play out are riddled with irony. The story of Adolphe perhaps illustrates this the best. The aptly named Adolphe who is portrayed as the painfully 'correct' of the three boys, goes on to be killed in a misunderstanding similar to the death of Hubert. What is particularly ironic about the Adolphe's case is that shortly before he is taken with what seems to be a sort of post-traumatic shock syndrome and hallucinates receiving a radio message through a filling in his tooth, he comes to the realization that, "if the state's will was not his, then his will had to do the bending" (3F, 134). However, in his delusion he thinks he is serving his Kaiser by delivering a message he "intercepted" when he is shot dead by a soldier who perceives his actions as desertion. As a precursor to what is to come in the following decades, amongst Adolphe's final thoughts are, "What a remarkable, excellent society, in which people could reproduce their voices and images cheaply and mechanically for wide consumption" (3F, 227). The radio here is a precursor to the new military technologies, "invisible weapons that would make things visible - radar, sonar, and the high-definition camera" (W&C, 71) in that its invisibility is what gives its operator an edge over the enemy. However, the irony is that like Virilio's shipwreck example, it is within the very technology that is supposed to provide clarity there is potential for confusion and disaster.

Rather than using the notion of progression which implies a positive chronological movement in which there is agency and control, Powers, much like Virilio does in his concept of dromology, addresses the idea of progression in terms of acceleration:

> each tool, each measurement, each casual observation of the nature of things [...] accelerates and automates the acquisition of the next tool. The first rock-chipping

rock logically extends itself, along a series of ever-shorter steps, into the assembly line and the self-replicating machine. (3F, 80)

Just like Adorno and Horkheimer's linking "automobiles, bombs, and movies", the shift is then a self-perpetuating one, based especially on a disavowal of this linkage (39). In his trauma over viewing the massacre of the 'representative group' of the Belgian townspeople, Adolphe hangs on to the image of the photographic poster for a play that he had taken from a Belgian household. His displacing of the face of the actress on it with that of the Belgian girl is perhaps a vain attempt to reconcile his part in the massacre by reducing it to a theatrical act. By metamorphosing the image of the actress with that of the dead girl, Adolphe somehow keeps her alive as the representation becomes substituted for that which it was merely an image of, "Photos, radio, the new forms of mechanical reproduction seemed to Adolphe further commandments to go forth and multiply, go and *love the image* of others as yourself." (3F, 228 [italics mine]). This disavowal and substitution come into their own in what Baudrillard calls the "Dual Form" in the Intelligence of Evil, which I will discuss in detail later in this thesis.

Thus, the analog photograph as a medium in 3F is placed at the forefront in a series of technological advancements that revolutionized the mode of consciousness of the "man of the twentieth century" in a shift that Virilio calls "substitution" and that Baudrillard describes the effects of as the "procession of simulacra". Virilio traces the status of photography within this shift, which was a part of the drive that led to the development of photographic technique to the point where Sander was able to use it as a mode of documentary-art:

> Photography likewise, in fulfillment of Descartes' hopes, had been largely an art in which the 'mind' dominating the machine interpreted the results in the fine tradition of instrumental reason. But, conversely, because the technical progress of photography brought daily proof of its advance, it became gradually more and more impossible to avoid the conclusion that, since every object for us is merely the sum of qualities we attribute to it, the sum of information we derive from it at any given moment, the objective world could only exist as what we represent it to be and as more or less enduring mental construct. (VM, 22)

What comes across in this description is precisely what is illustrated about the photograph in *Three Farmers;* trying to capture an empirical truth in a photograph reveals only a partial truth, as that "truth" is only completed in the act of looking and interpreting which is dependent on a myriad intricacies brought to it by the individual subject.

As Virilio gets at with the logistics of perception, the operational logic of the lens is a closing in of the space that was previously there for filling in on the part of the perceiver. This comes into its own in *PD* which I discuss in the next chapter, but it is already beginning here as Virilio observes, "With photography, seeing the world becomes not only a matter of spatial distance but also of the *time-distance* to be eliminated: a matter of speed, of acceleration or deceleration" (VM, 19). That is why as Virilio points out, Goebbels insists that "Propaganda must be made directly by words and images, not by writing," and why the National Socialists promoted audiovisuals so vehemently in Germany (S&P, 5). Because, "Reading implies time for reflection, a slowing-down that destroys the mass's dynamic efficiency" (S&P, 5). It is this logic that underlies the story of Adolphe and the radio versus Adolphe and the reading of the Bible/Goethe in pre-war times when the family sat together to read aloud and discuss the issues at hand.

In my reading, Powers' fiction about photography and the status of the image in the early twentieth century is more than a casual, causal history of the image as it was in the 1980s, the time of the publication of 3F. It is the systematic exploration of the order of simulacra that Baudrillard outlined also in the late 1980s, which is also the time that *Plowing the Dark* is set in. It is a tracing of Virilio's proposal that "history progresses at the speed of its weapons systems" (Speed & Politics, 68) by looking at the trajectory of development of media technologies through the twentieth century. In the next section, I will follow this trajectory as set out by Powers *Plowing the Dark* with the help of Baudrillard's theory about simulation.

THE HOLOGRAPHIC FALLACY:
DIGITAL IMAGERY AND THE HARNESSING OF STEREOSCOPIC VISION

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

"Is this still an image?"
- Jean Baudrillard

"Vision in the technological feast becomes unregulated gluttony; all perspective gives way to infinitely mobile vision, which no longer seems just mythically about the god-trick of seeing everything from nowhere, but to have put the myth into ordinary practice. And like the god-trick this eye fucks the world to make techno-monsters."
- Donna Harraway

Just as Jean Baudrillard outlines in his four stages of the image in "Simulacra and Simulations," the transition from *Three Farmers* to *Plowing the Dark* takes the reader from a world where the image was reflecting a basic (albeit complex and subjective) reality to one where it bears no relation whatever to reality. Having discussed the mode of operation of the analog image in the previous chapter, and in keeping with my main argument about the nature of the image, I am moving on to the digital image with *Plowing the Dark* (PD). Through my analysis of PD I discuss how the trajectory of development of the mass production of images takes off on a tangent from that of the era of the analog image. Keeping in play the theme of military technologies and their relationship to the dominant mode of vision from the previous section, I discuss the stakes involved in the current drive of completely digitized new media technologies toward what Baudrillard describes as, "the irreversible movement towards the totalization of the world" (IE, 21).

In the novel, Powers gets to the core of representation and its effects, not just the politics of representation but also the functionality or technicity of how digital images are produced and operate. By outlining in detail the operation of the digital image, Powers demystifies it but also illuminates its particular quality, which Baudrillard refers to as "sorcery" in

"Simulacra and Simulations." What emerges from the issues discussed in the novel is a range of questions that are at the juncture of any major development in the technologies of the lens (especially one that reconfigures the relationship between the image and its viewer in the way that digital technologies imagine themselves doing). Powers brings into focus the function of questioning itself and the importance of the role of intellectual awareness in encountering technological change. However, much like the intellectuals discussing the nature of photography in the late nineteenth century, despite the ensuing debates, the motivation driving the "progress" of the technology remains the same: the desire to capture the moment of experience ever more accurately and to bring it closer by recreating it in superlative detail. This desire for complete realization, which Baudrillard calls the drive of Integral Reality, holds within it the problematic effect of eliminating the need for interpretation on the part of the perceiver. In order to further my own examination and analysis of the shift of visual culture and the collective imagination in the twenty first century, in this chapter I outline the rhetoric of the move to digitization that Powers captures in PD, alongside the arguments he presents about the stakes involved in doing so.

In PD Powers mobilizes fantasies and anxieties about the digital overtaking the real to discuss the operation of the digital image: how while digital media seems to be opening up a world of possibility, it is in fact also closing in on alternative potential imaginations of the world. This concept of the technical imagination imposing a subtle hegemony on epistemology itself was outlined by Heidegger in "The Question Concerning Technology". Heidegger's concept of "Gestell" or Enframing described it as, "that way of revealing which is itself nothing technological" but rather it is a function of the technological (20). The idea is taken to its conclusion in *The Intelligence of Evil or The Lucidity Pact* (IE) in which Baudrillard outlines how by excluding nothing, the digital image is really negating all that is external to it rather than inciting what lay "beyond the frame" as the analog image did. Thus the connotative effects of representation discussed in the previous chapter are lost as the digital image takes precedence in the late twentieth century. In its project of making the world apparent within its digital environment, the Virtual Reality project in PD is an explicit

manifestation of the drive towards Integral Reality (which is why the imagination figures so predominantly in the novel). Read in this way Powers' fiction outlines the decline of the analog image and the concurrent rise of the digital image in a way that highlights the increased power of simulation to construct the daily, lived, experience of the late twentieth century world.

I

As I discussed in the previous chapter, one of Virilio's most powerful arguments concerns the link between the apparatus of vision and technologies of warfare, as embodied in the "sightline". Solidified in the World Wars of the twentieth century, this effect is intensified and expanded in the twenty first century through the proliferation of a global media network that has assured an entrenched screen culture throughout much of the developed world as well as urbanized centers globally. The ultimate contemporary example of this is the "9/11" attack on the twin towers that was planned to get the maximum '"live" coverage of the carnage possible. However, with his novel about digital technologies, Powers foregrounds the fact that these are the same issues the Iconoclasts fought over centuries ago: the power of the image is still a pertinent and contentious topic. In an article in *Context*, Powers puts the difficulty that often arises with representations as the blurring of the lines between "being" and "seeming" ("Being and Seeming"). However, what concerns Powers is not merely the politics of representation, which he is well aware of, but rather what lurks amidst the possibilities and lures of the novel technological effects of digital media, mainly the lack of questioning amongst those that build and employ them. Powers points out the danger of getting caught up in the excitement over new technology in an uncritical manner:

> Our dream of a new tool inclines us to believe that the next invention will give us a better, fuller, richer, more accurate, more immediate image of the world, when perhaps just the opposite is the case. Television does not improve on the verisimilitude of radio, nor photography on that of painting. The more advanced the media, the higher the level of mediation. ("Being and Seeming").

The crux of the problem is that as the technology gets ever more sophisticated and ubiquitous, it is getting more and more difficult to see the constructed-ness of electronic digital media,

similar to the way that photography was seen as a factual, empirical document in the late nineteenth/early twentieth century or even today[4].

Through the group of tech-obsessed employees of the lab in PD Powers recreates the technological utopianism that was rampant, especially in the U.S., in the late 1980s and early nineties. With the rise of software giants like Microsoft amongst a multitude of dot-coms that were fuelled by the popularization of the PC, the Internet, and other new electronic and digital media, the fetishization of the electronic that we experience on a global scale today was created. As the artists and IT professionals in the novel seek to recreate specific worlds and project them onto the clear white surfaces of its walls, the Cavern becomes to them a playground within which they can make their imaginary landscapes come true. However, most of them are too caught up in the excitement over the technical possibilities to give much thought to the potential consumers or the ultimate uses of their products. For instance, the female protagonist, Adie, when she is first contacted about the project, says she had given up Art and was designing marketing collaterals. On why she gave up being an artist, she says:

> You have no idea how horrible it is. To give your life to a thing you think represents the best humanity can do, only to discover that it's not beauty at all. It's about coercion and manipulation and power politics and market share and maintenance of class relations.(PD, 372).

And yet she takes on the role at the lab because she can't resist the tools it would give her as an artist. To questions about what makes this work any different she responds, "As a product? Maybe nothing but as a process? It feels as if there's something we have to make. As if we're closing in on something that the world somehow...needs" (PD, 372). The draw of the new technology for Adie is its "immersiveness" and even the basic drawings of crayon world captivate her. The promise of being given the tools to create something so spectacular and "interactive" appeals to her creative imagination. Baudrillard calls this desire to realize the realm of the imagination Integral Reality, "the irreversible movement towards the totalization

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[4] With the ubiquity of digital cameras and editing, photographs are widely accepted as constructed images. However, the original or "straight-out-of-the-camera" files are still perceived as more of a "truthful" document than a constructed one. See my detailed discussion of despite Stiegler's arguments in the introduction.

of the world" which as described by him in IE is a sort of automated movement that is taking place not only on the technological level but also on the level of how we as humans perceive and interact with the world (IE, 21).

The compulsion Adie feels is what Baudrillard calls the Great Game; that there is a disjuncture between the need to complete and the function of what is produced. On one hand, "Effectuating, materializing, realizing, producing - it seems to be the ideal destination of everything to pass from the stage of possibility to that of reality in a movement of simultaneous progress and internal necessity" but on the other, "the excess of reality in all its forms, the extension of all possibilities is becoming unbearable. Nothing is left now to the contingency of a destiny or to the non-satisfaction of desire" (IE, 20). Younger team members like Spider Lim and Jack Aquareli are portrayed as being enchanted by this same fallacy of authority and agency as their efforts seemingly go into creating a utilitarian and tangible product that is a delight to consume as it is for them to create. Similarly, despite her aversion for anything with wires going anywhere near her head, Adie is immediately enchanted by the artistic possibilities provided by the immersion environment and takes the job. However, the aspirations of her colleagues are soon made evident to her:

> You know what we're working on, don't you? Time travel, Ade. The matter transporter. Embodied art; a life-sized poem that we can live inside. It's a grail we've been after since the first campfire recital. The defeat of time and space. The final victory of the imagination. (PD, 159)

By appealing to "immediate bodily knowledge" (PD, 160), the technology here is attempting to close the gap between perception and imagination. The apparent "defeat of time and space" as the ultimate goal of this type of representation. It is this transformation of experience at the very basic level that Baudrillard's philosophical career addresses from the mid-eighties on. To represent, as defined by the OED is, "to bring clearly and distinctly before the mind esp. (to another) by description or (to oneself) by an act of imagination." A representation then is the frame through which something in particular is invoked and held up against for comparison and examination. However, while the essence of a representation is in fact that it is removed from the thing it is representing, it is the representation's likeness to the thing that is the very

factor that gives it its ability to depict it. What emerges from this duplicity, as Powers is pointing out, is a desire for the representation to become the thing it is representing which would negate the need for the imagination as there is no association to be made between the thing and a representation of it. However, this desire, the drive to Integral Reality can be witnessed in the progressive development within technologies of representation of a technicity (which operates much like Heidegger's Gestell) which is a drive towards rendering the technology itself more and more invisible and consequently the representations they produce to be more easily mistaken for and increasingly more constitutive of the real.

Powers explores this theme mainly in the discussions between the technicians working in the lab. The danger that Powers outlines is the tendency of new media in its desire for 'immersiveness', for ever higher resolutions and more 'realistic' images, to want to re-create the real as-is rather than to be the complement that illuminates our relation to the world. For Powers, the real lived experience is what representation should be all about:

> For like a book, digital representation, in all its increasing immersiveness and free agency, may finally locate its greatest worth in its ability to refresh us to the irreducible complexity of the analog world, a complexity whose scale and heft we might always have underestimated, without the shortfall of its ghostly imitations. ("Being and Seeming")

The point Powers is making is that by reflecting a version of reality (one that lacks luster when held up to reality), representations provide an appreciation for a full, lived, experience. The conversation where Steve describes to Adie how the Cavern is different to its predecessors illustrates this:

> *We're not just passive recipients anymore. We'll become the characters in our own living drama.*
> She shook her head. *The problem isn't going to answer to technology, you know. The problem is inside us. In our bodies.*
> *The Cavern is the first art form to play directly to that body. We're on the verge of immediate, bodily knowledge.*[...]
> She took in Pioneer Square in one glance: this palpable place, the master foil to Stevie's crazy vision. All at once, the tap of sunlight opened. *Why not life then?* She said. *Life itself, as our final art form. Our supreme high-tech invention. It's a lot more robust that anything else we've got going. Deeply interactive. And the resolution is outstanding.*
> *But we can't see life. [...] Not without some background to hold it up against.* (PD, 160)

Steve's answer that we need representations in order to reflect on reality is at the crux of the issue that Powers is taking up in "Being and Seeming." The representations or "ghostly imitations", Powers is pointing out, serve the function of making lived experience more real and worthwhile. At the same time, this exchange opens up the discussion as to what the final outcome of continually upping the ante to achieve a level of representation that continues to engage us may be. This then leads into the observations Baudrillard makes about "reality." For instance, the argument in *The Gulf War Did Not Take Place* has to do not with the factual reality of events but with how the representation of events has taken precedence over their reality, with live "news" broadcasts from the battleground and televised images from cameras attached to "smart weapons." The images in circulation were creating the scene of war while simultaneously undermining the factual reality of post-Cold War military conflict reducing it to a series of often silent, sterile-looking images.

Although they are by no means the first technologies of representation to have this "reality effect", (similar anxieties were voiced about photography, cinema and also in relation to television for being mediations of reality while giving the impression that they are 'pure' representations of reality), virtual reality or simulated environments of the sort that Powers describes, are prime examples of the ability of digital technologies to constitute reality rather than represent it. The virtual reality lab in PD is a prototype, a function of representation in its latest form, the "3D immersion environment". As Powers takes the reader through the process of learning the capacities of the technologies that are being developed, the novel effects that are produced are shown up to be precisely those that mask the affects of the digital imaging technologies and their ultimate usage. Virilio's use of the concept of the Medusa to describe the effect of innovations in the technologies of representation in *The Vision Machine* is an useful one here:

> *When you stare at the Gorgon, the sparkle in her eye dispossesses you, makes you lose your own sight, condemns you to immobility.* With the panorama and the diorama's play of colour and lighting, both fated to vanish at the beginning of the twentieth century only to be replaced by photography, the Medusa Syndrome comes into its own. (VM, 41 [italics his]).

Virilio's example highlights that the senses are immobilized at the same instant that they are mobilized when engaged by a previously un-encountered form of visual media, making the point that cognition and the senses are intimately linked. In PD, Powers too illustrates the effect described by Virilio, in which a "stun effect" or a sort of semi-blinding occurs when the senses are engaged by the visuals of the Cavern, "Her gaze zoomed and panned, as dazed as an infant's eyes sifting their first light. No sooner did she right herself than nausea upended her again. [...] this was the very opposite of motion-sickness: still-illness, frozen in a yawning landscape that bobbed all around her" (PD, 14). The glare, dispossession and blindness are followed by an adjustment of the subject's sight to the viewing conditions dictated by the machine. It is also a clever piece of prose by Powers as the projected landscape is in motion "bobbing" along with the intuitive, rapid motion of the biological eye, whereas in normal vision and cognition the world is static but vision is not. Thus, the mobility of the landscape causes a physical immobility. This immobility can be read as a metaphor for the operational logic of the simulation as conceived by Baudrillard, where any type of agency or action is made redundant as it would be already a part of the simulacrum.

As can be seen in Virilio's examination of the panorama and diorama, which were experimental visual technologies from two centuries ago, the use of technological means to (re)produce the effect of reality has been of central interest to a particular Western, Post-Renaissance discourse. Virtual reality of the 3D variety as described in PD is operating on the same mechanics of vision as an early nineteenth century painting installation in that it stems from the desire to harness reality in a reproducible fashion, coupled with the thrill experienced in the manipulating of the senses. Creating such an experience has been the basis for much of the developments in the technologies of vision since then. But, as Virilio discusses at length and as I have shown in the previous chapter, technologies of vision and war are inextricably linked. In moving from analog to digital though, Baudrillard's arguments about the shift in the mode of perception come into their own as images are no longer required to be based on any real event:

> A digital image which is completely fabricated, has no real referent and from which, by contrast with analog images, the negative itself has disappeared - not just the film negative, but the negative moment that lies at the heart of the image, that absence that causes the image to resonate. The technical fine-tuning here is perfect. There is no room for fuzziness, tremor or chance. Is this still an image? (IE, 28)

While the virtual environment of the Cavern is perhaps the final of Baudrillard's stages of simulacra -- in that it is "pure simulacrum," what is more pertinent is that, like Baudrillard's description of Disneyland, its very existence upholds the myth that the image widely in circulation is still performing a evocative rather than denotative function. By being an engine providing holograms at will, it performs the "sorcery" which upholds the impression that the world outside of the projected environment remains the same as before. By pinpointing the holograms inside the Cavern, we can ignore the waning of reality that is taking place through the screen culture that is rampant beyond its white walls. Soon after the Gulf War begins to be telecast live, Adie's realization that there is a close relationship between the "smart" weaponry being used by the U.S. military and the technologies they are developing at the lab, becomes a turning point for her. Amongst the other potential buyers of the technology of the lab were:

> Disney, yes. Sony, yes. Half a dozen research universities, yes. But amongst the rest of the roster were other agencies, groups whose upbeat acronyms could not disguise their affiliation. Slaughter was a free rider, a virus among them, using the RL, using the Cavern as a way of spreading its genome. (PD, 396).

Her work was not about fulfilling a fantasy of creating alternative realities anymore but rather, as it becomes clear, those alternate realities were creating the world.

II

By conflating the simulated environment produced inside the Cavern with the "real" world of the novel, Powers uses the technical possibilities of fiction to problematize the boundaries between imagination and reality with the effect of throwing into question the digital image in a way that highlights its distinction from the analog image. Adie spots an apparition inside the VR model of the Hagia Sophia, a man with a face she describes as, "an awed bitmap no artist could have animated" (PD, 399). At the end of the novel it is revealed that the prisoner, Tai,

from the parallel plot-line in the depths of his despair had somehow found his way into the simulation and experiences Adie as an "angel" descending down on him from the great dome of the Hagia Sofia, "An angel whose face filled not with good news but with all the horror of her coming impact", that "left (him) no choice but to live long enough to learn what it needed from (him)" (PD, 414). This meeting of the two characters in the simulated church is a clever move by Powers. At first it appears to be in the mode of a dystopia of technologies getting out of control of its creators which has been the topic of a slew of popular science fiction books and movies like *Minority Report*, and *The Terminator*. However, a closer examination reveals it to be the mobilization of the fantasy and nightmare of the technological, as it is treated in popular culture, to address the "totalization" in the digital that is the point of discussion here.

The introduction of the conception of the putting-off of, or delay of death by a kind of fictional "miracle" here exemplifies what Baudrillard refers to as the Great Game, which is the interplay of Integral Reality and the Dual Form which are inherently at odds with each other (IE, 22). As Bishop and Phillips put it, "Integral Reality depends on the inconceivable and unbearable task of total completion that is countered by the equally unbearable nature of the impossibility of completion" (284). It is this tension that emerges from Powers' engagement with digital technologies in this passage where the two narrative strands meet. It is significant that it is at the breaking point of each protagonist that they are revealed to each other. For instance, it is when Adie realizes the implications of what she has been creating in the Cavern and is feeling that, "The world machine had used her, used them all to bring itself into existence" (PD, 398), and is in the midst of destroying all her contributions to the simulations that she "sees" an apparition in the simulation (PD, 399). In her realization, Adie's mindset changes from naïveté to a place of knowledge and the existence of the "apparition" influences her actions. That is, instead of carrying through her decision to destroy her work and leave, the revelation creates a desire to search for him within the simulation and instead of deleting her contributions to the simulation, she ends up refashioning them in order to create an awareness amongst the potential buyers of the technology. The demonstration which was supposed to be a display of the technological possibilities is turned into a recreation of an

amalgamation of the multiple violent wars that destroys the simulated church, causing it to crumble into rubble around the horrified clients.

For Tai too, the moment of revelation is a turning point. He is in utter despair, unable to hold his mental and physical capacities together any longer and he had "[given] in to the final abyss" when he found the "walls of [his] cells dissolved" (PD, 413) and he experiences being within a hologram of the Hagia Sofia. Tai undergoes a metamorphosis as a result of his experience. He is terrified by the "angel" that descends on him but within her he sees a terror that he describes as "beyond decoding" which forces him to respond to it and to keep going on despite his circumstances and this consequently saves his life. Thus, it is at a crucial moment for both Adie and Tai that they are made apparent to each other and as much as Adie was terrified with the realization that there could be an actual life within the simulation, she could not turn away and leave it to the machine. The implication of this reading for my argument is that for Adie, when confronted by the unbearable totalization, the appropriate response is constructive action from within that illuminates the political and historical basis of the technological experience, rather than a light show or a destruction of a tool that would just be replaced. Thus, while Powers does seem to be at times mocking the technological utopianism of the lab workers, especially their dreams and aspirations for virtual reality technologies, by having the recreation of the site of the Hagia Sofia become the project of the Realization Lab's team, he brings to the fore how vital the politics of representation have always been. Despite the novel effects of Virtual Reality technologies, the politics of representation that will ultimately determine their use have changed little throughout the course of the centuries.

Powers' use of the Hagia Sofia as a locus for this event is also an incitation of the war of the Iconoclasts against the image. Baudrillard highlights that the agenda of the Iconoclasts can be read as an illustration of the power of representation to mask the absence of an origin of that which is being represented:

> It can be seen that the iconoclasts, who are often accused of despising and denying images, were in fact the ones who accorded them their actual worth, unlike the

iconolaters, who saw in them only reflections and were content to venerate God at one remove. ("Simulacra and Simulations", 184)

However, the denial of the image and its destruction is not, for Baudrillard, the answer but a perpetuation of the same logic that gives images their power. He goes on:

> But the converse can also be said, namely that the iconolaters possessed the most modern and adventurous minds, since, underneath the idea of the apparition of God in the mirror of images, they already enacted his death and his disappearance in the epiphany of his representations (which they perhaps knew no longer represented anything, and that they were purely a game, but that this was precisely the greatest game — knowing also that it is dangerous to unmask images, since they dissimulate the fact that there is nothing behind them). ("Simulacra and Simulations", 184)

Baudrillard's insightful summation of the function of representation here adds yet another layer to the discussion in this thesis about the status of the image. The iconolaters' refusal to unmask images for fear of showing them up as empty representations, is not merely a "game" nor does Baudrillard's description necessarily mean that they were intentionally conspiring together to keep up a charade. Rather, it is a testament to the "unbearable" quality of Integral Reality that he speaks of in IE, for what would be left in a world bereft of belief for having proven itself right?

A similar position that emerges from Powers' portrayal of the Islamic fundamentalists in PD. It is from the fear of the ability of representation to distort and pervert, that arises the fundamentalists' war against "America" and its global media apparatus. Akin to the Iconoclasts, they know the true value of the image and visual culture. However, due to the nature of the operation of the politics of representation, they must use that very apparatus in order to subvert it. Video recordings sent in to the mainstream media as evidence being their weapon of choice and mode of communication with international agencies, the kidnapping of Tai is motivated by him being collateral that can be used to gain the attention of the global media. The second narrative of PD thus warns against the dangers that could result from the extreme reaction against the modern technological machine and its allies. When Tai, who has been locked up in solitary confinement begs his captors for reading material, they ultimately acquiesce by providing him with a copy of the Qur'an. It becomes evident that they have one mantra that they use for justifying all their actions, 'Inshallah' or 'by the will of God,' and it

turns out that this will of God, as Powers goes on to show, is dictated by their reading of the Qur'an. When Tai begs for a book and they perform a "fatwah" to determine the outcome:

> Lessons follow in performing a fatwah. It's the old Iowa Fighting Fundy from Spiritus Mundi trick of throwing open the Holy Scripture to a passage, then interpreting the words as if they were a scrap of cosmic fortune cookie. Judgment by roll of evangelical die. (PD, 252)

Powers is obviously critical of this blind acceptance and enforcement at random of a "Truth" which is not only based on their acceptance of the Qur'an as the unmediated word of God, but also of their invocation of the right to interpret it as the situation arises and then claim the interpretation to be unmediated. Just like Virilio pointed out about Goebbels and the Nazi propaganda machine, the doctrine of the fundamentalists cannot allow space for interpretation. When compared with other story-line of the novel, this agenda is not too far off from the goals of the group of technicians in the Reality Lab. Just as the function of broadcast media closed in on the space left for interpretation as discussed in the previous chapter, the logic of completion and totalization that is inherent in the digital image is the same logic that leads to the mindset that allows for fundamentalism (and thereby terrorism) in PD.

The implications of Baudrillard's conception of Integral Reality is easily imagined in Powers concerns about digitization and the Gestell that goes along with it. As Baudrillard's says, the invalidation of "objective reality" leaves us "confronted with the undertaking of *realizing* the world, of making it become technically, integrally real" (IE, 27). Powers outlines this in "Being and Seeming":

> Here then is the motive of worldwide digitization: to render every impulse, whether aesthetic or utilitarian, in the same, fully-transformable panglossary. And like architecture, the target medium of this world-wide conversion blurs the line between representing and being. ("Being and Seeming")

This is a recollection of the moment of convergence of the two story lines in the novel in which Powers' thoughts about digital representation and how we might best respond to it is crystallized: we should not only be wary of uncritically accepting new technologies by getting caught up in the excitement of innovation but should also be equally concerned with actions that may arise out of naive fear of or non-engagement with these technologies. Tai's response, despite, or perhaps even because of, his terror, is a position of being fully open to

the possibilities of the terrifying angel who may be read as the embodiment of digital representation. Tai may also be read as a prisoner in the metaphorical sense because he cannot escape her progression. The tension then is intensified by the fact that the angel cannot be escaped but needs to be fully engaged with. However, Powers' use of this narrative device (of the meeting of the two characters inside the simulation) makes visible the constructed-ness of the novel as an art form both by drawing attention to and undermining the verisimilitude of the novel in order to put forward his philosophical point about a world created by technologies of representation. Once this motive becomes clear, the somewhat clunky narrative device turns into a deft move that makes the reader aware of the fictionality or the mediative quality of the novel as well as of the digital technology in question here.

Powers' narrative thus doubly performs the awareness that Powers incites, first from his characters and secondly, from his readers as subjects of a constantly mediated world. What we do not get though, is a clear picture of Powers as "pro" or "against" new technologies. The fact that the angel is filled with the "horror of her coming impact" but is just as "bewildered" as the prisoner, suggests that there is a certain momentum in her progression that is beyond the agency of her creators. However, the fact that it is the open-ness of the prisoner to the possibilities of the angel, no matter how terrifying, which saves him, is perhaps Powers' way of asking us to look past the naive technophobia which creates a more dangerous myth that posits pre-existing technologies as "pure" and unmediated.

Powers drives this point home in "Being and Seeming" when he calls on digital media to embrace its potential by finding ways to invoke the imagination rather than recreating exactly what already exists. Due to the fact that all experience is mediated, it is our imaginations that limit the boundaries of what we can do with the technology that is available to us. In "Being and Seeming", Powers writes of the power of fiction:

> When we read, we stand in the flow of thought and outside the flow of ephemeral event. This is the magic "re" in representation. New media too often reverses this relation. In place of the time of thought-- the time of Chartres, of Angkor, of the Taj --they serve us real time, transparent time. Time too much like the one that we are already too inclined to believe in. ("Being and Seeming")

This sentiment bears a resemblance to the way Walter Ong talks about oral cultures and the place of collective memory once a culture of writing and print became the dominant mode of communication. On one hand, it is an anxiety that the "new media" is endangering forms of intellectual life that we have cultivated with the culture of print. However, as evidenced by Tai's agony as he begs for reading material, this effect, the intellectual escape, is the fuel of the human intellect. If new media already provide the "work" one has to do to gain that experience, where will that leave us? What Powers suggests can perhaps be altered instead is our own reception, understanding and use of the products of the technologies of the lens. Powers breaks from Baudrillard when he says that, "No change in medium will ever change the nature of mediation. A world depicted with increasing technical leverage remains a depiction, as much about its depicters as about the recalcitrant world" (Being and Seeming). Nonetheless, as he goes to great lengths to show, this is becoming increasingly easier to forget.

In spite of the trajectory outlined in this thesis for technology to close in on the space which enables imaginative capacity, Powers seems to propose that there is still hope for a resolution that lies with an increased capacity for re-creating that "distance" necessary for interpretation and imagination. The quadriplegic musician in PD is an example of the technological enabling of action by the mind of someone trapped in an immobile body, whilst possessing a sound mind. Virilio makes an observation with regard to the immobilized that is relevant here:

> Doomed to inertia, the interactive being transfers his natural capacities for movement and displacement to probes and scanners which instantaneously inform him about a remote reality, to the detriment of his own faculties of apprehension of the real, after the example of the para- or quadriplegic who can guide by remote control - *teleguide*- his environment, his abode, which is a model of that home automation, of the 'Smart Homes' that respond to our every whim. Having been first *mobile*, then *motorized*, man will thus become *motile*, deliberately limiting his body's area of influence to a few gestures, a few impulses, like channel surfing. (Open Sky, 17)

Virilio is correct in pointing out that many digital technologies that are purported to be enabling are actually creating a disabling effect on the function of the able body. However, we see here Virilio's prejudice against the technological altering of some original, perhaps

more ideal, form of perception. He says it is, "to the detriment of [our] own faculties of apprehension of the real" that we'd trade in for this form of "remote reality". Powers' exploration of this idea proposes several considerations that are useful for discussing this topic. By laying bare the decay of the musician's body to disease in painful detail, Powers questions whether the human body can ever be made obsolete despite all our technological prostheses. On one hand there is the argument that despite his disused body, technology enables him to create music, resulting in the symphony that is impossible for an actual orchestra of musicians to play. The technology is liberating. It engages the senses of the immobile patient as well as the final listener of the piece. However, on the other hand, the gains do not come easy. The painstaking process of composition is made excruciating by the disability and the technology is not forgiving about that. The novel hints that this is reflected in the music itself as Adie sets her simulation of the destruction of representation to his score.

Where does this leave Virilio's treatise against the prosthetic and his warning of us all being doomed to motility? Virilio is often dismissed as a technophobic extremist, but could he be the Cassandra of the twenty first century? Whilst Virilio has some valid concerns, the issues at hand are far more complex than can be pinned down in a concrete manner. Powers' approach is through the art of his fictional writings which allows him the leeway to pose issues that are not able to be neatly resolved. With his focus on virtual reality technology at the end of the Cold War, Powers is concerned with the capacity for the production of the world by the digital technology that is our inheritance today. Throughout PD Powers illustrates that representations are never innocent, not only are they are always imbued with particular politics, in this case those of the relationship between the consumer electronics and media industries and the military-industrial complex, but also with the technicity of the digital image. The operation of that digital image is transforming the nature of perception as profoundly as the proliferation of the analog image did in the early nineteenth and late twentieth centuries. However, PD is also a representation, a text that adds to the mix. This is why, I argue, Powers is raising the issues in the manner that he does in PD, by writing a novel deeply imbued with a sense of historicity and uses the particular form of the novel, the

narrative, to highlight the questions raised by the emergence of new technologies but also manages to implicitly place them as a progression within the lineage of media technologies beginning with the technologies of writing and print.

The historical aspect is important. This is as highlighted by Bishop and Phillips who observe that "When the Wall comes down and the Gulf War takes off, the novel's engagements with the decreasing gap between perception and perceived object found in twentieth-century sensory-driven technologies shifts neatly from the Cold War into the War on Terror." (282). This is a point which is perhaps even more significant for a novel that was written and published before the events and aftermath of the 2001 attacks on the World Trade Center Towers, which, in a way, validates the concern that Powers shows in PD about the direction that the development of technologies has taken. It may be useful here to return to the tension that emerged from Powers' engineering of the plots to bring the two protagonists together under the simulated dome of the Hagia Sofia; a tension that emerges from the fact that Powers does not take sides. He cannot be pegged as neither 'for' nor 'against' the development of technologies as perhaps he sees that that debate has exceeded its usefulness. Despite Powers' interest in providing a critical basis for his novels, the beauty of the narrative form is that it allows him the leeway he needs to take a nuanced stance through which he can pose both the possibilities and the dangers to help us think through these issues and give us a platform for thought and discussion. In chapter one, I discussed the opening of the twentieth century and the rise of the analog image and here I have begun to talk about the implications of the "turn" that the digitization of the image has closed the century with. Using this platform I will continue the discussion in the next chapter, turning to the contemporary understanding of Visual Culture and what that might mean.

CHAPTER THEE

THE UNBEARABILITY OF TOTAL REALITY: THE CASE FOR MIMESIS AS INTERPRETATION

"The reason why men enjoy seeing a likeness is, that in contemplating it they find themselves learning or inferring, and saying perhaps, 'Ah, that is he.' For if you happen not to have seen the original, the pleasure will be due not to the imitation as such, but to the execution, the coloring, or some such other cause."
- Aristotle

"All art, therefore, appeals primarily to the senses, and the artistic aim when expressing itself in written word must also make its appeal through the senses, if its high desire is to reach the secret spring of responsive emotions."
- Joseph Conrad

Nicholas Mirzoeff on updating his second edition of *Introduction to Visual Culture* writes that the explosion of the popularity of the academic field of Visual Culture in the past decade, "made writing a new edition easier and harder at once" (2009, Preface). He clarifies, "Easier because I don't feel the need to justify or campaign for visual culture as a field - it's happening, with or without this book. Harder because there are so many needs to cater to" (Mirzoeff 2009, Preface). Given the ubiquity of electronic digital media surrounding us today (the broadcast media having been a large part of life throughout the twentieth century and news and other print culture having been the mode du jour prior to that), it is hard to imagine it has only been just shy of three decades since IBM launched the PC in 1981. As we have witnessed in the last three decades, the saturation of electronic-digital media has been swift and largely complete, especially in the urban setting[5], spawning an era of consumers for whom digital technology has become an integral part of both leisure and working lives.

Although the study of the phenomenon of visual culture is in no way a novel enterprise, the justification for the formalization of an academic discourse addressing the issues arising from this tsunami of electronic visual media gained credence only in the early twenty-first

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[5] Aside from much of the rural developing world and other areas of low internet accessibility. However, if cell phone usage rates can be used as any indication even this group is shrinking fast and access to the internet is considered a service that is high priority as governments believe that it could improve access to education and healthcare, especially amongst those members of its population that are living above the "poverty line."

century. For instance, Joanne Morra and Marquard Smith's comprehensive four-volume collection by, *Visual Culture: Critical Concepts in Media and Cultural Studies*, begins their chronology with Augustine in 398-400BCE. However, in name, and in its particular interdisciplinary nature, "Visual Culture" or "Visual Studies" or "Visual Culture Studies" can be argued to have been formalized only in the very early twenty-first century. The *Journal of Visual Culture* began to be published in 2002, the same year that the journal *Visual Studies* gained its title[6]and that Mirzoeff published his first reader on the topic.

Chronologies concern me as the main arguments made in this thesis are based on the tracing of a historical trajectory of visual media. Diachronic conceptions are inescapable when studying the technological due to the rhetoric of innovation they are so caught up in. Justifications of their novelty, significance, and revolutionary capabilities are often necessary to secure funding and/or public support. Thus, I believe that to examine contemporary trends in visual media and their implications, it is imperative to examine their inherited legacy. That is why the study of *Plowing the Dark* is incomplete without also looking at *Three Farmers* as I am doing here. In the previous two sections I have argued the link between the technologies of representation and the development of our capitalist-industrial society which is largely dependent on military technologies[7]. When taken together, Powers' two novels reveal alternatives to the story of advancement and progression which is the dominant rhetoric of much of these new technologies. The two eras of technological promise can then be read as a narrative of the (non)realization of the technological promise that was prevalent in the early twentieth century and then again at the century's close, centering especially around the term "progress." I argue that looking at Powers' fiction in this way reveals it as a foregrounding of the possibilities and limitations being put in motion by the particular culture driven by visual

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[6] The journal was previously entitled *Visual Sociology* from 1991-2001 and *Visual Sociology Review* before that from 1986-1990. This is indicative of the nature of the field forming around interdisciplinarity rather than within the traditional disciplines within the Humanities and Social Sciences.

[7] I am aware that this model is based on a 'Western,' Euro-American model that is taken as a measure of success throughout much of the world. However, I must acknowledge that alternative ideas and trajectories of development are often neglected even when the arguments being made are critical.

media. It can thus be regarded as a commentary on and critique of "visual culture" and what that might be, both in terms of social-cultural phenomena and as an object of study. Having established this through extensive close readings of the two texts in this and the two previous chapters, I propose that taken in conjunction, the texts provide the additional function of performing the critique that they expound.

I

"Information transmission is thus no longer concerned with the bringing about of a relative gain in velocity, as was the case with railway transport compared to horse power or jet aircraft compared to trains, but about the absolute velocity of electromagnetic waves."
- Virilio (36, Armitage and Featherstone)

The three decades before the Great War began saw the invention of the radio, motion pictures, the gas-motored airplane, the tractor, the bicycle frame, dynamite and the machine gun. Powers points out that in hindsight, despite the "promise" of new technologies at the turn of the century, the twentieth century was filled with violence of disastrous proportions, including two full-scale world wars which exterminated youth by the millions and in effect changed the nature of war altogether. He observes that thanks to "total war," "every citizen, not just paid soldiers now became a direct protagonist in war in ways never before imagined and never afterward escaped" (3F, 88). As I discussed in chapter one, technologies of vision and their polygamous marriage to human perception and technologies of warfare, played a large role in this particular unfolding of events. In *Three Farmer's* Powers talks about "trigger points [...] those times when the way a process develops loops back on the process and applies itself to its own source" (81). Amongst the many examples he gives of this phenomenon is World War I:

> in the early days of the war, none of [its] consequences was immediately obvious. The war had reached a deadlock. Month after month, commanders sent men over the tops of the trenches, refusing to believe that the last debacle would be repeated. At the Somme, desperate for a breakthrough, the British regressed to the eighteenth-century tactic of the "slow walk": thousands of men almost linking arms, walking stately into waiting machine-gun nests.
>   Europe was stalemated in a static front. War had reached that transmuting moment. It had become self-reflexive, self-knowing. It would now go on forever. It was about itself. (3F, 89)

The "farmers" and the "dance" that Powers is writing about in his first novel then are actually the youth of the early twentieth century walking unwittingly into the ultimate "dance" of death by the war machine during the First World War and subsequently the violent twentieth century.

An examination of Powers' conception of history is useful here as I discuss his critique of and stance on what is currently called visual culture. In 3F, Powers' narrator talks about the assertion by Charles Peguy in 1913, "that the world had changed less since the birth of Jesus than it had in the last thirty years" (3F, 80). To justify my quoting the passages below at length, I believe them to be key statements from the novel as Powers is addressing diachronic, lived experience in terms of acceleration and progress in a way that is speaking directly to my concerns regarding perception and change in this thesis:

> [Peguy] described, for his millions of contemporaries, the concurrent horror and excitement of geometrically accelerating culture.
>   Hidden in Peguy's formulation is the idea that each tool, each measurement, each casual observation of the nature of things -even Peguy's- accelerates and automates the acquisition of the next tool. The first rock-chipping rock logically extends itself, along a series of ever shorter steps, into the assembly line and the self-replicating machine. This increasingly steepening curve applied to every endeavor where the product of growth contributes directly to growth's progress. (3F, 80)

It has been one aim of my research agenda to challenge the notion of 'progress' along with its accompanying rhetoric invoked here, through a closer examination of the history of visual technology. When looking closely at the two novels in discussion here, the idea of progress is shown up as a false or problematic one as Powers' juxtaposition of technologies of representation, human perception, and military technologies throws into question the positive rhetoric surrounding "progress." The OED defines progress as, "advancement to a further or higher stage, or to further or higher stages successively; growth; development, usually to a better state or condition; improvement; an instance of this." It also specifies that this specific usage, which implies a positive improvement alongside the diachronic movement, "In later use (is) applied esp. to manifestations of social and economic change or reform" (OED). However, looking again at the passage quoted above, Powers calls on the ideas of acceleration and automation which imply a movement that is set in motion by a specific event but is

carried forward by its own momentum, rejecting any idea of agency or control. Thus although there is certainly rapid change taking place there is no real assurance that any of it is an "advancement to a further or higher stage" as per the dictionary definition of progress. This is exemplified by Powers' critique of World War I in 3F. However, the rhetoric of change or revolution, especially with regard to the technological, is generally tied to that positive connotation of progress.

This concern is brought home when looking at PD, where the experimental Virtual Reality technology takes, by default, the status of a revolutionary, useful, positive and necessary development. In the previous chapter I talked about how the designers and technicians working at the "Reality Lab" (RL) were too caught up in the innovative nature of the technology they were working with to be invested in its implications. Looking at Adie's gradual awakening to the implicit as well as explicit agenda of the project illuminates Powers' alternative narrative to that of progress. It is toward the end of the novel that Adie starts to see, "at last, what these men had for so long been gazing at" (PD 267). That while the team was consumed with the workings of the technology, constantly manipulating it, updating it, coaxing it to work according to their will, their quest was not really about the physical components but the effects they generated:

> The Cavern was not even a flip-card deck compared to the Panovision it pointed at. The Cavern would shrink, year after rate-doubling year [...] The technology meant nothing. The technology would disappear, go transparent. The clumsy mass of distracting machine would vanish into software, into the impulse that had invented it. Into pure conception." (PD, 267)

The true "progress" then was in the capacity of the technology itself, making it faster, more capable and more powerful. However, as Adie recognizes here, the technical capacity is merely a tool that distracts from the real agenda. As Powers outlines through her realization, the effects produced are more a product of the "acceleration and automation" he referred to in 3F (80); that is, the technology is a tool that has developed from, and in turn enables, the next step in a series of developments in the technologies of representation. Their significance lies in that the products (be they print, analog or digital) are involved in complex interactions with the senses that lead to the conditioning of human perceptions in a particular direction. Value

judgments as to the "progress" afforded by the development of these tools then require a more detailed engagement than judging them using criteria based solely on their capacities for the production of visual effects.

PD was published in 2000 and is set in the late eighties/early nineties, the time period directly after Powers' first novel *Three Farmers* was published. I have discussed the era and its significance in terms of the IT revolution in the previous chapter but I believe it is that particular era that links the two novels I am discussing here. 3F, despite its historical base, is a novel that is forward-looking and I believe that Powers' experience of the eighties as he was writing 3F, springboards into the issues discussed in PD. In the passage below, Powers returns to the "tools" he referred to in the passage I quoted from 3F earlier:

> Adie saw this primitive gadget morph into the tools that humans have lusted after since the first hand-chipped adze. It seemed the prize at the end of a half-million years of provisional leapfrogging. It was not even a tool, really. More of a medium, the universal one. However much the Cavern had been built from nouns, it dreamed the dream of the unmediated, active verb. It lived where ideas stepped off the blackboard into real being. It represented humanity's final victory over the tyranny of matter. (PD 267)

Adie's thoughts here mirror Powers' in "Being and Seeming" where he talks in detail about how computer code is the new "building block" akin to the function formerly provided to our understanding of the world by architecture. The technological dream here is the building of and existing in a world manufactured completely to human imagination, stripped of the constraints of reality or the "tyranny of matter." However, it is also an immediate world, one where images have gone from being representations to making up lived experience, erasing the need or even capacity for mediation. The project of the RL then is literally a manifestation of Baudrillard's description of what is happening to reality in the contemporary media-tized environment. An examination of the "progress" factor here however, reveals that the technological aspiration of the eighties, of creating a utopic world through digital media, remains unfulfilled. As the disgruntled mathematician Kaladjian in PD complains, despite the possibilities and potential of the technology, "The problem is that we still live *here*" (PD, 265). As the readers of PD who are already living in the twenty first century can infer, Powers is pointing out the failure of the technology to produce that erasure of mediation that it had

aspired to. The project of the RL then becomes apparent as a decoy; while the world waited

for the experience promised by virtual reality, the global media machine, soon to be

complemented by the widespread use of the Internet, took control of modes of perception

outside of the lab.

The "real" story of PD then is of the "real-time" news broadcast and the propulsion into a

media culture besotted with a gluttony of instantaneous information in the form of images.

Virilio talks about how the concept of acceleration itself changed in its very nature as a

function of time and space in the twentieth century:

> the old politics of acceleration were all about transport. [...] But today, that is, since
> the beginning of the 20th century, acceleration is mainly about the increasing speed of
> information transmission. Sure, transportation has been constantly speeded up too,
> but, today, the major development is the increasing speed of information transmission
> and the quest for the attainment of real-time. (36, Armitage and Featherstone)

The shift from analog to digital technologies that takes place in-between the two novels is a

precise function of what Virilio describes here. Aside from the Internet offering "real-time"

presence for communication and instant transmission of information such as instant

messaging and e-mail, the broadcast networks' monopoly of this concept in the "live-telecast"

is the prime example of the transmission of information taking precedence. The particular

moment of the live telecast is laid bare in PD with Powers' recap of the telecasts of the tearing

down of the Berlin Wall, the Tiananmen Square massacre and the Gulf War and the world's

response:

> The world machine bore on, in the face of the unbearable. Its overburdened angel
> engine failed to overheat. Not right away, in any event. Not all at once. It survived the
> latest massacre of hunger striking students. It absorbed the intimate documentation,
> the grainy aerials and close-ups, the midrange establishing shots that saturated video's
> every free market. Knowledge returned. Civilizations bad penny, even his armies
> firing on unarmed crowds. Only the scale, the mechanical efficiency, the presence of
> cameras made this round seem in any way unique. (PD, 154)

What is noteworthy here is the narrator's observation that the broadcast revolution did not

appear to have any measurable impact on the outcomes of the "world events." The passage

above reads like a continuation of the narrative of 3F, as Powers points out that the

technologies being used, both visual and military here are similar to World War I: the

"unarmed crowds" akin to the soldiers marching into death-traps, row by row. What remains

constant across the century is that the technologies of vision have kept up with the technologies of war once again. Television, the medium used to broadcast live images of the first Gulf War was also used for surveillance and, for the first time, for the guiding of "smart" weapons where direct, on-the-ground observation was difficult or dangerous for troops. Once again, like the reasoning quoted in 3F that the use of mechanical ammunition technology would render sustained conflict impossible, the justification was used that the tele-technology had advanced such that conflict would remain swift, precise and brief, with minimal loss of civilian life. As we have seen, neither of those statements held true.

Powers plays with the notion of hindsight to engage the reader in a reflection on the historical event. In 3F, Adolphe, who is serving conscription in the German army, is "peacekeeping" in a small town in Belgium when he is confronted during a skirmish by an old couple . He admonishes them, "Get along. Go home, close your door, and get in bed. You don't know what is happening out here. This is history" (3F 216). The old couple is horrified, "that something so abstract could happen [there] on the streets of Petit Roi scared them more than Adolphe's rifle" (3F 216). The irony is that technically, history can only be conceptualized in hindsight, however, as events unfold in the twentieth century they have become increasingly conceivable instantly as "historical." While the old couple was scandalized by the occurrence of "history" on their streets, by the end of the century television viewers expected to witness it instantaneously from the equivalent of the beds that Adolphe ordered the Belgians to return to. It is this same "history" that Powers refers to in PD:

> History and its victims kept their hands to the plow, broken, exhausted, like an old married couple trapped for life in love's death lock, unable to break through to that sunlit upland. The future, under construction, leveraged to the hilt, could only press forward, hooked on its own possibility. Hope not only persisted; it made a schoolgirl spectacle of itself, skirt in the air, all shame on view. (PD, 154)

In this passage, hindsight becomes instantaneous as well as history and when read in conjunction with 3F, insists on continuation of the operation of the "acceleration and automation" Powers first referred to in 3F. This is the precise moment that Chris Turner identifies Baudrillard's thought as, "Baudrillard's understanding of the *pro-duction* of the world becomes increasingly radical" (Baudrillard 2005, 8). When spectacle turns mundane,

what Powers and Baudrillard recognize about the moment is the shift in the function of perception. The visibility of the event not only "exhausts" the historical event by overexposure but hope too is swallowed up by the spectacle as its only possibility is through display. For example, when the students at Tiananmen Square were gunned down and plowed over with tanks, they shouted to each other to protect the reporters and their cameras so that the world could see what was really happening. Their event was being constructed by the news networks and their hope for resolution lay in using the images being broadcast to their benefit. However, as Powers lays bare, there is no salvation for them in these images, "The world machine bore on, in the face of the unbearable. Its overburdened angel engine failed to overheat" (PD, 154). This is Baudrillard's argument turning from "The Ecstasy of Communication" into "Simulacra and Simulations;" although the "live telecast" seems to be about information, its function is inverted from being on display in that manner. Following from Debord's notion of the spectacle as capital (*Society of the Spectacle*), this becomes Baudrillard's argument from that point on: social engagement based on the visual culture produced by the continuum of the spectacle is not truly engagement as it has no basis in reality-- it is an abstraction. This point was brought home during the Gulf War, as Baudrillard pointed out that the distinction between the event and its representation was no longer in operation.

This idea, taken in conjunction with my assertion in the previous chapter (that Powers is proposing that debates, however topical, are perhaps not effecting any kind of change) raises questions which become the basis for the field of "visual culture." In a world created by the explosion of digital media what is the role left for the professional observers/critics-- the academic and the artist? For example, Mirzoeff, talking about the contemporary "image war," also known as the war against terror in the Bush Jr. era, comments that:

> The extraordinary crisis caused by the rapid rise and fall of the US empire has brought the contemporary division of the sensible into high relief as one of the central issues of our time. At present, these issues dominate the horizon of visual culture studies and it seems likely that they will continue to do so. (Mirzoeff 2009, 292)

Mirzoeff's statement is exemplary of the double-bind that emerges from the conjunction of the technologies of vision, war and entertainment discussed here thus far: in a culture produced by images, how does one study and elucidate on that "image-culture" productively? In PD, Powers attempts to find out through a playing-out of the story of the prisoner in solitary confinement; a scene where the senses are isolated, all "media" is removed and the imagination heightened.

II

Turning to the second story line of PD, we can see Powers emphasize the workings of the mind in the absence of a glut of media-- analog or digital. Blindfolded, cut off from all communication and sensory fodder removed, Tai begs for reading material. He is asked by his captors why this is such a pressing need:

> How can you tell him? On every urgent page, in every book born of human need, however flaccid, puerile, slight or wrong, there is at least one sentence that remembers the prisoner in his cell, locked away nowhere, victim of the world's shared failure, begging for something to read.
> "I...I can learn from them how not to be me. For an hour. For a day. You are crushing me, Muhammad. I need someplace to go. I need something to think about. Somebody else, somewhere else." (PD, 292)

The plea for escape from reality is telling. Physically immobilized, Tai can only "live" via his imagination and reading offers him the grounds for temporary removal from his plight. Powers puts Tai in the same situation as the technicians working on building virtual reality environments in the RL: he can experience whatever his imagination can conjure within the "white walls" of his mind. Identifying this analogy is useful to comment further on Baudrillard's concept of Integral Reality. Baudrillard outlines a trajectory, "Reality has fallen prey to Virtual Reality, the final consequence of the process begun with the abstraction of objective reality - a process that ends in Integral Reality" (IE, 27). In PD, we have an illustration of this movement, not just in the project of the RL (as I discussed in detail in chapter two), but in following the experience of the mind isolated from media. What Powers exposes in Tai's plea for reading material is the basic need for what Baudrillard calls "the abstraction of objective reality" in the quote above; Tai's need to be something other than

himself in his cell is not unlike the desire to escape the mundane everyday reality that lies behind the manufacture of "3D" experiences in the Cavern. Confronted by the harsh reality of his captivity, Tai regrets his appeal to practicality in his past:

> *Look, Gwen. I live in the real world.* What you'd always told her, every time around. Horrified, you keep repeating it. *I live. In the real world.*
> She looks at you: This is the love that is supposed to improve my existence? You want me to believe *what*? You want me to live *where?*
> She's right. This is no place to be caught out in. (PD, 295)

It is when he is deprived of positive sensory stimuli that Tai recognizes the impossibility and even the unbearable-ness of ever living solely in the "real world." The "prisoner in his cell" that the book addresses then is a metaphor for the individual, internal, human experience of life.

While in the world that Baudrillard writes about, the virtual has indeed taken over the real, what Powers reveals is a point that critics of Baudrillard often miss: that the processes Baudrillard is describing are based on the basic human tendency to respond to sensory stimuli in the way to which they are accustomed. Baudrillard's philosophy is a critique of the hegemonic, Western, post-renaissance basis of the conditioning of the senses and perception from which follow its empirically biased ideology. Tai's inability to "tolerate sun, or movement, or noises, or too many people within ten feet of [him]" when he is finally released from his years of captivity, proves this point further (PD, 414) as it is the deprivation of his senses that reveals to Tai, "a truth that only solitude reveals" (PD 414). The enforced blindness reveals to him "the only fact of value" the vital importance of "Here. Now, for nowhere else exists" (PD, 414). Tai's initial deprivation of sight at capture comes full-circle when his senses are overwhelmed on his release, in a way that is similar to the "Medusa-effect" discussed in chapter two. Powers direct play on "nowhere" and "now here" does not detract from the point he has taken four hundred pages to make: in Tai's desperation to escape the "now-here" and subsequent mastery of the imagined and internalized experience, he learns that all experience is mediated by the very nature of human existence. After living in captivity for years, the revelation that comes to Tai is the same as the trite saying that his captor responded to him with when he begged for a book: "Everything in life is imagination. But in

fact it is reality. Whoever knows this will need nothing else" (PD, 292). This means that the privileged position Virilio gives the "original" faculties of perception, before they are tampered with by a prosthetic as he outlines in texts like *Open Sky* and *The Vision Machine*, in their basic operation already contain the essence of what Virilio criticizes them for. What comes through in PD, if read as the examination of a continuation of a manipulation of the senses throughout a modern, western, tradition of vision, is that while there are valid and urgent causes for concern as highlighted by Virilio, there may not be an ideal way of responding to the technologized experience that is life in contemporary times, because of the very nature of lived experience.

Powers' philosophy if crystallized then lies much closer to Baudrillard's than to Virilio's because he recognizes that there is no experience that is not mediated in some way and that while there are forces much like cause and effect that are in operation (which is why the historical is so important), there is no agency or higher level of control that can be aspired to or realized. This is Tai's realization, one that he can only fleetingly hold onto: "An insight that action destroys, one scattered by the slightest worldly affair: the fact of our abandonment here, in a far corner of sketched space" (PD, 414). Thus, although we are able to guess or "take sides," as Baudrillard says, with regards to the "correct" course of action regarding the development of new technologies, whether we succeed or fail at the goals we set for ourselves, or even whether those goals turn out to have been worthwhile will only become apparent in hindsight (if at all). This is why the parallel narratives of the political prisoner and experimental VR technology project are particularly poignant; sight, in both the sensory and epistemological senses, is simultaneously put into question. However, what happens then when hindsight (along with foresight) is no longer possible, as has been discussed earlier in the chapter? Marshall McLuhan' thoughts on this subject penned in 1964 sound very much like Baudrillard's. McLuhan writes, "Today the action and the reaction occur almost at the same time. We actually live mythically and integrally, as it were, but we continue to think in the old, fragmented space and time patterns of the pre-electric age" (4). McLuhan's famous statement that the "medium is the message" is related directly to the point made in this thesis

about media and the mediation of the senses as it is a statement about techne or the "essence of technology" as he called it in *Understanding Media* (8). The main argument he makes is very close to Baudrillard's and in essence is also related to Heidegger's conception of "Gestell." It is that the form of the technological that is in common use constructs the operation of social functions and relations of the time:

> In terms of the ways in which the machine altered our relations to one another and to ourselves, it mattered not in the least whether it turned out cornflakes or Cadillacs. The restructuring of human work and association was shaped by the technique of fragmentation that is the essence of machine technology. The essence of automation technology is the opposite. It is integral, decentralist in depth just as the machine was fragmentary, centralist, superficial in its patterning of human relationships. (McLuhan, 8)

Thus, if we follow this same reasoning in relation to the voice of the artist or academic working through the medium of the written text, the very existence and work in itself is both the condition and the response as it is a product as well as a producer of its "time".

Despite the arguments for the possible (non)effect of a single work of fiction or academic research, in Powers' exercise of writing fiction is the justification for the particular line of reasoning in this thesis, but also, in more general terms, for the existence of Visual Culture as a field of study. For as we know if we follow the Baudrillardian line of argument, even if it is not possible to have any real impact on the status quo as events are in our time merely simulations, we are still players within the simulation and are involved in the process of its playing out through which lie the possibilities for change. As Powers comments on the technologies of representation, by representing in turn a particular historical moment, the implications of *Plowing the Dark* are carried in its message as a work of art which, ironically, outlines the failure of the technological promise of the eighties. The "problem" that Kaladjian expresses in PD then, is not only a disgust with the state of affairs in the real world but also that all types of creativity were being channeled into industry at the expense of this function of providing this necessary commentary. Lotringer in *The Accident of Art* (AA) refers to this when he talks about the "market art" of the eighties:

> The visual arts have remained by the wayside as the entire culture is now being threatened by the extermination of space and the instantaneity of time. Instead of

> looking for ways of offsetting creatively the danger, art is looking away, or looking at itself, even nodding silently, colluding with the ongoing destruction. (29)

Just like Adie realizes that the art she was producing was subjected to the vagaries of the art industry, she realizes that the mathematician was unhappy because, "His days of true research were over. He had done no useful math, no *beautiful* math, for years. He, too: banished to industry" (PD, 266). Despite Kaladjian working on an impressive metaphor for the mathematical working of the coded reality he was unhappy because he was not producing a new mathematical feat but rather rehashing existing algorithms to perform predicated functions available for re-purpose by his employer.

This idea of the encroaching of corporate interest onto artistic pursuits is not a novel one but has been developed throughout the twentieth century as Powers outlines in 3F. Powers makes an explicit comparison between August Sander and Henry Ford, citing their comparable educational and rural backgrounds and creative and entrepreneurial natures. The projects of Sander and Ford are intertwined, one completing the other, just like the narrator's initial visit to the museum in Detroit brings together the Rivera mural, the mislabeled print of the "three farmers' and Henry Ford's pennies inscribed with his profile and "Help the Other Fellow." The intricacy of the relationship between capitalism and art that Powers outlines in 3F lies in the fact that the interests of each are more than merely opportunistic or crude profiteering. Kaladjian, in a conversation about the waste produced by obsolete hardware comments that, "Progress is destruction with a compass:"

> Raj's nods accelerated a couple of hertz. *It does make one wonder what the finish line looks like. [...]*
>   *The world is losing its memory.* Raj toyed with a stack of printouts headed for the shredder. *Whole areas of the collective brain are being wiped out as its storage degrades. [...]*
>   [Kaladjian] *But look how far we've managed to get, from flint to silicon, before the enterprise shut down.* (PD, 275)

The sentiments expressed here help to round up the issues raised at the beginning of this chapter about the promise versus the reality of technological innovation. As Powers points out through 3F, the Industrial Revolution left as much destruction in its wake as it aided the development of industry. In PD Powers examines the digital revolution and its underpinnings

and, although we are yet to see how it unfolds throughout the twenty first century, if we are to compare it to the Industrial Revolution and its fallout, the outlook is pretty grim.

In the twenty first century (if not before) it has become evident that "progress," post-industrial revolution and into the twentieth century, laid the grounds for the destruction of many things, including the natural environment and the loss of countless human lives and liberties and mental faculties. However, the desire to know what comes next, coupled with the pleasure of creating something new, drives us to continue in the same vein. To go back to the quote about "the future," this is the same reasoning that leads Powers to observe that it remains "under construction, leveraged to the hilt, [pressing] forward, hooked on its own possibility" (PD, 154). This is the logic of progress that I have attempted to flesh out and examine throughout this thesis with the hope of raising a critical awareness with regards to the digital age that we find ourselves living in today.

CONCLUDING NOTES

As user generated content is so widely encouraged and supported by platforms such as Google, Facebook, Youtube and Twitter and given the push toward open-source software applications written by users for users, it seems as though creating a critical awareness amongst the consumers of digital technologies is ever more pressing. The visual and the digital, even more so, has become the preferred medium not only of mass communication (as defined by the tradition of broadcast media) but also of the masses in communicating with one another, exchanging information and producing knowledge. The 'tech' culture spawned by the explosion of the Personal Computer and Internet has created a generation of twenty-first century citizens that is equally or more at ease communicating via digital avatars than face-to-face. The fears of the late twentieth century that PC culture would breed a species of socially inept humans has become a moot point as society has replicated itself in cyberspace. The very existence of the Internet term IRL or "in real life" and its normalization can attest to the shift to hyperreality that Baudrillard had started to write about by the seventies.

Along with Media and Cultural studies, academics of Visual Culture Studies, ranging from the critical to the celebratory, attempt to make sense of the glut of visual media that is everywhere. Through this research project I have attempted to foreground (and perhaps myself come to terms with) what is at stake in the relentless adoration of the image that is contemporary visual culture. I found in Powers novels a set of tools through which I could do so.

Powers is very much a twenty-first century citizen in that he is as comfortable in the digital sphere as he is outside of it. Having been a scientist, computer programmer, academic of the humanities and then making the choice to write fiction, it is apparent that he is painfully conscious of the operation of representations and the worlds they create. I find in his fiction a mirroring of my own reservations about the digital image and culture on which so much of our everyday functionality is increasingly dependant on. I hope that in building on Powers'

work this project has enabled the saying aloud of what is implicit in Powers novels and explicit in the work of Baudrillard and Virilio: that the relentless marching forward of the image is inherently violent and our disavowal of this fact makes us complicit in that violence.

It is my aspiration that this small contribution will add to the voices that call for a pause and for a thinking through of these worlds that we choose to live our lives in. Even if, as Baudrillard says, it may be too late to effect any change to the machine we have set in motion.

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