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Image Bodies, Avatar Ontologies: Rendering the Virtual in Digital Culture

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DISSERTATION APPROVAL

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In 2009, five avatar-themed films were released, one of which became the highest grossing film to date, signaling that, in addition to their popularity in videogames and virtual worlds, avatars are culturally salient figures which demand scholarly attention. Avatars, virtual environments, and user behavior have evolved significantly since virtual reality captured public and academic attention at the close of the twentieth century, and this dissertation is an attempt to theorize the avatar in contemporary digital culture. By interlacing new media philosophy and analyses of cinematic texts I situate the avatar at the nexus between digital images and interactive bodies, with implications for both cinema and virtual environments. Avatarial interfaces position users in an embodiment of connections which in some ways evokes the cyborg body, but the avatar as a theoretical figure places greater stress on the relation between human embodiment and (digital) images, as well as suggesting a move from cyborg fragmentation toward an avatarial gestalt. Avatars are also fruitful bodies for thinking through agency and gender in contemporary society, and engaging the lost 'body' of the picture as film has been supplanted by digital imagery. In this regard, virtuality, as a conceptual state pertaining to images, embodiment, technology, and philosophy, serves as the connective theoretical tissue linking bodies and images. Ultimately, in this dissertation I employ the avatar in an exploration of the ways in which we are already virtual, and how we have become avatarial in our own skin.

DEDICATION

For Katy, who doubted, and for Lijah, with whom the days whiled by.

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INTRODUCTION

> Ever get the feeling you're playing some vast and useless game whose goal you don't know and whose rules you can't remember? … Welcome to gamespace. You are a gamer whether you like it or not, now that we all live in a gamespace that is everywhere and nowhere.
>
> McKenzie Wark[1]

The color is the first thing you notice. Orange-tinted, high-contrast monochrome – the color of a dirty creamsicle. Peasants flee past Polish apartment blocks as tanks cut them down with machine gun fire – cut, literally fissured, breaking apart as the hits suspend them in individual anguished freeze frames before they explode into pixel clods and flitter away. Bombs burst into neat layers as slices of frozen fireballs that hang in midair, while a cloaked and masked woman, Ash, materializes and aims a sniper rifle at a hovering plane to finish off the level. This illegal and addictive virtual reality game set in the near future hauntingly echoes a past of Nazi and Soviet invasion, the battles repeating themselves as levels and missions, building toward the mysterious 'Class Real' at which the game ends – though Ash wonders to herself whether it really does end at all. She takes down the plane, and while 'Mission Complete' flashes across the suspended explosions, we withdraw from the game. Back in the real world, Ash removes the heavy interface helmet and cashes in her points while denizens of an underground club stoically watch her performance played back on a large screen. She exits the club into a world not so different from the one she just left: high-contrast monochrome, a hint of sepia (or is that the orange bleeding through?), rough-hewn clothing, in a nearly sunless environment – an eternally occupied Poland, darkly rendered. A gamespace for foreign military powers and the occasional virtual warrior that can stand up to a tank.

[1] McKenzie Wark, *Gamer Theory* (Cambridge: Harvard University Press, 2007).

Videogame theorist McKenzie Wark could have been writing about Mamoru Oshii's 2001 film *Avalon* when he wrote "The fruit of the digital is the expulsion of reality from the world. That's gamespace. The consolation of the game is that at least this expulsion is absolute"; as it happens, he was writing about *The Sims*, the highly popular life simulation franchise in which players function essentially as 'gods', in Wark's view, controlling the lives of their sims.[2] Players can become heavily invested in in their sims, personally as well as in terms of hours spent facilitating sim progression within the game world. At other times, the iconoclastic impulse can be equally compelling: "They are images. They are images in a world that appears as a vast accumulation of images. Hence the pleasure in destroying images, to demonstrate again and again their worthlessness."[3] The game offers up the possibility for seemingly conflicting approaches to the sims, caring for them as if they were real, as a child nurtures a doll, or destroying them because they are not real, despite their many familiar aspects in appearance, behavior, and suburban lifestyles (or perhaps because of the familiarity, in which ordinary life as videogame becomes uncannily iterative). Indeed, in *Avalon* it is not always clear whether Ash (Malgorzata Foremniak) is playing the game or fighting the war, or whether she sees her opponents as players, soldiers, or images; the film presents them to us as all three, letting the flattened image linger at the moment of destruction – still an image of the soldier, still indexed to the player, but one that has become more of an image or a different kind of image, hung briefly like a picture to emphasize the point. Meanwhile, Ash's success in the game depends on her ability to prevent her own avatar (Foremniak plays both) from being similarly rendered – from becoming too much an image.

[2] Ibid., 38.
[3] Ibid., 33.

Avalon turns on the underlying mechanism of the videogame to manage images for maximum visceral and affective impact, to make them relatable on proprioceptive and emotional levels for the embodied player, and to create contingent hierarchies of 'image bodies' (that is, one preserves one's own image as if it were a body, and destroys other bodies as if they were images) – not unlike the mechanism of cinema itself. The pleasure of playing with bodies and objects in videogames is the compound of the simultaneous force of their presence (as enemies, co-players, objects, obstacles, tools, power-ups – visual objects in videogames are eminently functional) and their utter disposability; or, as depicted in *Avalon*, soldiers and battle vehicles that enter with overwhelming power and disintegrate with a good shot. The sophisticated graphics in contemporary games become both lush images to interact with and be immersed in and at the same time richer, even photorealistic, images to destroy.

Wark's outlook on contemporary society bears some of the same cynicism expressed by Baudrillard in his critiques of simulacral culture, but Wark's allegory emphasizes algorithm over sign. Baudrillard portrays a society not only disconnected from reality but producing a hyperreality to replace it, with a fantasy space like Disneyland serving as a "deterrence machine set up in order to rejuvenate the fiction of the real in the opposite camp," the 'real' America.[4] In a similar comparison, Wark posits the videogame as an almost requisite adjunct to a society that has become gamespace: "Games redeem gamespace by offering a perfect unfreedom, a consistent set of constraints."[5] Games offer logic without real stakes; the world as gamespace defies clear logic, but has much at stake, and thus becomes a losing battle. Whereas for Baudrillard the terms are set – "illusion is no longer possible, because the real is no longer

[4] Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: University of Michigan Press, 1994), 13.
[5] Wark, *Gamer Theory*, 40.

possible" – the notion of gamespace implies a space available for navigation and 'play' (if one, in this case, that necessitates appropriating the violence of the system).[6]

Avalon offers a paradigmatic vision for ludic navigation through gamespace as Ash battles her way into Class Real, the final level that promises great insight. Given a gun, an evening gown, and little sense of direction, she makes her way out of her dismal apartment building and steps into what appears to be the 'real' world. The picture suddenly transforms to full color, and she is taken aback to find instead of soldiers and mercenaries, casual shoppers and pedestrians on a street full of contemporary shops. After wandering for a while she eventually succeeds in her mission – terminating one of the 'unreturned' who never left the game while his physical body lay vegetative in a hospital – but her fate is left unclear, as the film ends with her in Class Real and its quotidian (now uncanny) scenes of urban life and main street capitalism. A choir sings the praises of Avalon, the paradisal haven for fallen heroes in Arthurian legend, here presented ironically as a Westernized economy. While Ash seems uncertain about its meaning, the implication is clear to us that she has not escaped the real world by going too deeply in the game, but rather that she has come around to the real world by following the game to its depths. While the film had previously drawn at least superficial distinctions between the online world of Avalon and the offline world in which Ash lives, in the end they are both situated as virtual realities relative to the real world – or, rather, the real world is part of the game, or a gamespace with clear activities (shopping, for instance) but no clear rules. And while Ash is initially disoriented, she has a clear advantage over the occupants of this world who have no idea that they are part of a 'game' or virtual reality; Ash, having come to the real through the game – and now fully embodying her avatar – can see it for the gamespace it is.

[6] Baudrillard, *Simulacra and Simulation*, 19.

Figure 1. Ash in the virtual reality game Avalon (top) and in Class Real (bottom).

Wark's notion of gamespace is a potent, if occasionally sardonic, approach to greater issues of virtuality. The virtual as an aspect or dimension of material reality is a manifold concept that has been developed by numerous theorists and philosophers, and while gamespace is not synonymous with the virtual, it does represent a certain approach to virtuality that accords

with my own, which is why it has served here as an introduction. First, while the concept of the virtual has a history predating the digital era, and has been theorized to be an inherent quality of human experience and culture, the idea of gamespace is more specifically situated in our contemporary mediascape, and I wish to emphasize the intensification of virtualization that has attended not only the explosion of digital technologies, but also the exponentially expanded production and distibution of images. Also, gamespace, I feel, reflects the tensions between the 'disembodied' images, avatar ontologies, strained semiotics (Wark's 'allegorithms'), and material effects that I wish to draw out in the virtual. Gamespace is cyncial, a white flag of defeat at the prospect that we have been virtualized beyond our capacity to function within a digital culture that is no longer emblematic of machine logic but has fully adopted the abstraction of the image. Ash might serve for the moment as our avatar in an exploration of a world which we can no longer conceptualize apart from its mediation. She is wary at first, not trusting her eyes, but she acclimates quickly, figuring out how to play the game that has no rules. "This world is where you belong," says the character she has been sent to kill as he lay dying, and it soon becomes evident why. "Reality is what we choose to believe," she says, gun in hand, "As for who controls the game, I believe it is me." She is not a fugitive or a bleary-eyed wanderer in this world that is simultaneously real and virtual, quotidian reality and gamespace, but on the contrary, right at home – and this is where the film leaves her.

Thinking virtuality through gaming also introduces the avatar as a key figure for conceptualizing our relationship to the virtual in terms of bodies. While avatars are not virtual[7]

[7] While scholarship post-dating the enthusiasm for virtual reality in the nineties has sought to demarcate the virtual from its association with virtual technologies (including avatars), it is clear, as I discuss further below, that these reclamations of the term are yet associated, sometimes obliquely or generally but in other instances quite directly, with an understanding that reflects recent usage relative to virtual technologies. I suggest that contemporary notions of virtuality in terms of computer use and simulation have not only indelibly influenced our understanding of the virtual, but that the resurgence of the term cannot be disassociated from the culture that produced these technologies. In other words, the concept of the virtual is quite distinct from virtual reality and other computer operations termed

simply because they are produced within virtual technologies, it is one hypothesis of this dissertation that avatar use, by virtue of its proximity to embodiment (i.e. the 'virtualized' experience of the body), opens the possibility for 'touching' the virtual where the interface apparatus coincides with phenomenological disjunction. I use 'disjunction' here meaning not separation, as in disembodiment, but as a lack of correspondence or consistency – the slippage inherent in any construction of subjectivity relative to the body, though my focus here is on the technological and cultural implications which the avatar as a theoretical model illuminates. Avatar use has been much more often theorized in terms of effects and aesthetics, largely taking the processes involved in operating avatars for granted.[8] However, a deeper acknowledgement of the interface apparatus is essential in understanding our relationship to digital media, and I apply this strategy to avatar use in order to draw out those elements that are instrumental for contextualizing digital media technologies in terms of human experience.

The relation between user and avatar bodies, as well as the interstitial ontology of avatars as embodied 'images' representing their users within spatialized, imagistic environments, underwrites a second hypothesis regarding the representation of avatars within the conventions and technologies of cinema and other narrative media. In their appropriation of the avatar, these texts represent, and occasionally express, the virtual in their strata of doubles and interfaces, analogs of the digital in performance and embodiment, image hierarchies, naturalized technologies, and narratives of control. In seeking contact with the virtual – to 'render' it – I am not trying to make the virtual tangible, but to articulate or give substance to those processual

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'virtual', but it would not have the viability and salience that it currently does were it not for the development and cultural profusion of these operations.

[8] One of the best treatments of avatar use that integrates process and effects is Julian Dibbell's first-person account of his experiences in LambdaMOO. With lucid prose befitting the literary nature of his subject, Dibbell describes the complex interactions between various users in a text-based environment, bringing out especially the tactility of sexual encounters transacted through wordplay. Julian Dibbell, *My Tiny Life: Crime and Passion in a Virtual World* (New York: Holt, 1998).

moments and medial embodiments in which virtuality is reflected. That is, following Mark Hansen, I understand virtuality in phenomenological terms, in the intersection between bodies and images or bodies and information; as these relationships are colored and inflected in the evolving mediascape of digital culture, I investigate a few of these texts, both for the ways in which they pass through the virtual in their representation of these relationships, as well as the ways they fail to do so.

In artistic practice, 'render' connotes expression or representation, while in CG imaging 'render' refers to the process of making a wireframe model appear solid and dimensional; more generally the term means 'to cause to be or become, to make'.[9] Virtuality is not a thing, nor is it simply a state of mind, but, as I explicate in the following section, can be understood as a relation between perceiving bodies and the material world. Intervening in this relation are those instruments that incorporate a perceptual mode with a material object – a photograph, for instance, or panoramic painting, or a virtual environment encountered through a computer (although these forms do not 'picture' the virtual as such). These encounters may generate an affective or cognitive dissonance that troubles, if only obliquely and ephemerally, the ontological status of both the perceiving body and the representational object. The virtual is not in what the picture shows, but in the relationship it embodies. I see it not as simply illusionistic, in the way that a naturalistic painting or photographic image looks 'real', or in the way that a viewer of a panorama or participant in a virtual world might feel like they are 'there'; the virtual is deconstructive and disarticulating, challenging one's sense of embodiment and the material world even as it is so integral to the fabric of our embodiment and materiality. That is to say that we are indeed virtual, but disavow it as a condition of lived reality; encountering the virtual is

[9] "render, v.". OED Online. Oxford University Press. http://www.oed.com (accessed July 07, 2012).

thus at the same time a revelation of certain actualities, and the threat of disintegration when it exposes too much.

Virtuality is not static or fixed, but contingent upon specific forms, unique instantiations, individual perceivers, cultural conditions, and, as I seek to explore in this study, an evolving topography of interstitial objects and medial spaces. 'Rendering the virtual' can be understood as the development and use of forms and objects by which the vectors between perception and materiality are redrawn, as well as my rhetorical attempt here to catch glimpses of the virtual as it flickers peripherally, always just out of sight. This dissertation is about our relation to digital images and information. I invoke the virtual as that which gives form, as abstract as it may be, to this relation, focusing on a digital culture that privileges the visual over the informational, and thus this study has much to do with the image. As images are divested of their traditional material substrates, our relation to them, as embodied beings in the material world, changes – as does our sense of the virtual.

Rendering the virtual, at least within the context of this dissertation, also necessitates a critical acknowledgement of the *gendering* of the virtual. As I attempt to locate intersections between the virtual as a relation and virtuality in representation, I find them most saliently in the experience and form of the body. Bodies are raced and gendered, and I explore the ways in which different kinds of bodies are positioned antithetically relative to the virtual, with male characters in avatar films opposed to and usually achieving some kind of victory over an encroaching virtuality, and female characters typically ensnared within it; I will argue, however, that the feminine position ultimately suggests a model for compatibility with the virtual, in contrast with the empty victories of male characters.

I am interested in avatar films for their imbrication of images and bodies within the technological, cultural, and aesthetic registers of the digital. The phenomenological work of Mark Hansen situates the body as the primary means for 'framing' digital information for human experience. I attempt to integrate this emphasis on the body with a consideration of the movement of digital culture away from the machine and information aesthetics, toward screens and images. Another cinematic figure emerges in respect to image and embodiment, akin to the avatar in its process of one body controlling another and in a certain conflation of body and image, and that is the CG character. We have seen a number of these in recent years, from Jar Jar Binks and Gollum (in the *Star Wars* and *Lord of the Rings* series, respectively) to the advances recently made in James Cameron's *Avatar* (2009) – which, as an avatar film as well, will be of special interest in this study. In certain respects the digital avatar and CG character go hand in hand; in viewing documentary footage of *Avatar*'s production, for instance, one gets a definite sense of the motion-capture stage as an enormous videogame apparatus with human controllers. However, in film CG characters and avatars tend to be inverted: whereas the avatar is most often a body (the actor's) playing an image (the avatar, the double), with the CG character an image (the effect on the screen) plays a body (a character, the movements of the actor). I use the terms 'body' and 'image' a bit loosely here to give a sense of the difference between avatar and CG character in film, but my project is ultimately to draw body and image together, and these two figures these 'image bodies', are a means to this end.

While image bodies, for the purposes of this project, denote avatars and CG characters specifically, the juxtaposition of these two potent and laden terms produces resonances far in excess of anything this dissertation could encompass. I can only hope here to piggyback on some of the tensions this dyad generates as I draw from the greater discursive flows amidst which this

study is set. I do intend allusions to the disappearing 'body' of film, as digital imaging practices have altered filmmaking and other imaging practices, as well as to the ways in which we experience embodiment increasingly in terms of images – not just specific images, but, as I hope to show, within a more abstract sense of 'imageness', extracted by the digital, luminescing with virtuality. With the second part of my title, 'avatar ontologies', I intend to explore the situation of avatars relative to their users, as bodies in service of other bodies, as well as the inflection of the avatar on our own ontology – in the ways in which we have also become avatarial.

The Avatar as Theoretical Model

I became interested in avatar-themed films when five of them, along with a television series, were released in 2009, a clear trend in the mainstreaming of the avatar I was already exploring in Second Life. This cycle of films treated avatarism from a variety of perspectives: *Surrogates* (Jonathan Mostow) contemplates a society living vicariously through robots; *Gamer* (Mark Neveldine and Brian Taylor) bleakly imposes virtual sex and videogame violence on real bodies, while exploiting their cinematic elements; *Sleep Dealer* (Alex Rivera) explores immigrant labor and the Mexican-American border through the lens of virtuality; and *Avatar* situates race and environmental concerns within a dialectic of photographic and digital imagery. An anime film, *Summer Wars* (Mamoru Hosada), juxtaposes family and the household with an all-consuming virtual environment, and the SyFy drama *Caprica* drew connections between virtuality, religion, and robotics, making 2009 seemingly the year of the avatar in popular media.[10]

[10] *Sleep Dealer*, an independent film, debuted at the 2008 Sundance Film Festival but was released commercially in April 2009. The *Caprica* pilot first aired the same month, with the series following in January 2010 (on what had by then become the SyFy channel).

This recent influx begs a return to the avatar as a subject of study, and particularly as a prominent figure within digital culture. Prior treatments of avatars in film have lumped them in with works on cyborgs, where the avatar is at best a subset. This is perhaps to be expected, as book-length publications on cyborgs in film trailed off as avatars began appearing in cinema and other media more frequently; over a dozen avatar films have been released, for instance, since the 1996 publication of Claudia Springer's *Electronic Eros*. Springer's work addresses the seminal avatar film *The Lawnmower Man* (1992, Brett Leonard), as well as the literary work of cyberpunk pioneer William Gibson, within a larger framework of eroticism and gender in cyborg-themed media. A later work, Sue Short's *Cyborg Cinema and Contemporary Subjectivity* from 2005, has served provisionally as the last word on the subject, coalescing the numerous theoretical approaches that have been applied to the cyborg, as well as filling in a few gaping holes in its treatment. Avatars remain largely absent, however (not even warranting an entry in the index), while Short has little to say about *The Lawnmower Man* and David Cronenberg's avatar thriller *eXistenZ* (1999), nothing about *Avalon* or the mind-bending *The Thirteenth Floor* (1999, Josef Rusnak), and bears only ill sentiment for *The Matrix* (1999, Andy and Larry Wachowski).[11] Not only have avatars been underrepresented, then, but I further question whether the subsumption of the avatar within the cyborg model adequately addresses its unique qualities.

Although to some extent avatars began drifting off scholarly radar screens at the turn of the millennium, avatar use as we are familiar with it today was was just about to explode.[12] Sony's PlayStation 2, the best-selling console to date, was released in 2000, while Second Life launched in 2003 and World of Warcraft the following year. Venues for avatar use have

[11] This brief list makes clear that 1999 was another year of particular popularity for avatars (unnoticed by Short), with a fourth installment, the soft-core *Sexual Matrix* (Udo Blass) completing the picture.
[12] Following a surge of critical attention in the nineties, avatars (as well as cyborgs) became less frequent topics in the following decade.

proliferated, with dozens of variations on social and gaming platforms boasting millions of users (ten million alone in World of Warcraft). Many of these users are producing avatar-themed media, including popular web series *The Guild* created by avid gamer Felicia Day in 2007, as well as thousands of machinima videos that not only use avatars in their production, but frequently address issues surrounding online interaction in virtual environments.[13] Recent cinematic treatment of avatars has emerged out of this surge in use and the exponential growth of videogaming, and while social science research in the area of avatar use has mushroomed, scholarly attention to avatars in film has been slow to catch up; my project here addresses the underserved phenomenon of cinematic avatars, and explores the implications of their recent appearances.

As such, we must consider the usefulness of the avatar as a theoretical model. The potency of the cyborg as a figure for study has been attributable to its cultural relevance as well as its broad applicability across real-world and fictional forms. I suggest that, like the cyborg, the avatar can be a useful model for thinking through issues of subjectivity, but one particularly apropos of an image culture concerned with virtuality and materiality.

The figure of the cyborg functions on multiple planes, and thus the cyborg as a theoretical entity, like the cyborg body, exists in tension with itself. The cyborg is a conceptual image and subject of representation, well known from films such as *The Terminator* (1984, James Cameron) and *RoboCop* (1987, Paul Verhoeven); an object for theoretical consideration of postwar subjectivity, aligned with feminism by writers such as Donna Haraway; and a term applied to certain bodies in social reality, from people with mechanical implants and prostheses

[13] Machinima – a neologism from 'machine' and 'cinema' – refers to movies made with game engines, at first employing the avatars and sets of a game for purposes not intended by designers and then editing captured scenes into a narrative or demo, or hacking the game engine to create new materials in order to realize creative vision. Initially machinima was viewed by the industry as inapt or subversive, but distributors soon catered to players' insistence on greater control for both game design and machinima opportunities; games like *The Sims* now include machinima features as part of the software.

to workers within Fordist systems of production, incorporating also the possibility that we, as members of industrial societies, are cyborg by virtue of our heavy reliance on machines and technology.

The term 'cyborg', short for 'cybernetic organism', was coined in papers by Manfred Clynes and Nathan Kline in 1960, speculating on the possibilities of self-regulating human-machine systems for space travel, but visions of human-machine hybridity in literary fiction are older, concomitant with the rise of industrialism that provides the basis for later representations in film.[14] These representations have foregrounded the machine, often in the context of masculinity and domination; however, the cyborg as theoretical construct is generally antithetical to the masculine and the implicit subjectivity of the liberal human, privileging instead fragmentation, multiplicity, miscegenation, transgression, and the disruption of cultural binaries.

In its etymology, 'avatar' is a threshold word. The Sanskrit root *tarati* denotes a 'crossing over' through descent, a transcending of the ether that separates the heavens and the earth – or, in new media jargon, something along the lines of telepresence. More correctly translated 'appearance' rather than 'incarnation', the term denotes the physical but leaves room for the spectral. Vishnu is the deity most associated with avatars in Hinduism, and though frequently represented iconographically as embodied, Vishnu is described in scripture as being omnipresent and shapeless; therefore his avatars – fish, boar, priest, sage, and innumerable others – are the bodies assumed by his bodiless form, which, as a collective of alts, so to speak, comprise the 'body' of Vishnu. Thus the avatar in Hindu mythology is not merely a disguise, as we find in the

[14] Examples of the work of Clynes and Kline can be found in Chris Hables Gray, ed., *The Cyborg Handbook* (New York: Routledge, 1995). Older instances of cyborgs in literature include Edgar Allan Poe's short story of a man with extensive prostheses, "The Man That Was Used Up" (1843) and C. L. Moore's "No Woman Born" (1944) in which a woman's brain is placed in a mechanical body.

godly machinations in Greek mythology; through avatars is Vishnu made manifest, and through these bodies is the unknowable known, the invisible seen.

An avatar in computer use is the graphical representation of a user in computer or online space. In its contemporary function the term was first used by Chip Morningstar and Randy Farmer for the graphical virtual world Habitat in 1985 and further popularized in Neal Stephenson's cyberpunk novel *Snow Crash*, published in1992. Like 'virtual', 'avatar' is another term that has been used rather loosely, referring to chat icons, MUD characters, blips, ships, and cartoon characters in videogames, and even screen names. To my mind, however, the term is best suited for those representations that are closer to the historical and mythological implications of the term, by which a measure of essential being (or at least some expression of personality) is manifest in a figure whose representative and simulative embodiment engenders certain types of identifications and social interactions – i.e. closer to the way one approaches a body rather than a picture.

This view is consonant with the historical development of the term in contemporary use, as it was first used to refer to graphical, human figures in a shared environment. While the graphics in Habitat were subpar, lagging behind videogames at the time (in order to accommodate sluggish network speeds), presence was attached to a user-defined visible body, and the body in turn benefited from a measure of 'depth' that resulted from the combination of imagistic forms that concealed their technological structure, (bodily) movement in response to user commands, and the temporal 'liveness' of presence in shared virtual space. While by this definition single-player videogames technically don't include 'avatars' (the term 'player character' is frequently used in gaming), the high degree of immersion produced by sophisticated

technologies in contemporary games, as well as the realistic bodies and, increasingly, the potential for networked play and personalized avatars, encourage me to include such usage here.

Avatars are a significant part of social reality, as well as subjects of representation, appearing in a number of films and other media texts, and objects with which to think through contemporary subjectivity. While cyborgs are certainly part of the information age, avatars specifically connect cyborg subjectivity to virtuality, in which information takes on new bodies, moves in images, and changes the face of the hardware in which it is instantiated. The avatar in terms of the cyborg might be thought of as the cyborg of screen or image culture, but this implies a very different kind of cyborg; while it is essential to carry forward issues relating to the cyborg in any consideration of the avatar, I avoid seeing the avatar as simply a modified cyborg and instead inquire as to what the avatar as an idiosyncratic entity can bring to some of the same issues of embodiment that the cyborg once spoke to with more frequency.

The body of films I focus on are distinguished not only from cyborg films but also from other films dealing with computers and virtual reality. In fact, a number of the avatar films I take as my subjects do not diegetically include virtual environments, and when they do they are more often depicted cinematically (through metaphor and representation) rather than digitally (with a clear digital or informational aesthetic).[15] A key criterion that distinguishes avatar films for my purposes is dualism and avatarial embodiment – films with characters that exist across two

[15] An important distinction in avatar films can be drawn between those that use CG graphics extensively to differentiate bodies and spaces (such as *Avatar*), those that use them selectively (*The Matrix*), and those that don't use them at all (*Gamer*); another distinction can be made between films with avatars in a digital virtual environment (*The Lawnmower Man*) or a 'cinematic' environment (using filmic devices to represent the virtual) (*The Thirteenth Floor*), or in which the environment is continuous for both user and avatar (*Surrogates*). These various modes for depicting an aspect of digital culture within cinematic conventions are as interesting for the ways they invoke the digital (through various kinds of effects or, as in *Avatar*, an extensive application of the digital to produce nature in excess) as they are for resisting it, 'performing' it analogically with the photographic image and the body of the actor.

bodies, mediated by an interface, or in which one character controls another as an avatar.[16] The nature of these bodies, their modes of representation and performance, and the conditions of the interface are salient points in my explication of the cinematic avatar.

I believe that the avatar offers rich possibilities for new cyborg theorizations; I offer just a schematic overview here. A clear first step is the nature of the prosthesis. Avatars are sometimes theorized in terms of this key component of cyborgism, but prosthetics becomes a different matter when the replacement of the body or a body part, so eloquently explored in Vivian Sobchack's phenomenology, or the technological extension of the human, as theorized by McLuhan, takes the form of a body. Avatars are not simply tools or appendages, nor are their feedback circuits limited to the utilitarian or proprioceptive, for they are at the same time mirrors and faces, image bodies distributed through virtual environments and social networks.

Oscillatory and contingent, avatars can be engaged and disengaged, in contrast with the close integration of the cyborg. *RoboCop*'s Murphy cannot extract himself from the robotic body which sustains his biological one, and in the end of the film must find a way to exist as a monstrous hybrid, a body in tension with itself. Avatars approach the self-difference of the cyborg with distance and separation, placing emphasis on agency within a world of media influences. In *Surrogates*, the thematic question implied is not whether we are able to discontinue mediated lifestyles, but whether we should. In *Avatar*, Jake's trajectory toward becoming his own avatar is a way of refiguring diegetic distance as a function of technological distance – moving through the avatarial relation to complete the digital body.

[16] By this standard, the classic virtual reality film *Tron* doesn't qualify, though it is an important precursor to the films I focus on here. At the same time, there are many other films that share similar qualities which I have borne in mind while researching avatar films, but which fall outside of my focus on works derived in at least some respect from avatar use, including: films in which a character appears in his or her own dream (no interface control); films, like *The Manchurian Candidate*, in which one character exerts significant control over another (a different kind of subjection); body-swapping films, in which two characters each inhabit the body of the other (embodiment is 'mixed up' but not dual); films with supernatural or surrealistic avatarial figures, such as Cesare in *The Cabinet of Dr. Caligari* (pawn rather than second self) or Tyler Durden in *Fight Club* (not a consciously controlled 'body'); etc.

Interfaces, of both software and hardware varieties, are the technological gateways to a variety of bodies, and highly cinematic spaces as well. Images of the vascular interface in *Sleep Dealer* create a third space between the character's life in a futuristic Tijuana and his telepresent labor on a construction site in California, a richly symbolic bridge between competing images. We also find many images of visual technologies couched simultaneously as experiential technology and immersive cinema, with implications of an embodiment extending beyond the body. *Surrogates* is typical of the valorization of the visual, as operators wear a light version of VR goggles, physical appearance is emphasized, and the eye of the surrogate becomes a key point of access to the user. In digital avatar use it is important to remember that the avatar is not just the body on the screen, but the embodiment of a connection between two materially dissimilar bodies.

The relation between reality and virtuality and the problem of disembodiment are central themes in avatar films. These issues remain salient topics in the theorization of avatars and virtual technologies, but in juxtaposing cinema and interactive media we find fruitful fields in the representations of real and virtual, embodiment and disembodiment. Notably, the sort of disembodiment envisioned by cyberpunk pioneer William Gibson never comes into play, as characters are not only re-embodied, but the new bodies tend to represent cinematic fulfillment: Neo (Keanu Reeves), for instance, doesn't lose his body when he re-enters the Matrix, but realizes the cinematic fulfillment of his embodiment within the simulation. Also, reclamation of the real is often the objective of characters in avatar films, but in *The Matrix*, *Surrogates*, *Avalon*, and others, we find the films struggling to define the reality that is salvaged at the end of the film, particularly as the films themselves function as celebrations of their own exploration of the 'virtual'.

The cyborg image instantiates material and ontological difference in a single body (in the integration of human and machine typically), whereas the avatar decouples the disparate elements of the cyborg, re-situating them within avatarial relations and a variety of interfaces. The avatar privileges dualism over hybridity, interconnection over miscegenation. While dyadic relationships can certainly be problematic, it seems that there is more than one way to interface bodies and images, as we can find in Elizabeth Grosz's notion of 'interimplication', or Henri Bergson's concept of multiplicity. Duality offers the potential for dialectic, and there exist opportunities for exploring synthesis in the Gemini (two linked together) that are unavailable in the chimera (one divided).

Donna Haraway's conception of human-machine integration, drawn from the cold science of the body as machine and compelled by the defense machine of the Reagan era, sought to wrest the power of informational technologies away from their patriarchal origins, employing the machine as metaphor for identity as construct, a system that could incorporate flexibility. "The machine is us," she writes, "our processes, an aspect of our embodiment." The avatar as theoretical model owes much to Haraway and other insightful writing on cyborgs, but within the contemporary mediascape I see an evolution of form that reconfigures Haraway's border war as medial interface. "We are responsible for boundaries," she declares, "we are they" – which is as astute and concise a statement as exists within the canon of cyborg theory, for certain; but, thinking avatarially, this study asks what happens when we replace the boundary – the barrier, partition, frontier – with the medium.[17]

In other words, I see a key distinction between Haraway's concept of the computer as machine and contemporary use of the computer as media device. As Katheryn Hayles

[17] Donna Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Sex/Machine: Readings in Culture, Gender, and Technology*, ed. Patrick D. Hopkins (Bloomington: Indiana University Press, 1998), 462.

demonstrates, information has a body, is embodied – but bodies can take a variety of forms, and these forms have changed significantly in the last twenty years.[18] While images of cyborgs have constituted a potent and provocative tradition, what I find so very compelling about the avatar is that it is a body *in* images, accompanied by an eschewal of the mechanistic in favor of the natural and imaginal, so that the technology of the avatar is hidden in its construct, absent from its appearance. In CG characters and representations of avatars – which are frequently associated with digital reproductions of nature – we find an inversion of the cinematic cyborg: rather than a photographic image of a technological being, a technological image of the naturalized body, as in *Avatar* and the CG-enhanced *Surrogates*, or in bodies playing images, as we find in *Gamer* and other avatar films.

Strands of the 'Virtual'

> Our contemporary sense of the moving image has evolved from three interwoven strands of the virtual arts that engage with one another in uneven historical rhythms – photography and film, electronic imaging and transmission, and computational processes – and we need concepts that can bring these strands together while recognizing the complexity of their relationships and differences.
>
> D. N. Rodowick[19]

In an essay on digital cinema, Garrett Stewart asks "Why are so many recent films, despite their obvious digital enhancement at the level of technique, concerned in their plots with a *non*-electronic virtuality?"[20] Stewart sees parallel, if ultimately diverging, trends in the representation of virtuality in European and American filmmaking. On the European side, he finds tendencies in the use of coincidence, erotic telepathy, and an uncanny "couched in the

[18] N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (Chicago: University of Chicago Press, 1999).
[19] D. N. Rodowick, *The Virtual Life of Film* (Cambridge: Harvard University Press, 2007), 98.
[20] Garrett Stewart, "Cimnemonics versus Digitime." in *Afterimages of Gilles Deleuze's Film Philosophy*, ed. D. N. Rodowick (Minneapolis: University of Minnesota Press, 2010), 328.

repeatedly elegiac dimension of the filmic medium's self-conscious memory effects."[21] Such can be found in the 2008 suspense film *The Broken* (Sean Ellis), which begins with the evocative image of a mirror suddenly shattering during a dinner party for Gina's (Lena Headey) family. Subsequently, she witnesses members of her family replaced systematically and violently by doppelgängers, and begins to realize she has one as well. Determined to confront her own double after a series of harrowing encounters, Gina enters the apartment that once was hers, only to discover that she herself is the doppelgänger, having killed the original Gina, but lost her memory of it in a car accident soon afterward. Following her initial shock, she slowly comes to terms with her ontological state, as we too must come to terms with our 'mistaken' identification with the sinister double.

On the American side, Stewart finds an 'ontological gothic' in cinematic variations on electronic virtuality and the supernatural, and offers as an example the noirish *The Thirteenth Floor*, in which different temporal versions of a Los Angeles past (1937) and present (1990s) are nested within a virtual reality game in the future. In the film, Hall (Craig Bierko) is helping to develop a VR simulation of 1937 L.A. when he becomes caught up in a murder that he supposedly committed, and over the course of his investigation is led to question the reality of his world. On a tip, he drives to the outskirts of the city, where he finds the edge of the simulation that has comprised the world he thought was real. Hall, who had been controlling an avatar in the historical simulation, eventually discovers that he himself is an avatar in a larger simulation (the same truth Thomas Anderson discovers in *The Matrix* of the same year). Whereas 'spectral others' invade European films, notes Stewart, in recent American cinema

[21] Ibid., 327.

"heroes may turn out to *be* their own spectral others: either the digital figments of someone else's computer program or already their own ghosts, deluded into thinking themselves still alive."[22]

These revelations can certainly be traced along the Baudrillardian philosophy that drives *The Matrix*, but Stewart points out a different aspect in the injection of distance into agentive experience and

> between perception and somatic engagement. Actors within a spectacle have been transformed into spectators of their own programmed actions, with a new premium thus placed on virtuality. In the aftermath of a character's autonomous 'I', subjectivity is more commonly overseen than internalized.[23]

The ontological gothic appears then to be an avatarial ontology, although the iterative avatar relations in the film imply something more than whether a character is simply an original or a copy, as the model of the avatar demonstrates how agency is never unilateral, but always a negotiation. If I am avatarial, the film seems to ask, then what do my actions mean, and for whom am I an avatar? When Hall drives out of the city and finds the end of cinematic reality (the landscape beyond the city is only a graphical wireframe model), he faces fundamental questions about the nature of reality when it is revealed to be a construction (Fig. 2). However, this problem might be more productively constituted as a question of what has allowed him to take the already constructed world and make it meaningful.

As diegetic subjects (and the actors who play them) are observing themselves, audiences may not be entirely sure who *they* are watching, as a character turns out to be an avatar or appears across two or more bodies, or in the case of motion-capture CG characters, where the performance of the actor ends and the work of the animators begins. Both of these questions – the matter of the constructedness of representation within digital culture, and the question of

[22] Ibid., 328.
[23] Ibid., 336.

what or who we are seeing when we view digital media and its analog(ue)s in avatar films – have to do with virtuality, images, and bodies.

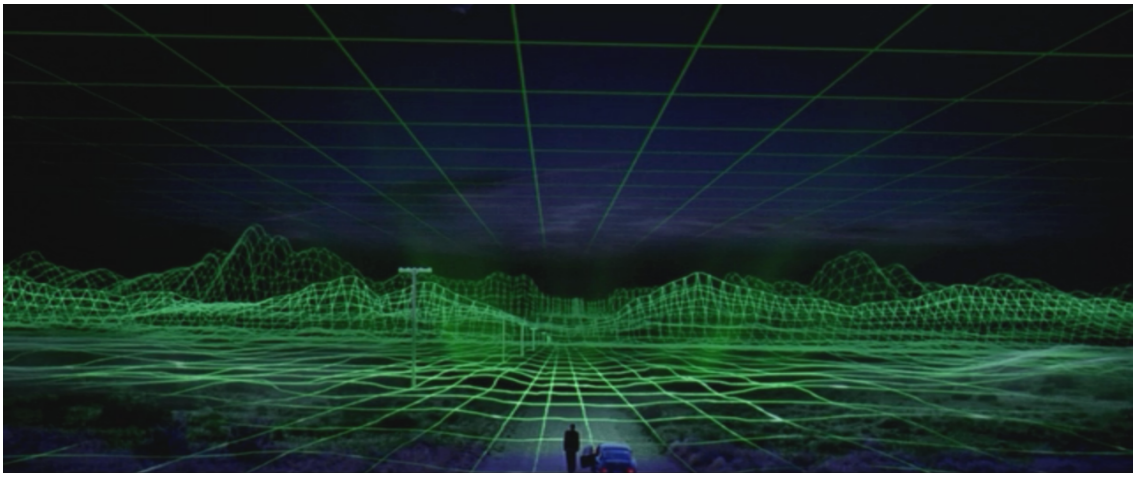

Figure 2. Hall finds the outskirts of the city not yet rendered

The concept of virtuality is multifaceted, and the term 'virtual' has been used in numerous, disparate ways, which has made it somewhat of a slippery notion. In this dissertation I consider virtuality in three different senses: as referring to computer and technological apparatuses that produce dimensional digital images and immersive experience, as in virtual reality and virtual environments; in terms of representation, as images present and reflect various realities and exist as both objects and views; and as part of phenomenological experience, in which we (often intuitively and unconsciously) relate subjectively to images and their materiality, and the technologies that produce them. In a film like *The Thirteenth Floor* these three different uses converge, as digital virtuality is represented in a cinematic form, employing an iterative performance of the body to disrupt the sense of a cohesive and ascertainable relation between body and image, thus evoking a sense of the virtual.

This convergence can be witnessed at the level of the body in Bierko's performance of three (or perhaps four or five) different 'characters': the 1990s Hall, who turns out to be a

sentient artificial intelligence who is used as an avatar to perform a murder; Ferguson, the 1937 character Hall plays in the historical simulation; David, the real world player in 2024 who manipulates Hall; David in Hall's body during the murders and an attempted rape; and Hall in David's body after David is killed in the simulation and Hall's consciousness inhabits his body. Within these convolutions, virtual technologies are an integral part of the diegesis, although they are with a single exception represented cinematically rather than digitally. The film's representational strategy is to interlink its various settings and temporal disjunctions through the iteration of the actor's body, and at the same time obfuscating a clear sense of character. Hall is established to be only a construct, and one only intermittently appearing in a body, yet the film is not self-reflexive or distanciating and so any sense of disjunction is focused on questions of reality, and specifically in undermining the role of the body as a locus for selfhood. Also, as multiple characters and bodies appear in the form of Craig Bierko, the body of the actor is further produced as a redundant yet fluid image, so that at any one point in the film we do not simply see Bierko or a particular character, but must view his performance as an abstract multiplicity. In this respect, the relationship between body and image is challenged, and the virtual evoked.

In order to clearly distinguish between technological, representational, and phenomenological virtuality, I'll address each below. It is important, however, to first acknowledge the negative connotations, in respect to material reality, with which virtuality has been saddled following an initial wave of enthusiasm about virtual technologies in the 1990s. The virtual is sometimes associated with absence, as in 'not there' or 'not real', or as insufficient or inadequate, as in 'almost, but not quite'. The virtual has also been characterized as deceptive or even hallucinogenic, the appearance of a thing which is not only not there, but which never was a 'thing', in a space that never was a 'there'. These associations must be distinguished from

the etymological roots of the term in potency and power, influence and moral virtue. Literally meaning 'manliness', with 'man' (*vir*) at its root, the virtual is measured in its effectuality or forcefulness – "in essence or effect, although not formally or actually," but also "effective in respect of inherent natural qualities and powers."[24] The effect, in this case, supercedes the object, and in a certain sense *becomes* the object, which is the reason we can talk about 'the virtual'.

With virtual technologies, the missing object (physical reality) has been replaced by immersive graphics and computer interfaces, and the social interaction transacted through these.[25] Rhetoric surrounding the immersive technology of virtual reality (VR) reflected a belief in the power of simulative technologies to produce experiences for users that would be as effectual as real-world experiences.[26] Early evangelists of VR, such as Jaron Lanier and Howard Rheingold, lauded the technology as world-changing through its effects on individual perceptions of reality. Lanier later clarified that this would not necessarily be effected through an escape from reality, but through the realignment of the perception of one's reality after having experienced an alternative to it;[27] however, this clarification was offered to counter the more

[24] "virtual, adj. (and n.)". OED Online. Oxford University Press. http://www.oed.com (accessed July 07, 2012). I address the gender bias of the term in Chapter 7.

[25] A note on terminology: there are many references in this dissertation to virtual reality, virtual environments, and virtual technologies, in which I use the conventional terminology. 'Virtual reality' (or VR) refers to computer-simulated environments that engender a sense of immersion for the user, facilitated either through head-mounted displays or room-sized apparatuses. 'Virtual environments' are spaces derived from virtual reality environments but use home computers rather than immersive displays, typically emphasize shared online space in persistent worlds (generally for socializing, gaming, and building), and, most importantly for my purposes here, are accessed with avatars. While virtual environments include all sorts of communal online territory, from text-based MUDs to 2D graphical worlds and chat rooms, when I use the term here I am typically thinking of MMOs (massively-multiplayer online games) such as World of Warcraft and virtual worlds such as Second Life, as well as single-player videogames that employ avatars and 3D graphics. 'Virtual technologies' refers generally to software and hardware that produce virtual reality and virtual environments as both technological and cultural phenomena.

[26] As a general note, I use the adjective 'simulative' to refer to virtual technologies rather than calling them 'simulations'. In computational terms and other systematic language, a simulation is a model of something (e.g. of airplane controls and the physics of flight in a flight simulator). Virtual environments are more along the line of places in which human behavior plays out rather than models for observing or predicting such behavior; thus I use the adjectival form to emphasize the more general definition of 'simulation', as an imitation of appearance or character. For a discussion of virtual environments as places, see Richard Bartle, *Designing Virtual Worlds* (Indianapolis: New Riders, 2004).

[27] Jaron Lanier, *You Are Not a Gadget: A Manifesto* (New York: Alfred A. Knopf, 2012).

popular view among both enthusiasts and critics in which VR at its cultural height was generally discursively opposed to material reality. Cyberculture theorist Michael Heim suggested that "in VR the images are the realities. We interact with virtual entities, and we become an entity ourselves in the virtual environment. As in the medieval theory of transubstantiation, the symbol becomes the reality."[28]Images become real, in other words, and users become virtual. William Gibson's vision of cyberspace as put forth in his influential novel *Neuromancer* became archetypal, imagining total disembodied presence in the network. However, when VR, which was closely watched and upon which many projections and anxieties were pinned, failed to emerge from its clunkier stages and take hold as a popular technology, the potency of the term as a contemporary watchword diminished. As virtual worlds and videogames developed and their complexity and sophistication escalated, notions of virtual embodiment increasingly gave way to discussions of graphics, hardware, and gameplay, and avatars were foregrounded as the bodies to occupy the new immersive spaces that were cropping up in 3D videogames like *Doom* and virtual worlds like *Alphaworld*. Of course, VR and other virtual environments don't produce virtuality as such, and, according to scholars like Anne Friedberg, their appropriation of the term 'virtual' has distracted from its broader meaning, particularly as pertaining to other modes of representation. Friedberg has identified these particularly with nineteenth century entertainments such as the diarama and panorama, which offered a 'virtual' gaze and were predecessors to the virtual gaze of cinema. The virtual for Friedberg is to a large extent dependent on the immersive quality of the representative mode and its potential for seamlessness. This is a notion essential for its consideration of the way in which we receive cinematic images and stories as effectual, even as we know they're not real; however, my understanding of the virtual differs somewhat in

[28] Michael, Heim. "The Design of Virtual Reality," *Body & Society*, 1995, Vol. 1(3-4): 70.

that I understand its greatest potency to be found in that which cannot be represented or directly perceived.

Cracks Between and Surfaces Around

In *The Virtual Window*, Friedberg works to correct what she perceives as a misunderstanding of the virtual and "reclaim its considerable utility for making distinctions about the ontological status – and the materiality versus the immateriality – of an object."[29] Social theorist and philosopher Brian Massumi goes further, arguing that

> Nothing is more destructive for the thinking and imaging of the virtual than equating it with the digital. All arts and technologies . . . envelop the virtual, in one way or another. Digital technologies in fact have a remarkably weak connection the virtual, by virtue of the enormous power of their systematization of the possible.[30]

Evoking Bergson's concept of the possible and the virtual, Massumi situates virtual technologies (as a subset of the digital) oppositionally to the virtual because of the algorithmic logics that drive them. Bergson theorized the virtual in terms of an ontological unpredictability; the 'possible' is that which a system is designed to produce, while the 'virtual' connotes unanticipated states outside of the possible. Because digital technologies are algorithmically based, they leave no room for the unexpected. However, we will see how human interaction with the digital opens up possibilities for engaging the virtual when we approach it in phenomenological terms – or, as Massumi puts it, through the 'analog'.

The virtual isn't inherent in the digital, but neither is it 'contained' in artworks or objects. A fundamental premise of this dissertation is that we, and the world in which we live, are always already virtual. Elizabeth Grosz, in her discussion of virtuality and architecture, writes "we did

[29] Anne Friedberg, *The Virtual Window: From Alberti to Microsoft*, (Cambridge: MIT Press, 2006), 7.
[30] Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation* (Durham, N.C.: Duke University Press, 2002), 137.

not have to wait for the computer screen or the movie projector in order to enter virtual space; we have been living in its shadow more or less continually."[31] Anthropologist Tom Boellstorff asserts that "virtual worlds show us how, under our very noses, our 'real' lives have been 'virtual' all along. It is in being virtual that we are human: since it is human 'nature' to experience life through the prism of culture, human being has always been virtual being."[32] In situating the virtual at the level of culture, Boellstorff points to the overarching role of culture and society in defining relationships between the self and the world, as well as between the self and one's own body. And while he doesn't use the term 'virtual', Foucault's genealogies of power and knowledge theorize the cultural flows of discourse and the implications for the body 'inscribed', in which the relationship between the perceiving self and the material world is shaped by various invisible and taken-for-granted societal forces.[33] This relationship is also subject to the influences of commodity culture and "the domination of society by 'intangible as well as tangible things'" as Debord puts it, "which reaches its absolute fulfillment in the spectacle, where the tangible world is replaced by a selection of images which exist above it, and which simultaneously impose themselves as the tangible par excellence."[34] I don't mean to imply here that virtuality is ideological, but that ideological discourse shapes the particular forms that virtuality takes for various groups and individuals. The notion that we are virtual is an acknowledgement that we already exist in mediated relationships with ourselves and our world, and the nature of these relationships becomes crucial.

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[31] Elizabeth Grosz, *Architecture from the Outside: Essays on Virtual and Real Space* (Cambridge: MIT Press, 2001), 78.
[32] Tom Boellstorff, *Coming of Age in Second Life: An Anthropologist Explores the Virtually Human* (Princeton: Princeton University Press, 2008), 5.
[33] Michel Foucault, *Discipline and Punish: The Birth of the Prison,* trans. Alan Sheridan (New York: Vintage, 1979).
[34] Guy Debord, *Society of the Spectacle* (Detroit: Black & Red, 1970), Thesis 36.

One implication of commodity culture, as well as of digital culture, is that we have become 'more' virtual in the last century, in that post-industrial societies are subject to greater virtualization than developing countries. While, following Boellstorff, virtuality is an inherent condition of all humanity, manifest for instance in mythology and religion,[35] the case can be made that the development of cinema, radio, and television, the proliferation of images and consumer products, and the ubiquity of computer technologies have only enhanced our propensity for mediated experience. Such is the basis for Baudrillard's declaration that contemporary society has become a simulation, but again it seems a mistake to conflate the two, as a simulacral culture may certainly affect the interconnections between perceiving beings and the material world, but it does not constitute these connections.

The question then becomes one of access: how do we encounter and recognize the virtual? Understanding virtuality as medial, it is clear that the arts and media technologies will bear some relation to the virtual. Such is Friedberg's approach when she locates the virtual within "the register of representation itself."[36] I have alluded to her theorization of a virtual gaze active in immersive works such as panoramas, and later cinema;[37] however, it is necessary to draw a clearer distinction between representation and the virtual, for while art and electronic media can be instrumental in generating encounters with the virtual, they are not themselves virtual nor do they represent virtuality directly. Massumi writes:

[35] Religion, and particularly Christianity in Western culture, has for centuries exerted systemic doctrinal duality in its subjects, by which the material world and mortal existence became the 'virtual reality' to the invisible but definitive reality of God and heaven, and the true nature of the human was spirit – or the soul, that liminal connection between the spiritual and the profane flesh. This view of matter and the body was heavily indebted to the abstractions of Neoplatonic philosophy, but in fundamental ways affected adherents at the level of the body – often mortally.

[36] Friedberg, *The Virtual Window*, 8.

[37] Anne Friedberg, *Window Shopping: Cinema and the Postmodern* (Berkeley: University of California Press, 1993).

> The virtual, as such, is inaccessible to the senses. This does not, however, preclude figuring it, in the sense of constructing images of it. To the contrary, it requires a multiplication of images. The virtual that cannot be felt also cannot but be felt, in its effects. When expressions of its effects are multiplied, the virtual fleetingly appears. Its fleeting is in the cracks between and the surfaces around images.[38]

The virtual is affective, oblique, and fugitive. In order for an image to approach the virtual, Massumi indicates that it must "twist and fold in on itself, to multiply itself internally" or approach the virtual "topologically," by which one might arrive at "an overimage of images of self-varying deformation: a unity of continuous separation from self."[39] For me, the avatar and the CG character incorporate striking configurations of self-variance, and in an attempt to engage virtuality through these configurations, I approach them with an eye toward *superimposition*, in the overlaid strata of digital, perceptual, and material elements, and *spatialization*, in the distance-in-connection produced by the interface and inherent to the avatar. This approach to images and technological apparatuses in terms of their layers and interconnections evokes that what Grosz sees as "the embeddedness, the nesting or interimplication (perhaps another name for difference) of the virtual and the real within each other."[40] That is, virtuality is not a singular epistemological and experiential laminate over the material world, but virtual and real produce and construct one another and intermingle in nested layers of history, design, convention, and use, in addition to individual psychological and phenomenological experience.

The topography of the virtual, with its many points of connection to and tensions with materiality, is uneven terrain. Human perception and the material world are constantly roiling and shifting against one another, resulting in much ideological work to temper the restless correspondence between the two. The universalizing impulses of societal order and bodily

[38] Massumi, *Parables for the Virtual*, 133.
[39] Ibid., 133-4.
[40] Grosz, *Architecture from the Outside*, 89.

discipline, as well as the torrents of consumerism and the market, are sources of ideological production that deeply affect our relation to the world and our bodies. However, as mentioned above, the virtual is never homogeneous, but always contingent. The negotiation of embodiment and enculturation by individuals, in addition to the particular qualities of various media and the distinctiveness of an artwork, alter the experience of virtuality, or 'virtualities', as these relationships are defined and redefined.

In this vein, it has been argued that some people are more virtual than others. In her work on race in the internet, Lisa Nakamura contends that "people of color have always been postmodern (and by extension 'virtual')" in their decentered, fragmented, and marginalized cultural status.[41] A similar sentiment relative to gender is expressed by Nigel Clark, who argues that "'women's bodies have always been postmodern' [as they] have had a longer history of subjection to inscription by idealized images."[42] I don't mean to conflate postmodernism and virtuality, but in considering the problematic relationship between women's bodies, patriarchal mandates, and image culture, one might say that a stronger influence of virtuality is evident. However, a different sort of connection between women and virtuality can also be drawn through Haraway's association of the cyborg with the feminine in order to demonstrate the constructedness of identity – but a constructedness which, when understood and harnessed, can yield great power. As I will show, representations of virtuality regularly make use of raced and feminine bodies; on the surface, this results in marginalization, but depictions of women and black men relative to the virtual can also be understood in terms of the force or effectuality that the virtual implies.

[41] Lisa Nakamura, *Cybertypes: Race, Ethnicity and Identity on the Internet* (New York: Routledge, 2002), xv.
[42] Nigel Clark, "Rear-View Mirrorshades: The Recursive Generation of the Cyberbody," *Body & Society*, 1995, Vol. 1(3-4):117 (quoting Arthur and Marilouise Kroker).

The indirect process of *imaging* the virtual, as outlined by Massumi, must be distinguished from the practice of *representing* the virtual, as we see for instance in *The Thirteenth Floor*, where virtual technologies are depicted and alluded to, and the cinematic representation summons the virtual in its presentation of both an object and a view, but the virtual is encountered indirectly, through the phenomenological encounter with the Bierko multiplicity. One may touch upon the virtual in the process of forming an image (Massumi suggests that "imagination is the mode of thought most precisely suited to differentiating the vagueness of the virtual"),[43] with heightened awareness of the relation between perception and the physical world, but once the image is fixed temporally and materially, its relation to the virtual is much more difficult to grasp. Friedberg states that the virtual marks a "secondary order in the relationship between the real and its copy, the original and its reproduction, the image and its likeness."[44] While I am wary of placing the virtual too firmly within modes of representation, as noted above, I find useful her elucidation of the interstitial nature of the virtual. Friedberg refers to it as "a second-order materiality, liminally immaterial," and evokes Bergson's association of the virtual with perception, the images by which the material world is produced phenomenologically: "Matter, in our view, is an aggregate of 'images'," writes Bergson, "and by 'image' we mean a certain existence which is more than that which the idealist calls a *representation*, but less than that which the realist calls a *thing* – an existence placed half-way between the 'thing' and the 'representation.'"[45] For Bergson, the image is in the beholder as a virtual instantiation; for Friedberg, certain images and technologies produce the virtual, as measured in the form of engagement they provide (as in virtual travel and virtual windows).

[43] Massumi, *Parables for the Virtual*, 134.
[44] Friedberg, *The Virtual Window*, 8.
[45] Ibid., 11. Henri Bergson, *Matter and Memory* (New York: Cosimo, 2007).

My approach lies somewhere between, but I rely on both. Friedberg's emphasis on the propensity for certain images and technological forms to converge with the virtual initiates a broader discussion of cinematic images in the era of digital effects, but at the same time these forms must be situated relative to embodied observers. The virtual cannot be captured or fixed in an image, but, in my view, is encountered in the moment of engagement and within the conditions of viewership or use. With these diverging (but ultimately complementary) views in mind, we can here briefly address a variation on the virtual that pertains to this study – the 'virtual image'.

Virtual Images, Embodied Frames

A term Friedberg locates in nineteenth century studies of optics, 'virtual images' are images with no fixed material substrate, e.g. reflected in mirrors, produced in the mind, or registering on the retina. This is not to say that these images are divorced from materiality, as they are reliant upon eye, brain, and mirror, but they are ephemeral, existing only in the moment of their creation. To these we find a contemporary parallel in Manovich's study of radar blips, which he extends to real-time televisual and computer-mediated images; his pronouncement that "the image, in a traditional sense, no longer exists!" refers to a culture in which real-time images on screens have supplanted images in physical media.[46] Real-time or virtual images become ways of thinking about the materiality of images as we now frequently encounter them on television monitors and computer displays. However, Manovich's assertion underscores the importance of materiality in our engagement with images – indeed, reiterating the fact that images never simply float above their material supports or are independent of them, but when the material substrate of an image has changed, it is no longer the same image (it is 'pictured'

[46] Lev Manovich, *The Language of New Media* (Cambridge: MIT Press, 2001), 100.

differently); when the substrate fixing the image has disappeared, it is, for Manovich, no longer an 'image'.

I address images and their materiality here because, within the context of this dissertation, I understand virtuality in terms of the shifting relationships between bodies and images. A film like *The Thirteenth Floor* is interesting to me from the standpoint of the virtual not for its digital content or complex imagery – in fact its images are cinematically quite conventional – but for the way it evokes the digital, in both its abstraction as an informational technology and its intimacy with human experience, through the film's manipulation of what or who we 'see' when we view Bierko in the film. CG imagery, on the other hand, tends to be employed obviously and bluntly in the overuse of its capacity to show, but while it often lacks nuance, it touches the virtual when it invokes the cognitive dissonance whereby we question what it is exactly that we are 'seeing', and in the way in which these images are processed simultaneously (if subtly) as both data and pictures.

W. J. T. Mitchell points out what has become clear in the proliferation of digital imagery: the image is already 'virtual', that which "can be lifted off the picture, transferred to another medium, translated into a verbal ekphrasis, or protected by copyright law." He gives perhaps the most succinct summation of the immateriality of images in noting that "you can hang a picture, but you cannot hang an image." A picture is the material instantiation of an image, which in comparison is "phantasmatic, virtual, or spectral."[47] Thus while pictures exist in the material world, Mitchell situates images within the plane of the virtual – an aspect that becomes increasingly apparent as images are losing their material substrates, and must temporarily borrow those of the devices upon which they appear.

[47] Mitchell, W. J. T., *What Do Pictures Want? The Lives and Loves of Images* (Chicago: University of Chicago Press, 2005), 85.

The ethereal qualities of the image that Mitchell suggests here can be contextualized within our fascination and experiences with images. With the shifts toward digital production and dissemination of images, fascination and experience must accommodate the dematerialization (eminently transferable and modifiable images displayed on screens) and redoubled materialization (the necessity and material presence of hardware for viewing images that proliferate across devices rather than on paper media) that characterize contemporary digital imagery. Both the de- and re-materialization lend themselves to a certain fantasy, of the image in its 'imageness' unfettered from the fixity of a medium, and of the technological capacity to exert power over the image – to affect the means by which one has been or might be affected, to subject the image to the medium (the computer), and perhaps to rein in its 'surplus value', as Mitchell puts it. "Everyone knows that images are, unfortunately, too valuable, and that is why they need to be put down."[48] Digital imagery thus might be said to offer different fascinations, simultaneously allowing the production and destruction of the 'imageness' of the image.

What must be made clear here is the tricky materiality of the digital image, for it not only comes into play literally (and effusively) in films like *Avatar*, but it is in many ways the capacities of the digital to which avatar films allude when they (often non-digitally) depict the virtual. On the one hand, the 'image' is for Mitchell an immaterial element, which must be instantiated in some material substrate in order to be a 'picture'.[49] And, as Freidberg writes, even a virtual image "begins to have its own liminal materiality, even if it is on a different ontological order."[50] Rodowick questions the presence of an image at all, suggesting that "through digital screens our relation is not to an image, but to function or force – that of control and the

[48] Mitchell, *What Do Pictures Want?*, 76.
[49] This of course is complicated by the ekphrasis, which necessarily produces an interpretation or mental image based on the object of description.
[50] Friedberg, *Virtual Window*, 9;

management of information" – an interesting notion, given that virtuality etymologically relies on forcefulness rather than physicality.[51]

Digital images borrow their 'liminal' materiality from the objects that produce or display them. As in the science of optics, these images are associated with the instrument that provisionally generates or presents them, whether mirror, eye, television, or computer, rather than the medium in which they are fixed. Our contact with the image, should we wish to touch it (or, as Mitchell suggests, kiss it) becomes contact with the instrument – and indeed, contemporary devices and computers have been redefined as media machines that produce images, as well as aesthetically pleasing objects that make the machines a distinct and yet seamless part of the images they display and objects of touch by which images are selected, swiped, zoomed, edited, and even created.[52] By Mitchell's reasoning, a clarification of Manovich is necessary: it is pictures that are disappearing, rather than images – and in fact, we seem to be, more than ever before, in an era of the image.

The digital image is also material in another way, in that while it seems ephemeral, it of course must be preserved in a physical substrate, such as in magnetic alignments on a hard drive or molecular nubs on a flash drive – which at their base levels are physical rather than numerical.[53] However, our contact with these instantiations is very different from that of analog media, and thus the paradox we face with digital media is that they are material, but not in a way in which they can be materially accessed by humans; they are displayed on physical hardware, from which they borrow a certain materiality, but there is no fixed relation between the two; and at the same time, they bear an ontological resemblance to Mitchell's definition of an image, yet

[51] Rodowick, *Virtual Life of Film*, 141.
[52] A key difference between televisual and digital images is that the digital images can be manipulated, and especially without contacting a physical medium (there is no originating videotape). At the same time, there is increasing emphasis on touch -- contact with the device -- for the same purpose.
[53] Rodowick contends that "digital records may be printed, of course. But their 'natural' ontological state is to be manifested on electronic displays" – a theme I take up in Chapter 5. Rodowick, *Virtual Life of Film*, 135.

they are not abstractions. My attempt to relate embodiment to the lost materiality or 'body' of the analog depends on these nuances, and even as I at a certain point move toward abstraction, or the 'imageness' of the image, it is more out of an attempt to account phenomenologically for the ambiguity of digital materiality than to suggest that digital images are indeed disembodied.

A defining characteristic of digital culture is that it is also in many ways an image culture. In fact it is common for writers engaging new media to employ the terms 'numerical', 'informational', and 'binary' rather than 'digital' when they want to refer to the mechanical aspects of digital technologies, as the digital is no longer associated exclusively with informational substrates. 'Digital' has come to connote the interactive, imagistic, and even affective engagement with computer information. This includes the graphical user interface (GUI), or practices of facilitating access to information through user friendly interfaces employing images, graphical iconography, conversational text, and the ubiquitous buttons that are more likely to be graphical rather than hardware elements. The GUI and its attendant hardware, the mouse, were fundamental to the development and proliferation of the personal computer in the eighties, where, along with videogames, the turn toward images and away from machine language and aesthetics was already visible.[54] As processing and network speeds have increased, computers have developed into media devices, including their increasing use in image production and distribution, while digital elements in general have seemingly been integrated into almost every aspect of culture. An important aspect of digital culture, then, is the way in which computer information has been integrated with media production, graphical developments, and intuitive interfaces – a massive WYSIWYG ('what you see is what you get').

[54] A key moment in the transition was marked by Apple's transluscent iMac G3 in 1998, which initiated the hardware as part of the aesthetics while at the same time shifting away from the magic of the box – the curtain pulled back, like the conjurer pushing up his sleeves – to the magic of the screen.

To a significant extent, these developments help transform information into forms more compatible with human experience; however, disjunctures remain within, for instance, the ambiguous materiality of digital information, data intermingling with images in digital culture, and even the way in which the pace and spectacle of traditional media forms (such as advertising) have grown exponentially, fueled by developments in digital media. The body is not removed from the contemporary shifts toward information and images, but central to them. Here, then, I turn finally to the body and the essential role it plays, both conceptually and materially, in processing the data streams and image influx of digital culture.

Mark Hansen, drawing from media philosopher Pierre Lévy's writings on virtualization and Bergson's philosophy of images and virtuality, takes a phenomenological approach to informational technologies and embodiment. He argues against Deleuze's 'disembodying' abstraction of the body as the center of indetermination – the process, as introduced by Bergson, by which the body isolates certain aspects of images to generate perceptions. In his theorization of the movement-image and the time-image, Deleuze moves away from Bergson's emphasis on affect in its phenomenological sense, offering up instead a formal understanding of affectivity as a permutation of the image. Hansen's aim is to restore the framing function of the human body: "to redeem Bergson's embodied conception of the center of indetermination will ultimately require us to reverse the entire trajectory of Deleuze's study, to move not from the body to the frame, but *from the frame (back) to the body*." Thus any media content, including photographs, cinematic images, and video signals, requires consideration of the "historically contingent negotiation between technical capacities and the ongoing 'evolution' of embodied (human) perception."[55] As technology evolves, so does the capacity of human perception – not toward a

[55] Mark B. N. Hansen, *New Philosophy for New Media* (Cambridge: MIT Press, 2004), 8.

machine-like subjectivity, as implied by the cyborg, but requiring a greater investment of the body. As Hanson writes:

> When the body acts to enframe digital information – or, as I put it, to forge the digital image – what it frames is in effect itself: its own affectively experienced sensation of coming into contact with the digital. In this way, the act of enframing information can be said to 'give body' to digital data – to transform something that is unframed, disembodied, and formless into concrete embodied information intrinsically imbued with (human) meaning.[56]

Hansen doesn't explore avatars in his study, but to my mind the avatar is a salient figure at the intersection of multiple embodying processes. As an object of affective use and cultural signification, the avatar is well-situated for an examination of the digital through the virtual and the corporeal, although one that in contemporary scholarship has been overlooked for its theoretical potential in understanding an evolving digital culture.

In looking at the ways in which information is framed by the body, an awareness of the ways in which the body is already virtual is essential for a consideration of the possibilities for any engagement with virtuality on a phenomenological level. The term 'embodiment' has been used to connote the virtual dimension of having or being a body – not simply implying a connectedness between self and body, but in fact highlighting difference. "Embodiment never coincides exactly with 'the body'," writes Hayles, even though it is the only way in which the body can be known and experienced. "Whereas the body is an idealized form that gestures toward a Platonic reality, embodiment is the specific instantiation generated from the noise of difference."[57] Because embodiment for Hayles is contingent and individual, there is "also at least an incipient tension between it and hegemonic cultural constructs. Embodiment is thus inherently destabilizing with respect to the body, for at any time this tension can widen into a perceived

[56] Ibid., 13.
[57] Hayles, *How We Became Posthuman*, 196.

disparity."[58] The body in this equation is what becomes 'virtual' as an inaccessible 'reality' that never appears except through its particular instantiations.[59] Thus virtuality is primary in embodiment – in the tensions between body and self, in the multiple ways in which the body is experienced through and as images, and in regard to our interaction with images, media forms, and technologies by which connections within the complex network of embodiment are shifted, recombined, and transfigured. The avatar, as an image body connected to a human one within what might be thought of as a circuitous embodiment, becomes in many ways an ideal figure through which to think bodies, images, and virtuality.

A Circuitous Method

It was a sense of the uncanny that initiated my abiding interest in avatars. I began exploring Second Life as a curiosity but was soon captivated by what I can only describe as a perceptual refraction between avatar and user, with both simultaneously 'present' in different ways. I absorbed the ethnographic and anthropological research that is routinely conducted in Second Life, but found that these studies, while revealing much about behavior and community, failed to capture the perplexing nature of the avatar, as their typically iconoclastic aim was to break through the illusion on their way to engaging users. Returning to film theory gave me a basis for understanding virtual environments as imagistic, but as these were not traditional images a second theoretical move was required, and I brought in new media theory to contextualize the cinematic frame through which I was approaching Second Life. Such an approach accords with the rising influence of digital technologies in filmmaking practice and aesthetics, which has been addressed by several scholars carving out hybrid approaches to the

[58] Ibid., 197.
[59] On may notice a parallel here between this dichotomy of the 'virtual' body and 'actual' embodiment, and the inversion of materiality and digital virtuality in a virtual world, where the physical bodies of users occupy a position of off-screen abstractions while their avatars command a great deal of visual presence.

theorization of digital media; as I compared the perceptual and affective reaction I'd had with avatars to the CG creatures and characters that were appearing with more frequency in film, it became clear that these figures could comprise a productive secondary thread in my study. I found fertile ground as well in the analog performances of digital technologies in the avatar films as one way of exploring the ripples of digital culture.

While in Second Life I also developed an odd sympathy for the avatars, including a rather compassionate attitude toward my own; these were not simply icons or cartoon characters by which users oriented themselves in the game or environment, but in their design as richly detailed (if occasionally clunky) human figures they seem to have tipped over into a different plane of online interaction. I was regularly struck by what seemed to be an undeniable sense of presence in themselves – an aspect in tension with their basic function of designating the user's presence.[60] At the same time these were bodies used, thoroughly subject to control and manipulation. While this was often done carefully and even lovingly by users invested in their creations, the avatar itself became somewhat of a melancholy figure for me. In videogames, the icon or avatar is most often thought of in terms of the presence, agency, and force of the user within the environment, but it is important to note that the avatar is also the site of vulnerability; this aspect of vulnerability became quite pronounced for me, and shows up as well in avatar films such as *Gamer*, where sympathy for the avatar provides the (overdetermined) emotional spine of the film, and in others, like *Surrogates*, where the film's commentary on the human condition has as much to do with bemoaning our avatarial state.

[60] This aspect is also especially noticeable in the many portraits users make and post of their avatars, as the avatarial connection does not persist through these comparatively fixed images, and since the pictures are typically designed to showcase the avatar in itself rather than in service of a user. Still, while abstracted from their users, avatars are able to appear as 'themselves', without their users these appearances are inevitably to some extent hollow.

As I was never particularly social in Second Life, the imagistic world remained quite concrete at the level of illusion, with the 'real' world, the users, floating spectrally in a vast dispersion under the surface. The sense of inversion of the material and immaterial worlds was compelling, with the 'immaterial' world manifest in bodies of avatars and the physics of the environment, and the 'material' world present only 'virtually' through the creations and actions of the users. I sought for a way to study the virtual environment that preserved the sense of uncanniness and traces of virtuality, as it is in these qualities that I found its phenomenological potency. As this was a quality but not a text, however, shifting my emphasis to media representations of the avatar provided material for substantive study that reflected back on the virtual environment, as well as helping to develop the theoretical aspects of the avatar.

These avatar texts are mostly films, but I also analyze television and web series, as well as interfaces and some general aspects of avatar use. As we are part of a convergence culture in which different media forms bleed into one another, clear distinctions between them are no longer possible – or necessarily desirable, as disciplinary rigidity can obstruct comprehensive analysis for the particular material I take as my subject. Indeed, avatar films are inherently convergent, with cinema appropriating new media forms in what might be thought of as mythologies of interactive media – or what Paul Young calls 'media fantasy films', referring to those texts by which cinema recontextualizes other media within classical Hollywood paradigms.[61] At the same time, virtual environments and the non-filmic texts that I explore draw heavily from cinematic convention in their strategies of visualization and narration – in the web series *Molotov Alva and His Search for the Creator* (2008, Douglas Gayeton), to take a literal example, the protagonist is a filmmaker in Second Life. Like the cyborg in tension with itself,

[61] Paul Young, *The Cinema Dreams its Rivals*, (Minneapolis: University of Minnesota Press, 2006).

the avatar incorporates several dualisms; my transmedia approach attempts to interface between these by considering the avatar's many manifestations.

This dissertation is indebted to a number of theorists who have approached cinema from a new media perspective and vice versa. Jay David Bolter and Richard Grusin laid important groundwork in *Remediation: Understanding New Media*, a comprehensive treatment of new media as appropriating pre-existing media forms and language. The authors situate film texts such as the avatarial *Strange Days* (1995, Kathryn Bigelow) as a film darkly appropriating the subjective view of the FPS (first-person shooter) and its techniques for moving through space originally acquired from cinema. This cross-media exchange is part of a discourse in which each recasts the other according to its own logic. Bolter and Grusin's definition of the double logic of remediation informs my accentuation of the avatar as a medial figure. Demonstrating that a remediative culture works to simultaneously multiply its media and erase the appearance of mediation, the authors lay out a defining paradox of contemporary media that speaks directly to phenomenological engagement and the knotty questions of materiality.

Manovich's comprehensive work *The Language of New Media* is more specific in its address of new media antecedents, drawing an agonistic line from Vertov's *Man With a Movie Camera* (1929) through practices of interactivity and visualization in computer media. Manovich hangs his argument on the enduring influence of the cinema, arguing that "cinematic ways of seeing the world, of structuring time, of narrating a story, of linking one experience to the next, have become the basic means by which computer users access and interact with all cultural data."[62] Cinema, for Manovich, is in a certain sense double, serving as both the classical theatrical model which new media subvert and the broader 'cultural interface' by which they repackage data for consumption. The latter assertion has sparked some resistance – Hansen, for

[62] Manovich, *Language of New Media*, 78-9.

instance, criticizes it as 'overdetermined', disallowing the full spectrum of new media functionality by confining it to a cinematic paradigm – but to some extent at least Manovich's view of the dual role of cinema in the contemporary mediascape accords with the view of other scholars, such as Rodowick, who argue that while film is disappearing, cinema persists in its visual language and narrative techniques.

If Manovich overreaches in imposing cinema as the dominant language of new media, he does point to an important element of digital culture in that an aesthetic of information has yielded to the primacy of the image. The design and function of digital technologies have steadily evolved to reflect and accommodate human experience, and thus while the body moves to the fore in framing digital information, the design of digital culture meets it with the image – the intersection at which the avatar is situated. Thus, in a final contrast with the cyborg model, we find in digital culture emphasis on the movement of technology toward the human sphere. That is, rather than humans modifying for synthesis with machines, it is the machines that are continuously modified for greater compatibility with humans, with data presented in images (and images increasingly computer-generated or modified), intuitive and haptic interfaces, and mobilized devices that personalize technology.[63] The framing function of the body must then increasingly deal with images and personal devices in addition to data and machines.

With his 'terminal identity', Scott Bukatman uses science fiction and postmodernist theory to posit an information age subjectivity, alluding to both the 'termination' of the traditional subject and the new subjectivity formed at the television screen or computer terminal. His encyclopedic work, coursing through a range of media texts, arts, games, and graphical

[63] Of course AI (artificial intelligence) and androids fall under the cyborg umbrella as well. The machine that thinks like a human and the robot that appears like one have however given some ground to other models, such as the androids in *Surrogates* that, for all their sophistication, have no AI. A series of articles in *Wired* magazine (January, 2011, 86-97) demonstrates that the naturalization of AI, which can now be found in everything from search engines to automobiles, has made it nearly invisible in its ubiquity.

works on its way to drawing out the theoretical implications of popular texts for contemporary subjectivity, provides something of a roadmap for my study. The 'virtual subject' he describes, well situated within cyborg and posthumanist constructs, is "a new subject capable of inhabiting the bewildering and disembodied space of the electronic environment," and an important precursor for my delineation of avatar ontologies.[64] The tension between the real and the digital embodied in the avatar is a forked path seeking the way to unity and wholeness within digital culture, whether that be through renunciation of virtual modes of being, or an acceptance of avatarial ontology through multiplicity. Many writings on the cyborg have dealt with these issues which I take up afresh with the avatar, and Bukatman's handling of textual multiplicities facilitates my treatment of the ways in which the avatar presents itself as a means for finding unity or wholeness in and through digital culture.

I am also indebted to Vivian Sobchack's eloquent essays on the philosophical aspects of the prosthesis and her phenomenological approach to film in *Carnal Thoughts*. Her sensorial, embodied approach to spectatorship has provided an invaluable framework for my conceptualization of the contingencies of virtuality. Steven Shaviro's critique of the Lacanian model in film theory, *The Cinematic Body*, provides foundational elements for my use of, and departures from, the mirror stage. And Paul Young and Claudia Springer, whom I have mentioned above, have provided valuable insights that I use throughout this study. In particular, Young's treatment of cinematic texts through which classical Hollywood refashioned its intermedia rivalries with radio, television, and the internet provided me with a conceptual framework for thinking about avatar films in the context of their function within cinematic tradition.

[64] Scott Bukatman, *Terminal Identity: The Virtual Subject in Postmodern Science Fiction* (Durham: Duke University Press, 1993), 118.

The texts I analyze here are of the type, I feel, that Steven Shaviro calls 'expressive', or giving voice to contemporary experience in digital culture. "By the term *expressive*," he writes, "I mean both *symptomatic* and *productive*. These works are symptomatic, in that they provide indices of complex social processes. . . . But they are also productive, in the sense that they do not *represent* social processes, so much as they participate freely in these processes, and help to constitute them."[65] These films, while often far from being cinematic masterpieces, are important texts because of highly relevant discourses in which they participate. Many of these films have garnered little critical attention and beg further analysis, while others have been written about extensively, as we see in the academic fever sparked by *Avatar* or the several books written about the *Matrix* franchise. Notably, however, neither of the latter have been substantively addressed in terms of avatars (or at least, in the case of *Avatar*, not avatars in the contemporary sense), and thus these highly visible films warrant another look.[66] Seeing these films from an avatarial perspective can be, I believe, a means for honing our understanding of the digital as it pertains to cinema and issues of embodiment.

Organization

In this dissertation I move from the avatar body, masculinity, and cinematic death toward the image body, femininity, and digital vitality. I take as my point of departure the mirror phase, as theorized by Lacan, as his influential formulation is critical to my work for its doubling of the subject in its inception, and for the connection he postulated must be made between the body and its image in the formation of the self. I am less concerned with the specific psychoanalytical aspects of the mirror phase than I am with the configuration it suggests, for its obvious

[65] Steven Shaviro, *Post-Cinematic Affect* (Winchester, UK: O-Books, 2010), 2.
[66] *The Matrix* has been approached from a gaming standpoint, but with a greater focus on the logic of the videogame rather than the body of the avatar.

implications for avatars and interfaces. In Chapter 1 I begin by situating the avatar relative to the psychoanalytic frameworks that determined how the one must be seen as two, before complicating these approaches with an analysis of three avatarial works that demonstrate the role of the half in constituting the double. Seeing the half and double not as imbalances but as integral parts of an avatarial gestalt is a first step in conceptualizing the distributed, interlinked embodiment this gestalt proposes.

Chapter 2 explores levels and hierarchies, depth and surface in avatar 'bodies', identifying points of connection and sites of ambiguity between material bodies and their imagistic counterparts. In a dissection of the avatar I plumb the depths of its digital body and feel out the space of the interface apparatus, working toward a fuller understanding of what it means to be an 'avatar'. The index serves as the point of departure, while gradations of distance from the index mark the status of the image body.

In Chapter 3 I trace the trend in avatar films of a masculine repulsion of virtuality and a crisis of agency when the male character is positioned as avatar rather than player. In this chapter I counter the myth of interactivity in gaming and analyze how it plays out along gender divisions in avatar films, and then further question how the film *Gamer* 'plays' its characters in an avatarial fashion. Chapter 4 takes mortality as its theme, as I conduct an in-depth analysis of the final scenes of the *Matrix* trilogy, focusing on Neo's avatarial ascension and death and comparing his final act to the 'death' of film. In examining Neo as a layered complex, I suggest that he becomes the 'One' only through his multiplicity, by fully becoming an 'avatar'. I further propose superimposition as a conceptual strategy for perceiving embodiment as overlapping 'images' of the body, moving toward the supposed vitality of the digital (and the multilayered CG character) relative to the demise of the photographic body.

Tracking Jake Sully's (Sam Worthington) character trajectory in *Avatar* from disabled half to composited digital whole, in Chapter 5 I examine the contest between the photographic and the digital in *Avatar*, and Cameron's use of the avatar as a device for linking audience sympathy with a CG protagonist and effecting his vision of a total digital cinema. To make the film work, Cameron must overcome an alterity of the digital that has precedents in animation, and so I also examine films that combine live action and animation in order to illuminate the hierarchy of image forms that renders animated characters as 'natives', cast as other to their photographic counterparts. Nativeness segues back into gender, and in the final chapter I look at the ways in which femininity has been positioned as being closer to the virtual, surveying the various roles given to female characters in avatar films, and how virtuality triangulates with the body and the image in defining and perpetuating a paradoxical discourse of the feminine as overly near the body and simultaneously abstracted from it. Women in these films (as well as a few raced men) are trapped in their own virtuality, but at the same time are the characters who are best able to navigate their respective virtual worlds. If indeed our own world is becoming more virtual (in that our relationships to images has become more and more integral to daily life), then what guides do we have for managing these relationships?

In the conclusion I make a final proposal: drawing from my arguments on embodiment, gestalt, and gender, I flip the model of femininity as incarcerated by virtuality and, reading against the grain, suggest that avatar films (generally inadvertently) posit the feminine as a model for navigating the virtual. I identify this as a medial position, one through which embodiment is perceived as a channel for the flow of the various psychological, phenomenological, and cultural aspects of which it is comprised. The tendency for many avatar films to grant their male protagonists victory over the encroachment of the virtual, allowing them

to preserve the physical body (by implication, substantively photographic) and reclaim agency, produce only empty ideological attempts to reify an idealized notion of wholeness. It is the women in these films who exist within an avatarial gestalt, and who are best equipped for navigating image culture and embodying the contradictions of a digital world.

CHAPTER 1

THE INCARNATION OF MYSELF

A recent debate between internet pundits PJ Rey and Mr. Teacup on the nature of cyberspace relative to the real world was hashed out, quite appropriately, in cyberspace (to the extent that such a 'space' exists) on their blogs, with posts entitled respectively "There is No 'Cyberspace'" and "There is Only Cyberspace."[1] Rey's argument took a stand against what he and his collaborators on the *Cyborgology* blog refer to as 'digital dualism', in which online space is falsely considered abstracted from reality. For Rey, there is no essential separation, as web pages and videogames are grounded in the material world temporally, socially, and economically; any experiential sense of immersion for the player in virtual space falls under what Rey refers to as 'augmented reality'. In this view, online and computer interaction are merely another aspect of reality, and the concept of cyberspace as separate from reality is a bygone relic; augmented reality represents the contemporary understanding of our relation to virtual technologies.[2] Indeed, Rey adds that in his view the qualifier 'augmented' is superfluous, as it implies more difference between cyberspace and the real world than exists, explaining that his use of it is due to the insufficiency of the already contested notion of 'reality' to absorb more ambiguity.

Taking issue with Rey's post, Teacup retorted with a Lacanian response in which he agreed that digital dualism is an erroneous belief, but not because cyberspace is ontologically continuous with the real and therefore does not exist; rather, Teacup argues from the opposite

[1] Mr. Teacup, "There is Only Cyberspace," *A Blog of Various Philosophical Reflections and Speculations* (February 3, 2012), http://www.mrteacup.org/post/there-is-only-cyberspace.html; PJ Rey, "There is No 'Cyberspace'," *Cyborgology* (February 1, 2012), http://thesocietypages.org/cyborgology/2012/02/01/there-is-no-cyberspace/.
[2] Rey notes, significantly, that influential cyberspace visionary William Gibson has moved away from his seminal characterization of cyberspace as a space distinct from the real world, as this perception "no longer describes what's happening."

perspective, that "reality does not exist, there is only cyberspace." According to Lacan, the Real cannot be encountered directly, and thus fantasy mediates our contact with the real world. Cyberspace becomes another example of the many fictions through which we perceive our lives, but Teacup grants particular weight to the internet as substantiating his metaphor. The ubiquity and social impact of online communication and information, in addition to the internet's ability to encompass many other forms of fantasy, gives basis to Teacup's rhetorical extension of the fundamental fantasy of the Lacanian Imaginary (the site of ideals, images, and desire) into the computer space that was once internalized in the network but has become increasingly externalized into social reality.

Rey and Teacup's disagreement demonstrates a key consideration for contemporary subjectivity in the way that the real extends into the virtual, and the virtual guides the real. What is most pertinent in this debate is not who is right, but how the conversation can happen at all when we consider their use of the term 'cyberspace'. Rey is talking about computer technologies, while Teacup alludes to psychic engagement with the world, and while these are two separate issues, their dichotomous ideas of cyberspace are not without a point of interection, in the phenomenological experience of online space and digital data. As extensive and penetrating as the internet is, it is not actual online space that fuels this debate, but the idea of what cyberspace means for everyday living, and this aspect evokes the virtual.

The virtual is not a rejection of or alternative to the material world, but a way of understanding how we exist within it, and this begins with the body. Teacup contextualizes this relationship within a Lacanian framework that challenges Rey's cyborg approach while offering a provocative hypotheses relative to embodiment:

> Our subjective self-consciousness feels like it has been grafted on, and sits in an uneasy relationship with the body. The phrase 'we have always been cyborgs' is often taken to mean that we have always had different technologies, that human-constructed objects have extended us in various ways. Lacan proposes a radical and disturbing cyborg hypothesis: the original, zero-level alien technology that has been artificially grafted on the body is the self.

In this view, the body is always already in tension with the self. As Donna Haraway summarily puts it, "if the cyborg is anything at all, it is self-difference."[3] However, from a phenomenological standpoint, the stance taken by Teacup is problematic – if at the same time interesting for its technological bent. "Embodiment," Vivian Sobchack writes, "is a radically material condition of human being that necessarily entails both the body and consciousness, objectivity and subjectivity, in an *irreducible ensemble*."[4] The embodied self is formed precisely through having and being a body, and thus the concept of a graft does indeed seem alien. However, Teacup's Lacanian insight is in regard to the dissonance and even outright discord between self and body. Lacan situates this initially in the mirror stage, in which idealization and antipathy become wedged between self and an illusion of self that originates in two opposing impressions of the body.

The mirror holds a central place in Lacan's theory of the formation of subjectivity, in which he conceptualizes a sort of 'image body', although not simply in the reflected image. In the mirror stage, the child "assumes an image," seeing in its reflection an idealized body that appears whole relative to the fragmented body of still-developing motor skills he or she experiences subjectively.[5] The reflection of the mother as the adult both idealized and existing in the real world completes the imago of what the child might become as represented by the image.

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[3] Donna Haraway, "The Actors are Cyborg, Nature is Coyote, and the Geography is Elsewhere: Postscript to 'Cyborgs at Large'," in, *Technoculture*, Constance Penley and Andrew Ross, eds. (Minneapolis: University of Minnesota Press, 1991), 22.
[4] Vivian Sobchack, *Carnal Thoughts*, 4.
[5] Jacques Lacan, *Écrits: A Selection*, trans. Alan Sheridan (New York: W. W. Norton, 1977), 2.

Although the child eventually leaves the mirror stage as he or she is inducted into the Symbolic order with the acquisition of language, the mirror stage remains with the subject as it typifies an essential libidinal relationship with the body image. Thus subjectivity is gained only through an encounter with a virtual counterpart while remaining irrevocably fissured as the result of an inability to overcome the differences between the material and image bodies.

Self-difference in at least some form does indeed inhere in embodiment, as demonstrated in the models of mental processes and the brain produced in recent neuroscientific advances. Teacup's concept of grafting accords to some extent with the school of thought that our mammalian brains evolved on top of a reptilian prototype that remains, and we are thus to some extent constantly in conflict with our evolutionary heritage. However, other recent thought has posited an advantage to self-difference, as in David Eagleman's theory of the brain as a 'team of rivals' moderated by the conscious mind – an evolutionary development which allows for adaptation and complex decision-making. Eagleman paints a picture of consciousness as the tip of the iceberg as numerous subroutines perform the bulk of the labor in managing the body and interacting with the world. This organization is, for Eagleman, highly beneficial, as it allows the conscious mind to focus on a few managerial decisions, especially where the 'rivals' are at odds, rather than the immense work of coordinating muscle movement, processing the full range of sensorial stimuli, and even working through difficult problems, which largely occurs under the surface while the conscious mind 'takes credit' for a good idea.[6] In a way this is not so different from Freud's model of the mind as competing factions, the superego policing the id and the ego sustained in balance between the two. But whereas for Freud the repressed aspects of self – as if

[6] This has implications for agency as well, as Eagleman writes "people have little capacity to choose or explain their actions, motivations, and beliefs, and the captain's wheel is steered by the unconscious brain, shaped by innumerable generations of evolutionary selection and a lifetime of experiences." David Eagleman,. *Incognito: The Secret Lives of the Brain* (New York: Pantheon Books, 2011), 190.

a dark double lurking in dreams and childhood trauma – threatens the ego, for Eagleman human evolution and consciousness as we understand it depends on the mind opposed to itself in order to work through complex decisions. Transferring conscious processes to the unconscious mind is for Eagleman a healthy process, a move toward efficiency than repression. Acknowledging how small a role the conscious mind may play in cognition and behavior can yet be disconcerting, however.

There are other ways in which we are alien to ourselves as well. The interior of our bodies – muscles, organs, blood, etc. – is strange to us, alarming when it comes to the surface and foreign on a video monitor as viewed through a spectroscopic probe. Indeed, most of us encounter the inner workings of the body only through images, whether in educational materials or through medical imagery such as x-rays and MRI scans. Even our external bodies, and especially faces, are encountered largely through images as objective views of ourselves exist outside our field of vision. Photographs and home video become means for self-reflection – and increasingly for self-expression with the rise of social media – with the mirror, of course, operating as the basic technology for encountering the self externally. If we have an affinity for images, it is perhaps in part because we exist in images, and the model of the avatar suggests that we not only take pleasure in viewing them, but that this affinity extends into a certain level of identification.

In the mirror stage, the reflected body becomes desirable for its apparent wholeness, and the state of fragmentation and longing for wholeness that emerge from the formation of subjectivity during the mirror stage produce an oscillatory self that moves between subjective consciousness and a symbolic, idealized other. Bob Rehak, in his psychoanalytic history of videogames, conceives of this other as a ‘living avatar’, for “if the mirror stage initiates a

lifelong split between self-as-observer and self-as-observed, and the video game exploits this structure, then, in one sense, we already exist in an avatarial relation to ourselves."[7] The popularity of videogames, he suggests, can be explained in part in the way they revisit the mirror, and even provide an interface to it. Turning off the game and breaking the avatarial connection allows the user to preserve a (false) sense of wholeness after having been subjectively sundered while playing the game. The avatar becomes the reflexive ideal, and indeed our videogame counterparts are frequently endowed with better moves and increased abilities, even if the novice player might encounter frustration in fully engaging these bodies.

At the same time, the avatar should not be construed as simply an ideal, for gaming is a play of power relations – including the relationship between user and avatar. The pleasures of the avatar "seem amplified by the uncanny difference between reality and reflection: an alterity enabling players both to embrace the avatar as an ideal and to reject it as an inferior other."[8] Videogame avatars, in their alterity, seem to invite sadism as the ontological distinction of the self-image forms an illicitness that must be symbolically punished, destroyed, or powered off, only to be resurrected again (and again).

Rehak's application of Lacanian theory to videogames is insightful for problematizing discourses of entering cyberspace. Ultimately, however, Rehak's analysis preserves the tension and need for identification that the mirror stage institutes. For Lacan, the condition of the mirror demands an either/or approach (which, as Rehak points out, becomes oscillatory), as the subject is torn between percieing self as either this incomplete sensory experience or that illusion of completeness. Sherry Turkle, in her psychosocial work with players and avatars, analyzed player attempts to modulate between these positions, as her subjects created alter egos with whom to

[7] Bob Rehak, "Playing at Being: Psychoanalysis and the Avatar," in *The Video Game Theory Reader*, eds. Mark J. P. Wolf and Bernard Perron (New York: Routledge, 2003), 123.
[8] Ibid., 107.

identify and which could be used to counter social alienation or negative self-image, or to explore aspects of self-difference through gender play, for instance. However, here as well the avatar is stuck in a circuit of fantasy and reality with the mirror used as a means to an end, seeking the gestalt that never fully materializes. For Turkle, success was dependent on achieving an altered self-image that persists once the computer is turned off; this proved elusive as avatar identity came to be seen as less intertwined with real world identity than originally thought.

The controlled experiments of Nick Yee and Jeremy Bailenson imported the device of the mirror into virtual space in order to measure behavioral change as a product of difference in avatarial appearance. In one experiment, a first-person user would encounter his or her 'reflection' before engaging in a brief social interaction, followed by an interaction with another avatar. As might be expected, participants were more assertive and confident when their avatars were taller and more attractive, but Yee and Bailenson also highlighted the short duration in which subjects had encountered themselves with avatarial modifications, looking into the virtual mirror for only about a minute. The power of altered appearance on self-perception is evident, even when one knows the alteration is limited, and this experiment is interesting for its literal use of a mirror, even if Yee and Bailenson were only able to demonstrate its effects for short-term use.[9]

I have mentioned these examples of avatarial mirroring, through videogames, virtual worlds, and controlled experiments, to establish a sense of how avatars have been used and theorized relative to the Lacanian mirror. Each produces variations on using what might be thought of as the fragmentation intrinsic to the avatarial interface (a subjectively embodied self

[9] More recently VR interfaces and virtual environments have been used in therapy for PTSD, acrophobia (fear of heights), and other phobias and disorders. These uses are less concerned with social identity and more with immersion in controlled trauma-inducing scenarios. While the practice is still young, early results are positive. See Amanda Schaffer, "Not a Game: Simulation to Lessen War Trauma," *New York Times*, August 28, 2007.

here, an objective image body there) to confront (through reenactment) the fragmentation postulated by Lacan in the mirror stage. I have noted ways in which they seem not to achieve their implicit or stated aims of producing and sustaining some sort of idealized gestalt, but I am less concerned here with their effectuality than I am with addressing the gestalts they suggest. For Rehak, the psychology of videogaming falls squarely within a Lacanian definition of fragmented subjectivity, while in the experiments conducted by Turkle, Yee, and Bailenson, success was dependent on its persistence outside of the fragmentation of the interface. My aim in this dissertation is to draw out, through the lens of contemporary new media theory and an analysis of media texts that situate avatars and virtuality within digital culture, a reconceptualization of the gestalt from Lacan's use of the mirror in his theorization of subjectivity that posits a relation between body and image.

An important aspect of these media texts is the way they position virtuality relative to the 'real'. The avatar film *Surrogates* offers an iconoclastic reaction to what it presents as a cultural fantasy of replacing one's fragmented reality with an idealized self-image (Fig. 3). Set in the near future, the film imagines a world in which most of the population lives vicariously through androids, which they control avatarially from 'stim chairs'. These surrogates usually appear as younger and more attractive versions of their users, for whom they provide prophylactic safety and a degree of social acceptance. An anti-surrogate faction, nicknamed 'Dreads' in an overdetermined nod to their organic roots, have been sequestered on reservations where they appear to live impoverished lives amidst junked cars and run-down mobile homes.

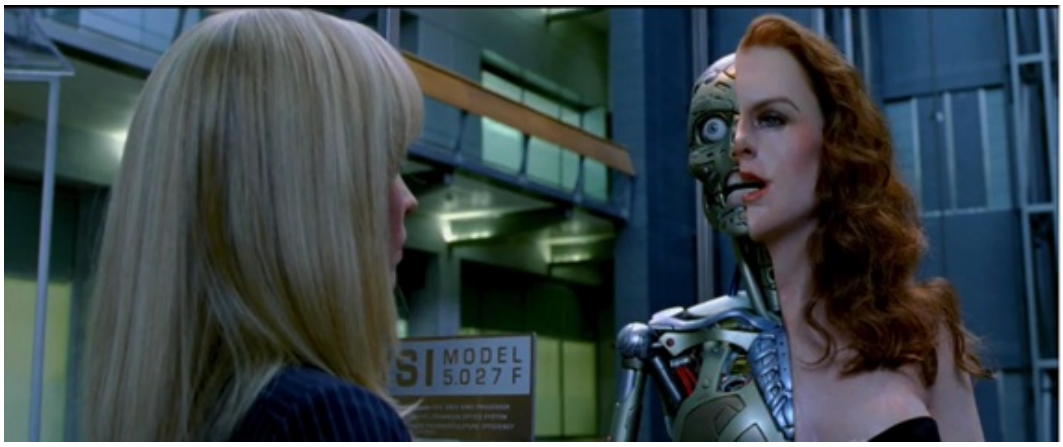

Figure 3. Agent Peters (Radha Mitchell) views a cutaway demo of a surrogate body in Surrogates.

The film begins with a murder, an attack with a secret weapon that kills an operator through his surrogate – an inconceivable death in this society. During the investigation, Agent Greer (Bruce Willis) confronts the menace to the surrogate lifestyle represented by the weapon, as well as his deteriorating home life, as his wife Maggie (Rosamund Pike) has grown distant, and refuses to appear even around the house without her surrogate. Bemoaning this loss of intimacy and dealing with the loss of their son, Greer begins to wonder whether surrogate living blunts reality too severely. As his investigation into the murder procedes, it turns out that the creator of surrogate technology, whose sympathies have turned sharply against surrogates, is planning to use the weapon to kill all surrogate users through a central network. In an attempt to foil the investigation, Greer's partner, Agent Peters (Radha Mitchell), is killed and her surrogate co-opted, but Greer still manages to stop the genocide. However, now operating Peters's surrogate, Greer is presented with the opportunity to destroy only the surrogates. He does so, and his action results in former surrogate users stumbling out of the apartments they haven't left in years, squinting in the sunlight, while Greer puts his arm around a contrite Maggie. Facing the window, they look out on a new day.

What this day will bring is not exactly clear, for there seems to be little investment by the film in providing a real in which to return. However, the reality against which surrogacy is opposed fits rather nicely within Baudrillard's dystopic vision of the 'desert of the real') – the age spots and crow's feet on a balding Willis, the detritus and poverty of the Dread reservation, and finally the banality and indetermination of the real world once surrogacy has ended. Greer has destroyed the idols, but not the need, or at least the impulse to create them. The emptiness of the film's ending, littered with the photogenic corpses of decommissioned imagos, seems an almost tacit acknowledgement that the surrogate *within* the operator remains. Avatar films like *Surrogates* offer pop mythologies dealing with the crisis of being an avatar – an anxiety conflatable with the crisis of becoming an image, even as images, in this film and in general, serve as objects of desire. The iconoclastic move of killing one's mirror image has rich antecedents in the literary and psychoanalytical figure of the double or doppelgänger, which wrestles with problems of dualism. Where the cyborg divides and integrates, the double multiplies and separates, and we find these two antipodal but ultimately related points intersecting in the avatar – the 'incarnation of myself'[10] – and in the related problem of being a 'half'.

The Double That Hid in the Depths of You

The double in Romantic literature is a figure of projection and materialization, a psychological state embodied, who then often haunts or helps a character from the outside. As a second self, the double is a solipsism, an excess of self or the result of an inability to contain some psychic element (such as overwhelming guilt) or dangerous impulse that forces a

[10] This phrase, spoken by the character Ivan in Fyodor Dostoyevsky's *The Brothers Karamazov*, is part of Ivan's defiant response when confronted with his double in the form of a sinister gentleman. However, while he detests the double, he feels that he also knows him intimately, admitting "I only don't know by what means I can destroy you."

manifestation of the hidden self – an ominous return of the repressed, which usually leads to a (cathartic) confrontation and a fight to the death. Freud siezed on the notion of the double in his essay "The Uncanny," identifying it with the return of repressed material or regression to a primitive state, and quoting at length his colleague Otto Rank, who developed the notion of the double along psychoanalytical and anthropological lines. Fundamental to the presence of the double, for Rank, is the relation of the self to the self, and he relies on the Freudian unconscious to explain it, as well as resorting to aboriginal societies which were viewed as fossilized cultures forming a sort of pre-consciousness to the advanced societies that followed. Belief in an immortal soul and an impulse for self-preservation factor largely in his anthropological study, as the atavistic view of the double is closely related to death. The uncanny double is a product of the mind opposed to itself – which also prefigures the Lacanian subject always haunted by his double in the mirror.

A key text for Rank's understanding of the double is the 1913 film *The Student of Prague* (Stellan Rye), in which Balduin (Paul Wegener), a poor student, strikes a deal with an evil sorcerer: in exchange for wealth and success, the sorcerer will be allowed to remove one thing from Balduin's room. Balduin laughs at the terms, knowing the room contains nothing of value, but after signing the contract stands aghast when the sorcerer draws his reflected image from the large mirror in the room and leads it away (Fig. 4). Balduin's doppelgänger returns periodically to bedevil his attempts to woo the countess with whom he has become obsessed, eventually driving him to the brink of suicide, when his double appears one last time. Balduin shoots it with a pistol and it disappears, then he laughs with relief as he is finally able to again gaze at his reflection in a hand mirror. In that same moment, however, he feels a pain in his chest and realizes he has been shot – in striking the image, he has killed himself.

Figure 4. Balduin, the sorcerer, and his reflection/double in The Student of Prague.

Image and body are interestingly conflated in the double; in *The Student of Prague*, the mirror image takes physical form and acts on its own, but never quite ceases to be a reflection or image. Balduin becomes simultaneously overpresent to himself and alienated from himself, and this oscillation produces ontological uncertainty as the character doubled to some extent becomes a facsimile as well – one half of an unholy dyad. The horror of facing the double is at the same time the horror of becoming the double, becoming aware of oneself as an ontological half or 'image' of oneself. This particular horror appears to be a masculine one, as the literary double is almost exclusively a male phenomenon – a tendency perpetuated in avatar films.[11] For the

[11] As noted in Rank, xxi, n.9. In contrast, films in which the double is female tend to take a different approach. *The Broken* demonstrates that being the sinister double also has its emotional remifications and the potential for sympathetic characterizations. In Krzysztof Kieslowski's *The Double Life of Véronique* (1991), Véronique (Irène Jacob) is filled with grief and longing when her double, whom she senses but never sees until she views a photograph at the end of the film, dies during a choral performance. The connection between the two women is intuitive, emotional, and loving, rather than the ocularcentric horror of the male double. Whereas with the male double, as in the hypermasculine *Fight Club* (1999, David Fincher), the doppelgänger is a product of self-loathing and repression, feminine doubling is more comfortable with its reflexivity and self-images. Notably, however, Maya Deren's 1943 film *Meshes of the Afternoon* uses the double to explore Freudian themes of the return of the repressed

subject whose identity is forged in the illusion of unity, centeredness, and transcendence, the doubled body is abhorrent.

In *The Student of Prague*, the image comes into play in more ways than one. Writing about the film, Rank praises "the uniqueness of cinematography in visibly portraying psychological events," as well as cinema's ability to render with clarity "the interesting and meaningful problems of man's relation to himself."[12] It is interesting that Rank focuses on the cinematic capacity to produce the double, since of course it cannot except through visual trickery in editing, camerawork and mise-en-scène (Balduin's double appears to be a look-alike rather than a double exposure) – after all, there may be two Balduins but there can only be one Wegener. However, Rank seems more focused on the nature of the medium in something like a surrealist vein, asserting that cinematography "reminds us of the dream-work, [and] can also express certain psychological facts and relationships – which the writer is unable to describe with verbal clarity – in such clear and conspicuous imagery that it facilitates our understanding of them."[13] Rank's privileging of an indexical medium to portray subjective states, while somewhat ironic on its surface given his comparison to literature as a less adequate medium for representing the mind, is perhaps best understood precisely within the indexicality of cinema – that is, its capacity for disrupting its own photographic index. Cinema even in its naturalistic mode shares something of the mischievous nature of the double with its play of presence and absence, but in its capacity to image that of which no picture can be taken, as well as in the

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and intrusions of the unconscious mind, challenging any masculine claim to the trauma of the double. I discuss matters of gender realtive to the double of the avatar in Chapters 3 and 6, regarding masculinity and femininity, respectively. Otto Rank, *The Double: A Psychoanalytic Study*, ed. and trans. Harry Tucker, Jr. (Durham: University of North Carolina Press, 1971).

[12] Rank, *The Double*, 7.

[13] Ibid., 4.

visual presence understood to mimic the dream state, cinema seemed to Rank unrivaled.[14] The haunting moment in which Balduin's reflection emerges from the mirror attains its particularly eerie quality because of its occurrence on film, as to show the double is, to a certain extent, to *see* the double. That is, we as viewers have also encountered a double which, while not so personal for us as it is for Balduin, nevertheless ruptures the cinematic world which in so many ways mirrors our own.

In contemporary films, such as the avatarial texts we are now prepared to engage, the tricks of doubling and disrupting the index have become much more sophisticated; however, they more often rely on the rather simple 'trick' of placing an actor in multiple roles. That is, rather than two actors playing 'Balduin', we are more apt to find a single actor playing a character and his or her avatar.[15] What seems simple on the surface, however, becomes fertile ground for study when we consider it in light of image production within digital culture and the relationship between actors in images and characters with avatars – as well as the cultural and psychological crisis of not only having an avatar, but *being* an avatar.

The Face in the Virtual Mirror

> I concur that there is a split between the physical and virtual self. Furthermore, I believe that it is a purpose – no, a *duty* – of virtual worlds to facilitate the reconciliation of these selves.
>
> Richard Bartle[16]

As co-creater the first MUD (multi-user dungeon) in which users adventured and socialized in the shared online space of a text-only environment, Richard Bartle interestingly

[14] We can see of course in Méliès the tendency to associate cinematic tricks with magic and sorcery, and he built his career upon this aspect of cinema. But Méliès used this quality in the service of spectacle rather than introspection. Digital effects cinema also tends to avoid subjective states, demonstrating instead an overwhelming propensity for objectivity, to *show* rather than express.

[15] *Gamer* is an exception here, as Simon and Tillman together form Kable.

[16] Bartle, *Designing Virtual Worlds*, 510.

initially resisted the impulse to allow players to create character descriptions, arguing that players could explore identity more freely if they weren't "tied to some image."[17] Eventually, however, Bartle came around to the possibilities of playing with textual images tied to the self, and even produced a taxonomy of levels of engagement, from casual play to full-blown persona, as a measure of users' psychological and social integration with their self-representations. The signification of these images, he argues, is a product of dissonance and consonance, as "[signs] arise because of the difference between virtual world technology and the way reality works. . . . immersion is accepting the signifier as the signified."[18] The reconciliation Bartle proposes seems to be the solution to a split seemingly effected by the existence of the virtual environment itself – one for which images initially seemed part of the problem, and later the means for integrating the physical and virtual selves. The implicit question remains, however, of the role of virtual environments relative to virtual selves, whether one of production, reconciliation, or dissonance – or all three.

Films about avatars thematize the split and potential reconciliation between physical and virtual selves, although not typically through presenting the virtual diegetically as a product of digital technology. Rather, virtual selves tend to be represented through performance and in actor bodies, or what might be thought of as 'analog' forms. Even the CG technologies used to produce images of avatarial bodies often dissimulate their technological origins; digital effects in *Surrogates*, for instance, are used more frequently to add subtle manipulations to actor bodies (such as smoother skin) than to produce images of machine bodies.

Division and reconciliation are visually manifest in a particular trope within avatar films, a contemplative moment in which a character comes face-to-face with the avatarial double. In

[17] Ibid., 184.
[18] Ibid., 635.

Surrogates, which depicts a world in which people live through robotic avatar bodies, Greer's surrogate body (Bruce Willis plays both Greer and his surrogate) enters the bedroom where Greer's biological body lies inert, and as he sets down the glass of water he brought for it (or it brought for him?), looks at this body with what seems to be a mix of pathos and disdain, an existential ambivalence about having 'beaten the meat', as Sobchack puts it. Moving to the charger, the surrogate docks and Greer disconnects from the interface, completing the face-to-face look on his way out of the room with a glance at his surrogate. Because only one body at a time can actively 'look', this exchange is completed through two looks, separated by a transfer of active use from one body to the other.

In another example, the look between user and avatar is facilitated by a mirror. In *Sleep Dealer*, Memo (Luis Fernando Peña) is a Mexican migrant laborer who works on a construction site in San Diego, operating his robot avatar through a VR-type interface in Tijuana. Seeing what the robot 'sees', Memo catches a glimpse of his avatarial self in the reflection produced in a metal sheet. Memo looks in one place but sees in another, through contact lenses that place the image display directly on the eye; he is 'touched' by images even as his sense of his own body is decoupled. Attached to tubes and cables and wearing an oxygen mask, Memo is unable to emote, and thus while his face is relatively blank, his emotions are projected onto the unfeeling visage of the robot, which strangely seems to contemplate its own avatar ontology in this moment. In Memo's drained expression it appears that the image dominates him, and it seems that both Greer's and Memo's face-to-face looks wrestle with seeing the self as a hollowed-out image, the depersonalizing double that leaves each feeling only half human. One might find a desire for wholeness or reconciliation in these looks, but to what wholeness can they aspire? How can one, having been divided and encountering the image of oneself face-to-face, ever be whole again?

While these looks imply concern about being avatarial, a comparable look in *Avatar* moves more toward an implicit wholeness. When Jake Sully (Sam Worthington) initially sees his avatar body, created originally for his deceased identical twin, the strangeness of its blue flesh and large size are belied by its lithe athleticism, alien beauty, and humanoid appearance; indeed, as the avatar contains his DNA and was designed with features of Worthington's face, Jake encounters himself in a strange mirror, but one filled with potential for the crippled protagonist rather than the emasculation of the cosmeticized body (*Surrogates*) or mechanized laborer (*Sleep Dealer*).[19] The paraplegic Jake, already half a man, is primed to see himself in a different light, and the foreignness of the avatar body is quickly overcome by what it offers him. Each of the avatar bodies, these selves as images, are also framed as pictures of a sort: Greer's surrogate in the charger, Memo's robot in the mirror, and Jake's avatar in contained within the steel girders of its tank. While the looks of Greer and Memo are shot in POV, however, Jake's moment with his avatarial image includes a moving shot with the camera positioned behind him, adopting the perspective of the videogame (positioning him as avatar) that serves as an apt visual metaphor for the particular form of the 'reconciliation' this body will afford him.

"The double," writes Baudrillard of clones, while evoking the psychological double of Romantic literature, "is precisely not a prosthesis: which, just like the soul, the shadow, the mirror image, haunts the subject like his other. . . . when the double materializes, when it becomes visible, it signifies imminent death."[20] The conundrum for the avatar user in these films is determining when the avatar body moves from the status of useful prosthesis to ontologically problematic self-other. Avatars, it seems, occupy a space somewhere in between, and in digital

[19] As with the psychological double, these looks seem mostly to be a male phenomenon. Maggie, for instance, never appears outside of her surrogate until the end of the film, and when she does have a face-to-face moment with another female surrogate in the salon, she is focused on sustaining the image body rather than reflecting on it (I discuss this moment more in depth in Chapter 6).

[20] Baudrillard, *Simulacra and Simulation*, 95.

use different types of avatar bodies function differently: early avatars with their limited expressivity are arguably closer to tools, while contemporary avatars seem to approach the double. Greer, Memo, and Jake each deal with the problem of becoming too close to or too much like their avatars (Jake's conflict is externalized through his allegiance to Colonel Quaritch [Steven Lang], who encourages Jake to use the body but maintain an emotional distance); however, inherent in and even integral to the films is the sense that not only will these characters find difficulty separating themselves from their avatar bodies, but that the characters are ultimately, inseparably avatarial. Memo implicitly comes to accept his avatarial state as an economic necessity, as *Sleep Dealer* ends with Memo staying in Tijuana and his job as an avatar operator rather than returning to his family's milpa; *Surrogates* ends with the destruction of the avatar bodies, but the film fails to conceive of a world without them, removing the advantages the surrogates afforded their operators (including pleasure, security, attractiveness, and acceptance), and replacing them with a bright new day of mundanity and vulnerability; and *Avatar* concludes with an embrace of Jake's new body imbued with a prelapsarian wholeness diegetically and a fundamental doubling imagistically – achieving wholeness, it seems, only through the embrace of the double and fully 'bonding' with the avatar body. The problem faced by the characters in each of these films thus seems less a matter of what to do with the avatar body than how to face their own avatarial nature, which the avatar bodies bring into sharper relief.

The conceptual move from the avatar body which gives rise to avatarial behavior, to an avatarial quality within the user that prefigures the avatar, reflects the move from machines to images as the theoretical point of intersection between the body and technology in contemporary culture. Tom Boellstorff notes that "cyborg selfhood is predicated on a prosthetic continuity

between human and machine. . . . In contrast, virtual embodiment is predicated on a discontinuity, the gap between virtual and actual."[21] Prosthetic continuity in film is often visualized as the integration of steel and flesh or the intelligent robot masquerading as human. But how is the discontinuous gap visualized here? The avatars in *Surrogates* and *Sleep Dealer* are mechanistic bodies, though not exactly robots; in an inverse of AI and the sentient robot, these are 'mindless' mechanical bodies that require a human operator to function while appearing autonomous (and often human). Rather than acting as vessels for replicated or downloaded human consciousness, these bodies simply channel it, becoming the medium for human engagement with the world on one respect or another. The absence of AI in these films removes the threat of machine agency, but at the same time positions the prosthesis as self-determined by making it discontinuous with the human body, appearing to act as a body of its own. In this way, these machine bodies are positioned as images, as reflections of their users: in *Surrogates*, the appearance of the robots is tied to personal identity, and in *Sleep Dealer* the robot operates as a clear metaphor for Memo's political and ontological status as a part of the machine, while at the same time precisely not a machine – in fact, having replaced machine AI in a postindustrial world still reliant on infrastructural machinery and steel. The reflexive properties of the avatar body in *Avatar*, exemplified diegetically in Jake's genetic tie to the Na'vi body he will 'drive', however, repositions the otherness of the avatar body within the construct of the mirror, so that while the character can disconnect technologically, an ontological divestment is impossible; Jake, once but no longer a twin, finds in this new body a way to become his own twin, to become the image of himself.

These avatars at the same time function as disarticulated prostheses, connected to the body from a distance, or rather in an 'ensemble' that incorporates distance as conditional for its

[21] Boellstorff, *Coming of Age in Second Life*, 138.

use. Thus on the one hand avatar use is clearly subject to the amputation theorized by McLuhan as a condition or result of the prosthetic extension; such amputation of experience is the central theme of *Surrogates*, where Greer is vexed in his relationship with the 'surrogate' Maggie has become. On the other hand, the disarticulated prosthesis takes on a certain life of its own in projecting wholeness and existing as a type of body, 'experiencing' the world on behalf of its user in online use (a phenomenological condition that is the subject of fantasy and anxiety in the films). McLuhan's exchange of extension for amputation is predicated upon the presumption of a certain bodily integrity or original wholeness of the human that is diminished and supplemented. The avatar on its surface implies fragmentation, but more essentially, perhaps, suggests connection, as avatars only 'work' when connected, when engaged within a doubling relation. Anxieties about the avatar in *Surrogates* and *Sleep Dealer* are ultimately not fears of hybridity and displacement by technology, but enunciate rather the doubled condition of human subjectivity and embodiment – an existence eventually embraced in *Avatar* on multiple diegetic, thematic, and technological levels, in becoming, to invoke Baudrillard again, "the double that hid in the depths of you."[22] The avatar body as a fragmentation that is perceived as a whole becomes an analog to the human body also experientially fragmented that can only become whole by merging with another whole – the double 'outside of you' that serves as a ludic materialization of the double within.

The face-to-face encounters in these films never fall squarely within the horror of the double in nineteenth century literature. Contrary to the literary double that spells death through over-presence, dis-integrating the individual by presenting the subject back to himself, the avatarial look accepts, to one degree or another, a counter-self that exists in images. The weary familiarity present in Greer's look, and the pathos evoked by the look Memo's robot seemingly

[22] Baudrillard, *Simulacra and Simulation*, 107.

directs at itself, convey the characters' resignation to a general condition rather than individual fear or abjection – not certain death, but a reality of the double culturally ingrained, even if the characters find it personally undesirable (within the world of *Surrogates*, Greer's dissatisfaction, along with the small Dread minority, is an exception in an avatarial society that is otherwise quite satisfied with itself). But in *Avatar*, the face-to-face look turns to curiosity, fascination, and possibility – the thrill of a body not just represented in images, but seemingly made of images. The response to the avatarial double moves from futile rejection in *Surrogates* to begrudging acceptance in *Sleep Dealer*, to the desirability of the spectacular digital body in *Avatar*.

The face-to-face look visualizes the way in which avatars have come into their own – not in the way that AI did in the sentient machine, but rather in the way that they are neither sentient nor simply tools or prostheses. Where the integration of the cyborg is too near, the avatar produces distance within the human connection with technology, and thus the avatar not only becomes the potential object for a look achieved at a distance, but also gives a face to the technological extension, allowing the avatar to look back. In the mirror Memo sees not only himself re-embodied, but also his robotic avatar looking back at him, with each body in service of the other. The eyes of Jake's avatar are closed while in the tank, containing its 'look', as the avatar does not impose on him the anxiety of the double but moves the avatar back toward a prosthesis he can become rather than a double that he already is.[23]

Surrogates offers another interesting facet of the avatar returning the look in what might be called a 'triangulated POV', as Greer's surrogate looks at the biological body while a nearby monitor displays the first-person view of what the surrogate 'sees'.[24] The first person view

[23] In Chapter 5 I develop Jake's particular double as a character trait rather than as part of a cultural condition.
[24] Thanks to Sue Felleman for this suggesting terminology. Also, I can't help but notice the similarity of the view in the monitor to reports of near-death experiences, in which the momentarily deceased note the strangeness of seeing their own bodies from the outside.

belongs on the one hand to Greer, whose eyes are obscured by goggle displays, but on the other hand to the surrogate, whose iris cameras provide the view which Greer sees, and whose body makes possible this particular view of Greer from the outside. The POV collapses in on itself – contained in a single shot and to a single character, relayed by two bodies and an extra screen – in a self-gazing paradox.

This form of self-looking facilitated by the second body in the film can be related to the online avatar which, while typically not returning the look face-to-face, is situated between its user and interactions with other users, so that avatarial interaction with others is always partly a solipsistic interaction within the user-avatar dyad: what they see when they look at 'me' is also within my view, the same body I am seeing, and thus also a kind of mirror. The avatar in Second Life does turn to face the user in an adjustment mode, when the user manipulates appearance in a configuration that includes a certain amount of intimacy, as the avatar loses social functions in this mode.[25] Interestingly, however, the avatar is still on view to other users, who learn to recognize this mode as a form of personal space and, as a matter of etiquette, keep their distance until the modifications are complete and the avatar returns to being socially avatarial, rather than personally avatarial. Also, in Second Life snapshots and portraiture, the face of the avatar is generally turned toward the user, whose view is at this point disassociated with what the avatar 'sees' and instead occupies the place of other users in seeing the self-representation face-to-face. The virtual camera captures the avatar as both a self-existing double with an ontology of its own, and a perfect half, so to speak, cleft from the user to which its blank gaze now turns.

[25] This might be the equivalent of the face-to-face looks in the films, and can be a rather odd experience after having spent most of one's time in the virtual environment behind the avatar.

Altered Egos

As simultaneously halves and doubles, avatars suggest a particular configuration for a human existence situated between virtuality and materiality, encompassing both while unable to fully be either – we are double in that our embodiment encompasses multiple experiential aspects, and halves in that we can never simply exist as one of these aspects, material, discursive, or imaginary. This dichotomy is explored in the work of Robbie Cooper, whose images of avatars and users in his book *Alter Ego* in a certain way reproduce the avatarial relation, and thus the book itself might be thought of as an avatarial work, as well as a book about avatars. A diptych-like layout positions users and avatars on facing pages, in reflective compositions with both user and avatar occupying similar size and position in the frame, and often sharing poses and clothing styles. The juxtaposition of these images can be quite striking: a 25-year-old stewardess-in-training from Seoul appears demure with her hand at the base of her neck, in marked contrast with the confidence of her sleek male elf avatar and his multi-bladed swords; a mother of three poses with her children while her sexy, raven-haired avatar shows off her assets above text describing her appearances in virtual pin-up magazines; and a severely disabled man is photographed with the oxygen mask that partly obscures his face, while his Boba Fett-like avatar in the Star Wars Galaxies platform is, interestingly, also fully masked (Fig. 5). After viewing these side-by-side images and reading about the personal relationships the individuals have with their avatars (written by the users themselves), the gap between the two sides begins to elide into two manifestations of something singular rather than divided, or even a single image or entity produced in the connection of the two.

Figure 5. A disabled user and his avatar, pictured in Alter Ego

Classical diptychs traditionally feature two related images, such as the Virgin Mary and the angel Gabriel, on opposite panels, forming a single picture or scene in two frames. The functional hinge of what was also called a 'traveling icon' allowed the pair of images to close in on themselves to form a single body. Something similar can be seen in Cooper's arrangement of the pages, poses, and text that elide these side-by-side images in something more than a meaningful connection (from user to avatar) or spatial configuration (such as in the shared space between Gabriel and Mary at the annunciation) to a sort of haptic conflation; as the reader turns pages, the two pictures are face-to-face within their paginated enclosure in a narcissistic kiss.

We take for granted, perhaps, that avatars always have users, and featuring them together in the pages of a book or on the introductory page of the Second Life website seems a fairly natural exercise. Typically, however, only one body at a time appears to others in avatar use, and such a visual arrangement is integral to the notion of what an avatar is. Showing the two together violates the avatarial arrangement in online use, and thus the book works doubly as both a

thoughtful joining of what is typically asunder into coexisting images, and an iconoclastic exposé that upsets the mystery and vitality of the avatar by revealing the second body.

Avatars and users are given equal ontological weight in the book, which raises the question of which is designated the 'alter ego', the other I. Cooper's pairs evoke both a Janus that looks out at the viewer from two faces, and a Narcissus fascinated with the self-look. In the book's subtitle, *Avatars and their Creators*, Cooper plays with a semantic distinction between the avatar and the user, notably granting 'avatars' the primary position and designating users as 'creators'. The book can be read as a collection of avatars and their origin stories, so to speak, as each avatar portrait includes thoughts by the 'creator' about why that particular avatarial form was chosen. Users are associated with an act of creation rather than their continued or active use, implying an act by which one body produces another. But who creates whom? The virtual element in virtual technologies is not their digital format, their mimetic creations of bodies and objects, or their interactive components, but rather the way they facilitate an understanding of and certain experiential connections to the virtuality inherent in being human. Or, recalling Boellstorff's statement, "virtual worlds show us how, under our very noses, our 'real' lives have been 'virtual' all along." Virtual technologies have brought out the avatar in us and extended a sense of our own virtuality, in concert with the theoretical formulations and cultural and informational contexts that have made us aware of our status as virtual beings. Regarding avatars and their creators, then, we must acknowledge the role of the informational and visual technologies that bring out or reflect the avatarial in us, under the guise of unilateral control.

In later work, Cooper takes the imaging of the 'avatar' further by dividing the avatarial halves, showing pictures of avatar users (this time children playing videogames) while removing the avatar bodies from the picture. In the photo/video series "Immersion," Cooper positions the

camera at the level of the screen, so we see the children from the point of view of the avatar, so to speak (Fig. 6).[26] These are unusual images of telepresence, with the lens trained exclusively on the physical world, alluding to the virtual world only through the responses it generates. The children are focused and clearly engaged with something we can't see, but at first glance this could be any engrossing activity, and thus the pictures, at least initially, lack the visual thrust and explicit connections of his *Alter Ego* series. But what is most interesting about the pictures is not what they show, but what they don't.

Knowing through Cooper's introduction that the subjects are captured while immersed in virtual environments, their eyes, half locked in concentration, half lost in a trance are distant and difficult to read, even as they seem to be staring directly into the camera. The children are very present in the images which, with blank backgrounds, feature little else, but at the same time they are somehow missing, as if the camera captured their bodies but missed something of their embodiment.[27] In the SyFy series *Caprica* (2009-10), a character learning to move the avatar in which he is embodied is instructed to 'tell himself' to walk, and bodily movement becomes a cognitive action that is at the same time very much a proprioceptive and instinctive one; the character initiates the movement through language, but once initiated walking comes naturally and easily, clearly drawn from the lived body rather than progressing as a stultifyingly cognitive exercise in putting one foot in front of the other. It is a similar dichotomy of active and passive that seems evident in the photographs, as the kids' senses are highly activated – they are running, jumping, and battling with dexterous maneuvers that make use of the embodied experiences and skills they have acquired in the physical world, even if the actual movements they make to

[26] The series can be found on his website, robbiecooper.org.
[27] I specifically avoid any reference to mind or consciousness here, as the images put to rest any lingering doubts about the engagement of the body with virtual space: tensed muscles, darting eyes, rapid movements of the fingers, leaning and dodging, etc.

accomplish this are not of the same type. The small movements and twitches that accompany the button-pushing (particularly evident in new players unaccustomed to channeling their embodied impulses) are indicative of the signals still reaching the muscles.

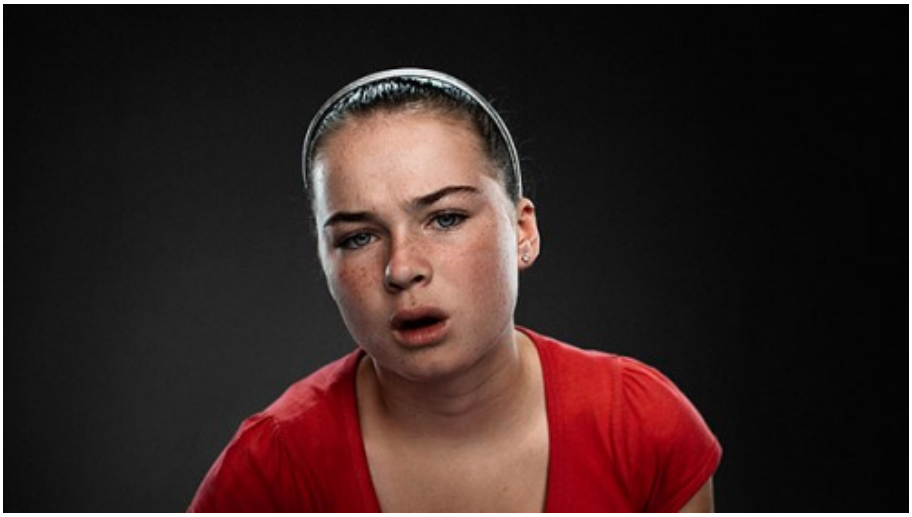

Figure 6. A girl locked in concentration while playing a videogame in Robbie Cooper's "Immersion" project.

The viewer is positioned by the camera in the place of the off-screen double, in the position of the imagistic virtual environment and avatar bodies that captivate and invigorate the player, while the players occupy the space in front of the screen. At the same time, however, the engaged players are partly 'here', on the side of the viewer, while we are partly 'there', trying to see through their eyes and imagine the virtual experiences they are having, and thus the images have a highly liminal quality that invokes the virtual. While Cooper creates an avatarial work in *Alter Ego*, "Immersion" suggests that the avatarial connection ultimately cannot be fully captured in a single or even multiple images, only alluded to in various ways – or through various bodies.

The "Immersion" project might be thought of as producing images of half-avatars; having established the 'avatar' in *Alter Ego* as the physical and digital doubles juxtaposed, in

"Immersion" he bifurcates this avatar by placing half of it off-screen. Thinking about the two works together, we can see how Cooper actually moves closer to an image of the virtuality of the human by rendering the digital counterpart implicit and drawing attention to the interstitial space between. With "Immersion" in mind, it is an insightful exercise to manually cover up one or the other of the diptych frames in *Alter Ego* to see pictures of avatars that represent not only a person, but that person's connection with various facets of their own virtuality, or, on the other side, images of people who 'picture' themselves differently and engage their own virtual embodiment in the avatarial double.

The missing double in the "Immersion" images recalls, to a certain extent, the absent reflection in the mirror in *The Student of Prague*, a mirror that both reflects and doesn't – "a strange mirror, then, very like that of childhood, and very different. . . . because, like the child again, we are prey to the imaginary, the double, and are so paradoxically through a real perception."[28] Christian Metz's well-known theorization of cinema as mirror produces a kind of a half, as film "differs from the primordial mirror in one essential point: although . . . everything may come to be projected, there is one thing and one thing only that is never reflected in it: the spectator's own body. In a certain emplacement, the mirror suddenly becomes clear glass."[29] With the reflection missing, Metz's spectator identifies instead with himself as a 'pure act of perception' – much more a half than a double. From this vantage he becomes 'all-perceiving', 'all-powerful' – "it is I who make the film."[30]

Of course, it is the player who also 'makes the game', albeit in a much more literal sense. The cinematic apparatus offers valuable insight into the spatialization of perception and the

[28] Christian Metz, *The Imaginary Signifier: Psychoanalysis and the Cinema*, trans. Celia Britton, et al. (Bloomington: Indiana University Press, 1982), 49.
[29] Ibid., 45.
[30] Ibid., 48.

materiality of media engagement, as I discuss later in this chapter, but thinking through Metz's classic application of Lacan to cinema, relative to the mirrors of the double and the gamer, produces a discord that illuminates the half. The compensatory reaction to halfness within the cinematic apparatus produces for Metz a sort of closed-circuit: evoking the psychology of the mirror, cinema produces a specular absence, which the spectator then fills by identifying with himself as perceiver – the one who looks rather than the image that appears. But the familiar scenes of audiences watching films (especially horror films) depict the bodily reactions, the absorption that belie the self-completing, all-powerful circuit of the apparatus. (It is hard to 'picture' Metz's transcendent spectator, while the image of the gamer seems more compatible.)

The question of halves and doubles is common to both film and videogames. For Lacan, the half is an enduring subjective state, which Metz resolves by making the half a whole in the context of film viewing. The avatarial double presents two possibilities, both of which are explored in this study. First, doubling produces halves, and a split between the medial and material worlds which must be resolved by a return to the real and some claim on wholeness. We have encountered this in *Surrogates*, with the incapacitation of the surrogate bodies and the resumption of familial relations as an (unconvincing) claim on wholeness. Second, a reconception of wholeness that only occurs through connection, spatialization, doubling, and a kind of imaginal embodiment, which I develop in this study.[31] The latter approach presumes a postmodern fragmentation of self that must be conceptually reconciled and managed – rather than becoming a half when confronted with the avatarial double, the avatar instead presumes that

[31] I use the term 'imaginal' rather than 'imagelike' or 'imagistic' to suggest a more active, participatory formation for the kinds of images I refer to in this study relative to avatars and embodiment. The term, derived from the Latin *imago*, refers to the imagination or a mental image, and find this sense captures an aspect of avatar creation and self-perception that I wish to convey. "imaginal, adj.1". OED Online. June 2012. Oxford University Press. http://www.oed.com/view/Entry/91635 (accessed September 04, 2012).

we are already fragmented halves seeking ways to connect the various 'pieces' of which we are comprised.

Understanding the half then is important for conceptualizing the implications of the avatar. While the two threads delineated above bifurcate in very different directions, they share common ground in the half. In later chapters we will see the frequent avatar theme, growing out of the cyborg mythology, in the journey toward wholeness and the return to the real, representing the first approach, as well as a model for connective gestalt in accord with the second. For now I turn my attention to three avatarial texts that explore the half by placing one or the other of the fissured halves/doubles of characters 'off-screen' – that is, not simply out of the picture, but connected to screens that are alluded to but not shown (*The Guild*), or in characters who only appear on screens whose frames are off-screen, resulting in a conflation of diegetic and non-diegetic screens with a viewer that is heard but not seen (*Thomas in Love*) or only abstractly implied (*Molotov Alva*).

Half a Double, Twice Removed

Avatar films explore the double in characters torn between two worlds, two lives, or two bodies. *Black Heaven* (Gilles Marchand, 2010), for instance, is partly set in a virtual world that is presented as a dark and dangerous lure, drawing the protagonist away from a healthy real-world relationship in pursuit of a virtual femme fatale (whose dark persona notably flourishes in the virtual realm, while outside of it she is somber and broken). In the anime *Summer Wars* (Mamoru Hosada, 2009) the real world has grown too dependent on and intertwined with the virtual world, so when a villainous program hijacks the protagonist's avatar and threatens global infrastructure through its networks and virtual commons, the protagonist must reclaim his avatarial double, and in doing so proves himself and redeems his character. But narratives of the

double in avatar films are also narratives of the half, and certain films and web media adeptly explore the avatarial connection from the standpoint of one half of the embodied dyad.

Molotov Alva and his Search for the Creator: A Second Life Odyssey purports to be the online video diary of a Second Life user who has abandoned his mortal existence. The web series, purchased by HBO Films, features the character Molotov Alva who, having left the real world (and implicitly his user body) behind, starts a new virtual life within the world of Second Life. The series begins with a notice of a missing user (identified by the same name) before shifting to the dispatches of the digital Molotov. Having left what he curiously calls his 'straight-world life' behind, Molotov recounts how he has gradually lost his connections with the real world: he builds a virtual house, but rejects it when he realizes it ties him too closely to real world living; photographs imported from the real world are kept in a garden, but over time the memories have faded away, so that the pictures become curiosities rather than referential or nostalgic objects (Fig. 7); and while he understands that sensorial experiences, such as the sand and water on a beach, are only accessible through his memories of experiencing such things materially, he eventually settles into a sort of simulacral existentialism, content with his new digital reality as the center of experience.

Figure 7. Molotov Alva in his garden of forgotten photos.

Somewhat paradoxically, at one point he declares his decision that in this new world, "at least who I was [in the real world] would remain constant." Molotov's creation story, which begins when he "falls from the heavens," implies a pre-existence that is only acknowledged within his growing agnosticism. His embodied memories from another life initially ground his experience and material instincts, and he forms his avatar body into "a perfectly rendered digital facsimile of my carbon-based self," while simultaneously disavowing the avatarial connection, i.e. that he has or was a user. The narrative becomes one of a clean bodily transition between the material and virtual worlds, intentionally undertaken, the series later clarifies, as Molotov "uploaded his entire life" into an online world. The user in this formulation is not missing, but transformed – or so it seems. After finding himself in the virtual world, Molotov soon sets out to find the 'Creator', determined to discover the 'one' who conceived of the virtual world and brought it into existence. This missing element vexes him and provides the main dramatic thrust of the series, and while he searches in vain amidst the varied communities and personalities to be found in Second Life, his reenactment of religion's central drama seems as if it would logically point back to the material world of the user – the unseen creative force existing in the metaphysical position relative to the virtual, and thus what Molotov seeks seems to be a meta-virtual return to the physical. If the search for God is ultimately a search for self, then Molotov's search for his creator would essentially be an avatarial turn inward, to find the source of the virtual elements dictating or influencing one's existence.[32]

[32] With a similar theme but different result, *The Truman Show* (1998, Peter Weir) also follows a character's quest to discover truth and meet his creator within a completely fabricated world. Truman's (Jim Carrey) attempts to escape the enormous set he lives in eventually provoke the creator (played by Ed Harris) to confront him with a philosophical argument about the nature of truth and reality. Truman exits for the real world anyway, and Molotov eventually does the same. Molotov's quest differs from Truman's in that the absence of a creator is set from the

Users do not exist in this imaginary world. Even when Molotov finally gets his answer in Episode 7 the disavowal of the user persists. According to the oracle he finds (a chimp lured with a banana), there is not one creator, but many, and Molotov understands this to mean the virtual denizens, rather than any external force. His satisfaction with this answer soon wanes, though, and in an inventive reversal, Molotov finds his only satisfaction in a VR-type interface with 3D photographic scenes of the real world, called "Back to Reality," which he views from a suspended virtual platform in the center of a spherical image space. He becomes addicted to this virtual counterpart to the virtual (which doesn't necessarily follow the logic of a double negative, which would result in a return to the actual, for these still appear as images to him), hungry for any shard of "organic reality" he can find after finally giving up on the virtual world. Narcotized by these images of the real, he is only able to pull himself out when his inworld girlfriend comes to tell him that she has found a way out, and is leaving. Molotov realizes that "while I'd gone off searching for reality, Abigail [his girlfriend] remained the only real thing here," and follows her through the tunnel marked 'Last Exit'. The series concludes with his long search for fulfillment in the virtual world ending only by leaving it for the "new, uncertain reality" through the tunnel, and thus his unresolved journey begins anew, back in the material world he once left, which nevertheless remains ambiguous.

Molotov's search for the creator and examination of his own life return him to a real without users, in which one exists in one state or the other – in the real world longing to be virtual, or in the virtual world searching for the real. The other Second Life denizens are cast as permanent residents, not interlopers like Molotov, and also sans users, and so while there are organic and digital worlds, the connection between them is on the level of Platonic forms,

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beginning in his denial of the user. The only way to confront the creator is to confront the artifice of the film, but actual creator Douglas Geyeton keeps the focus on the artifice of Second Life.

necessitating transubstantiation for movement across the non-interface. *Molotov Alva* thus presents a story of halves, where neither physical nor virtual existence feels complete to the character, leaving him always searching for the other – an imaginary journey through the imago that left him opining for the 'real' world he left behind. What Molotov is really missing, however, is exactly the obvious missing element: the avatarial connection, the double that resolves the half. As always one or the other, he has no way to reconcile virtuality and materiality. Also, as machinima, the method of production is tied diegetically and thematically to the series in a way that adds further dimensionality to the text. Produced using the Second Life engine, movement and gestures are enacted in real time in performances that are virtually 'filmed' rather than the frame-by-frame incremental production of traditional animation practice, and thus they rely on game mechanics rather than on the movement of the medium itself to produce the movement of character bodies. Molotov Alva is an avatar that diegetically disavows his connection with a user, and in production an avatar body disassociated from its user in that the avatar 'plays' a character which exists in the virtual world.

Web series *The Guild*, created by Felicia Day, takes the opposite approach. The series follows a group of MMO players who band together as a guild, and whose association with each other is, at least initially, exclusively online, through avatars. The avatars, however, and the game world in which they exist, remain unseen. Shots of the guild members frequently feature them at their computers, typically wired in for voice chat, but their interactions play out through cuts to their various apartments rather than transpiring in virtual space (Fig. 7). The visual device of not showing avatars in a narrative about avatarial connections produces, as with Cooper's "Immersion" series, a sense of the half-avatar in that we are kept from the world that engrosses and even consumes the lives of the characters. The series opens with Codex (Day) discussing her

addiction to the generically termed “The Game” with her therapist, who tells Codex that she can’t grow if she’s “still immersed in an imaginary social environment.” The implication of Codex’s ‘problem’ of spending too much time in her virtual life and not enough in her real one is that she, and by extension any serious gamer or avatar user, has become incomplete or underequipped for the real world as a result of heavy avatar use – a social half in addition to a virtual one.

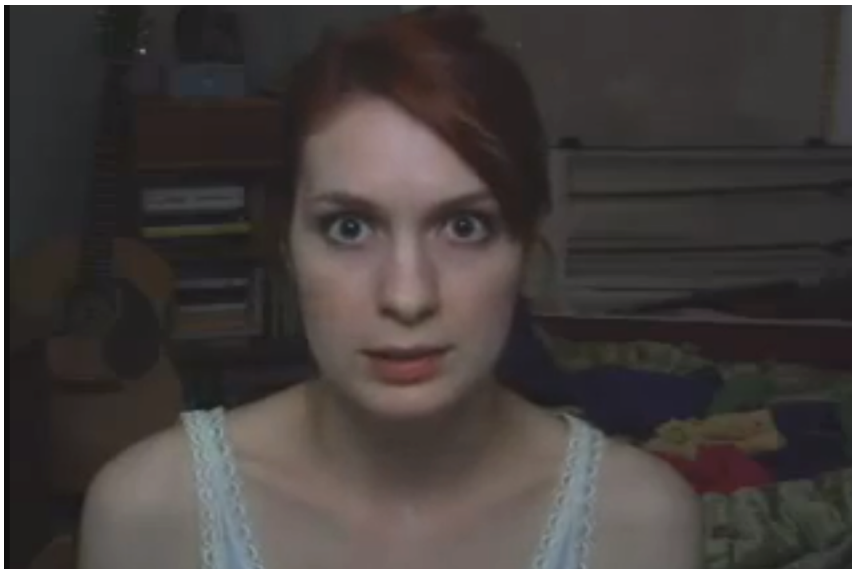

Figure 8. Felicia Day as Codex at her computer in The Guild.

As we meet the other members of the motley guild, Day plays their geeked-out involvement and social awkwardness for laughs. However, as these ‘incomplete’ characters become sympathetic and relatable, their status as halves takes on a rather different quality: rather than humans adjusting to life in a technological world, these are characters already firmly tied to a technologically-facilitated mode of living, attempting to find their way in the analog world. In their geekiness they become wise fools (or wise geeks), ones who see the world from the vantage of (a supposed) incompleteness and in doing so see the truth. They are thus equipped because

they have embraced their own virtual existences within an online virtual environment – they know they are halves. Their status as such is further underscored as they leave their doubles behind in the first face-to-face meeting of the guild to discuss the issue Codex is dealing with when Zaboo (Sandeep Parikh), another member of the guild, shows up on her doorstep after misreading her winking emoticons as flirting, and begins sleeping on her couch. The breakdown of the spatial distance between Codex and Zaboo and then the guild as a whole produces a crisis of the avatarial distance itself, as their avatarial relationships have been predicated on a certain distance; over time, however, they find new ways to interface in person, and at the end of the first season the guild reforms in the real world to wage battle in a local diner.

Interestingly, their opponent, whom they meet in the last episode, is Zaboo's Indian mother (thus implicitly pitting the Hindu tradition of the avatar against the digital). As the conflict heats up, Zaboo's mother is depicted with CG flames in her eyes and streaming blue electricity flowing from her fingers, 'melting' Zaboo's mind in her attempts to get him to return to her after he has absconded to Codex's apartment. She feels incomplete without him, but Zaboo cannot become his own man (Codex later calls him a "starter character" in real life, who needs to "level up") within the force field of a possessive mother. The guild bands together in this Oedipal conflict to help him overcome the physical bond of mother and child, enabling the perpetuation of the virtual bond of user and avatar. If Zaboo is a starter character in real life, it is because he has not been freed from the familial constraints that tie him to the real world (humorously summarized in his revelation that he had been breast-fed until he was eleven); thus the character cannot seem to escape the double/half ontology, but only find ways to make and manage connections.

While *The Guild* depicts users but not their avatars, and *Molotov Alva* narrativizes an avatar without a user, *Thomas in Love* (Pierre-Paul Renders, 2000, *Thomas est amoureux*) is an avatarial story which is centered on absence. The film takes place at the level of the screen, the point of connection between characters that mediates all of their interaction, and also the point at which the film 'materializes'. Thomas Thomas (Benoît Verhaert), with a doubled name that belies (or reveals?) his status as a half, is an agoraphobe who has not been out of his apartment in eight years, nor has anyone been in. He does all of his communication through the computer, although we never see the computer itself outside of what appears on the screen. The film opens with a 'shot' of pixelated digital wallpaper (the type common on PC backgrounds in the nineties) which gives way to a sexual simulation in which Thomas engages in virtual sex with a buxom 'sextoon' via a cybersex suit. During the lovemaking we see a phantom hand (the representation of his hand via the cybersex suit) appear on the screen, fondling one of the digital breasts, and this is the first and last we see of Thomas until the final shot of the film. The interim is filled with Thomas's (usually unsolicited) social interactions via the 'visiophone' with a grumpy customer service agent, his mother (the maternal bond again), his therapist, matches in an online dating service, and a prostitute with whom he makes a personal connection, and who in the end convinces him to finally leave his apartment (Fig. 9). These are done in a web-cam aesthetic, with characters talking to the cameras in their apartments and homes; the other characters see Thomas but can't come near him, while we occupy a position approximating his point of view but never see him, only hearing his voice. As Thomas's body is missing from the world outside his apartment, so it is missing from the film as well, as if his fear of enclosed public spaces extends also to the frame of the screen; footage of him on the beach as a child that his mother shares with him makes him panic, ostensibly in seeing himself outside, but much more, it seems,

to be present to himself in the image. When he does briefly appear in the last shot, finally leaving his apartment through an outside door, he is washed away in the overexposed image, exiting the Platonic cave into the bright daylight of video noise and exposure threshold. Notably, this is also the first time in the film when Thomas is not viewing the screen with us, and there is at this moment a strange and palpable sense of disembodiment – of the absent body finally departed into the image, or perhaps the image 'body' finally made fully manifest.

Figure 9. A woman from the dating service in Thomas in Love.

The defining image of the film, or rather non-image, is the graphical wallpaper, a generic pattern of pixels tiled across the screen forming something of a digital texture. Our induction into the world of the film thus stops us short at the level of the screen, and the film returns to this screen regularly between the visiophone calls. The wallpaper comes to stand in for or even 'picture' the screen, and the subtle shifts and twitches in the pattern create an oddly affecting picture of a restive or agitated screen. The wallpaper of the GUI is both in front and behind, too near and too far, the static curtain for the roiling information of the network just 'behind' it and at the same time the eternally receding backdrop for any number of windows; the spatial depth

that characterizes what Bolter and Grusin refer to as the immediacy of remediated perspectival images (such as photographs or videos) was, in the era of digital wallpaper, framed by the flat hypermediacy of the pixelated plane that awaits a window to see 'through' and is at the same time the impermeable surface that remains always at the level of the screen.

With its enhanced liminality as the threshold for both character and viewers, the screen in *Thomas in Love* supplants the missing body – Thomas is replaced by the screen, not incorporated into the machine or consumed by the device. The virtuality of computer space coincides, on a representative level, with the virtuality of Thomas himself. That is, what remains of him in the sound of his voice and the address of other characters produce his trace, or the residue of his missing body which is conflated with the pixelated screen in its most basic form, with visible pixels and the basic shapes through which the pixels are made to represent 'pixelation'. Thomas's trace is not found in the image of the body, which is implied early in the film in the translucent, ghostly image of his arm touching the sextoon; rather, the representative presence of the body in virtual space becomes something to depart from. Wallpaper and screen form the constitutive body of the image displayed on a computer, while the missing body is seamlessly conflated with the screen without being consumed. Thomas finally enters the image, and the real world at the same time.

While I have discussed the 'screen' in *Thomas in Love*, the material screen is implicit, attached to no visible device. Indeed, the argument can be made that we don't see a screen per se, as in a photographic image of the hardware that displays the video and computer content which make up the film, but rather we seem to be seeing the video feed from the network and CPU that is then displayed on the screen of the film's viewing – at the cineplex, or, in the case of this viewer, on a television set at home. The 'materiality' of this film comprised entirely of

simulated environments and video streams from webcams is much more closely aligned with the materiality of its exhibition than its diegetic objects. With the two screens conflated, my television became a shared liminal point of access.

Thomas's virtual sex, in which intercourse and interface are conflated in touching and being touched by the digital virtual world, and later the teledildonic encounter he has with a woman he meets on the dating site, ultimately prove unsatisfying for him. In a rather disturbing moment, when he and the sextoon approach orgasm, the signal begins to break down, infusing both analog video static and digital noise as a kind of sensuousness of the medium in reaction to the sexual intensity. In the final moments the simulation enters the 'bestial phase', as the sextoon turned wild-eyed beast thrusts her gaping mouth toward the screen – a Freudian representation of consumption by media as vagina dentata. Thomas must overcome the 'iconophobia', it seems, in which he fears the contamination of the image when applied to his own body rather than the bodies of others. He is comfortable, if not entirely satisfied, with copulation with and through images (the threat of consumption is ultimately allayed as another fantasy scenario) from which he can withdraw. But his final exit from his apartment, and entry into the world of images (where we finally see him) makes of the half a double, which points toward salvation in the blinding light outside the cave.

Through these examples of halves I have hoped to lay groundwork for better understanding the doubling of the avatar in terms of images and screens. In *Surrogates*, having a double is taken for granted in a society that has not only acclimated to managing two bodies but has become dependent on surrogate living – a marked contrast with *The Terminator* and *RoboCop* in which the threat is contained in a single monstrous body. Greer's concern however is that he has become a half, that humanity suffers for its overreliance not just on technology, but

precisely on the way in which technology has been humanized. We have seen that in the mirrored subjectivity theorized by Lacan and the Freudian-inflected double in Romantic literature that the double typically presumes or produces the half. And having sorted through the dichotomous claims that there is no cyberspace or there is only cyberspace, we face the avatarial question of whether avatars and virtuality are a departure from the real or material world, or whether material reality can only be encountered through mediated experience, and the sense of the virtual by which we engage these medial connections.

Moving forward, I turn to a closer inspection of the digital avatar as source material for representations of avatars and the thematic issues they engender, as well as a basis for approaching the theoretical possibilities the avatar offers. Continuing also with a consideration of the mirror, I will return to the "spatial identification" that occurs during the mirror stage, as Lacan refers to it, extending "from a fragmented body-image to a form of its totality" – but less for the space separating the subject and the imago than the space *connecting* them in what might be thought of as an interfacial rather than specular approach to subjectivity.[33] That is, thinking avatarially, I am curious as to what extent the 'gestalt' might be positioned as part of or even *as* the spatialized arrangement rather than as an unattainable image within it.

[33] Lacan, *Écrits*, 4.

CHAPTER 2

CORPUS AVATAR

The introduction page on the Second Life website features a photograph of a young woman with a streak of red in her hair and a pair of headphones on her ears. Immediately next to her is a picture of an avatar with the same headphones and red streak, a clear double (Fig. 10). The promotional text reads "It's you – only in 3D," referring to the 3D virtual environment and the opportunity for users to create self-representational avatars.[1] The lure of the invitation works doubly, promising the technological fantasy of 3D as well as a reassuring sense of familiarity, but also raises the question of what it might mean for an embodied human in the material world to become '3D'.

In its use in cinema and photography, 3D extends outward, seeming to break free of its frame and burst into the off-screen world – or at least this has been the case as a novelty during Hollywood cinema's turf war with television in the fifties and in amusement parks today. On the other hand, 3D can also draw inward, inviting viewers into the world of images with a greater sense of visual immersion; Second Life and some of the more subtle uses of 3D in contemporary films rely on this quality. Objects pictured in these spaces seem to be more discrete, more tangible, less connected to the rest of the image. Discourse surrounding 3D presents it as a more complete or even a purer mediation in contrast with traditional images in that it seems to retain an additional element of the real world – its dimensionality ascertained by stereoscopic viewing – while at the same time heightening the visual experience of its depictions; that is, 3D is heralded as a more realistic form, but in practice is mostly relegated to fantasy.

[1] This image and the attending copy were accessed from secondlife.com in 2010. The promotional text changes periodically; at the time of this writing it reads: "Second Life is a 3D world where everyone you see is a real person and every place you visit is built by people just like you."

The Second Life tag plays on this incongruity, however, implying that the you in a 3D image world will be a little more exciting than the three-dimensional, physical you. We can see in the subtle differences between the two promotional images – smoother skin, a narrowing of the face, better symmetry, brighter highlights in the eyes – what in regular practice is often more extreme, as Second Life is full of long, leggy avatars with thin waists and beefy biceps. In Second Life, as in other virtual environments, dimensionality is produced through movement within perspectival space and interaction with objects rather than stereoscopic illusion, but it is designed to produce a similar immersive effect. Accessing it with an avatar not only permits occasion for cosmetic modifications, but entry into a world of image objects as well, available for interaction with image bodies.

Figure 10. "It's You – Only in 3D."

The irony of leaving three dimensions to become 3D might be understood in terms of the trompe l'oeil of 3D, as a way for three-dimensional bodies and objects to exist in two-dimensional images – 3D makes 'space' for the viewer. The perceived distinction of bodies and

objects as discrete elements within 3D image space is consonant with the statement's focus on individuality in the implied assurance of remaining a unique entity – that is, no matter how thorough the simulation or convincing the images it will still be 'you'. The avatar is here presented as the point of entry into the virtual world, positioned as an intermediary form between the real and mediated environments that inducts the participant into image space through a mediation of the self (in the form of a body), and thus might be understood to embody a way of being within mediation. That is, if our world has become image-driven and experience has become mediated, we are compelled to devise compatible spaces and bodies. The recourse to the familiar 'you' privileges an enhancement of self through mediation over a loss of self in the image world, as well as implying a certain compatibility of the embodied self with image-based mediation. In other words, we adapt to our environment, and in this respect Second Life becomes less an imaginal simulation of the material world than a model for the body's entry into an image-driven world.

In virtual environments, 3D demands inclusion of the avatar body, and the presence of this body transforms the experience of the space.[2] Such is the aesthetic and symbolic place of 3D, and I have considered it here for its propensity to both push the image world outward and draw the viewer or user into the world of images. In the mirror stage, the reflected body is not an isolated image, but one set within the imaginal space of the mirror; thus while the reflected body is taken as a representation of wholeness, it is already set within and connected to the 'virtual' world on the other side, already part of the objects (the images) that surround it. The fantasy of

[2] Tom Boellstorff reports that in its early stages Second Life avatars were originally conceived as floating eyeballs rather than bodies. It is an interesting thought experiment to imagine how the Second Life environment would be different if this strange panopticism had been adopted. One immediately thinks of the many houses and other domiciles, dance clubs, and other buildings that would likely be absent, as well as the toll on the Second Life economy, which revolves around fashion, real estate, and sex. For Second Life, as with many other virtual environments, avatars are not simply a mode of access to an existing world, but in many ways the world exists for avatarial engagement.

the image body is organic to the imaginal space in which it is set, in "the relation between the movements assumed in the image and the reflected environment, and between this virtual complex and the reality it reduplicates – the child's own body, and the persons and things around him."[3] The mirror as *screen* presents an object of fantasy, accessible only through desire and misrecognition from a spectatorial distance (it is this defining quality that characterizes the cinematic apparatus); the mirror as an optical instrument, a *technology*, however, has an inherent materiality as it exists in, and only reflects, the real world. In this case it is the distance between the body and its reflection that is misperceived or falsely appraised, as there can only be the distance between body and mirror.

This chapter seeks to define the image body of the avatar in terms of the apparatus that produces it, distinguishing between the cinematic apparatus and the interface for a virtual environment in an attempt to better understand the relation between bodies and images within digital culture. In addition, it is necessary to examine the constitution of the body available for identification within the interface apparatus. Although avatar appearance can vary widely – from conventional or consumerist notions of beauty through the gamut of creative, quirky, and subversive bodies, all of which offer different affective and psychological interactions with their users – my interest here is more on construction than appearance. I undertake a phenomenological consideration of the avatar body *as* a body, laying groundwork for a better understanding of the experiential relationship between user and avatar as one body to another.[4]

[3] Lacan, *Écrits*, 1.

[4] I don't assume, of course, that an avatar body is materially similar to a physical, sensorial human body, but I take this approach as much to demonstrate some of the ways in which physical embodiment and virtual bodies coincide as I do to explore the construction of the avatar and digital imaging technologies in general. That is, when users make phenomenological connections with avatars, I suggest that it is as much a result of a felt affinity with them as being imaginally and multiply embodied as it is for their similarities to human bodies in the surface appearance.

Iconic Evolutions

The inclination to insert representative bodies into computer-generated spaces can be seen from the first videogames and social environments. *Spacewar!*, developed by MIT students in 1962, was not the first computer game, but it is significant for its space age fantasy elements that invited players into an imaginary scenario, despite the simplicity of its representative icons (two blips, the oblong 'needle' and the triangular 'wedge').[5] A decade later, 'adventure' games, influenced by the recently published *Dungeons & Dragons*, produced textual geographies to be explored subjectively by players in a ground-level version of the strategic map games that preceded them. Graphical videogames from the early eighties and beyond followed the trend set by *Spacewar!*, exhibiting a strong tendency to include a representative of the player within the space of play. These iconic representations were at first a series of crude shapes, but gradually employed more sophisticated imagery as the technology improved, coming to resemble the vehicles, ships, creatures, and bodies they once pretended to be.[6]

These avatarial objects, or 'player characters' as they came to be called within gaming jargon, display the player's relation to other objects in the game – not only in regard to the agentive (and often destructive) presence that is frequently discussed in writings on videogames, but as much for the vulnerability these representations facilitate. The imperiling of the player character contributes to the visceral thrill of the game for players, and connects it proprioceptively to the player's body as much as the agentive actions conducted by the player on

[5] Games preceding *Spacewar!* include Alan Turing's chess program (written for a computer that didn't yet exist), Alexander Douglas's *OXO* (1952, a tic-tac-toe game), William Higinbotham's *Tennis for Two* (1958, paddle game), and other games developed at MIT just prior to *Spacewar!*, including *Mouse in the Maze* (where the mouse was represented by a dot). These games prioritized strategy over fiction, and while *Spacewar!* was hardly immersive, it was highly influential in initiating the trend of videogame production toward immersion, fantasy, and identification.
[6] Some games, like *Pac-Man*, took aesthetic advantage of the primitive graphics available at the time, stripping down design to a basic functional shape that became a cultural icon; outside of the chomping disc, however, the tendency toward mimesis is still apparent in the game in the fruit and ghosts that players seek and avoid, respectively.

the space of the game. This condition becomes more pronounced with increasingly realistic depictions of bodies, although at the same time producing an inverse effect by conflating the body with disposability. In the historical development of avatar bodies, we can see these conflicting pulls of dissonance and flow by which contact with virtual technologies is negotiated.

While the evolution of the avatar proceeded through many gradations and variations, a few moments stand out as points of seminal transition. It is an occasional misconception that text-based games preceded graphical games, but the textual genre didn't develop until the mid- to late-seventies, some years after the advent of graphical games. One of the first text-based games, *Colossal Cave Adventure*, inspired variations like the dungeon-crawl *Zork* (also called *Dungeon*) and other adventure games – which several years later provided the basis for the first MUD (multi-user dungeon). These second-person, interactive narratives immersed the player in the world of the story and the map, but it was with the development of multiplayer versions and networked capability that made the representation of self to other players, and not only the game, a more integral aspect of play and the increasing possibilities for socialization. This was the environment in which Roy Trubshaw began working on the first MUD, or what later became known as MUD1, in 1978. Richard Bartle completed MUD1 in 1980, abiding by Trubshaw's desire to create a shared space within the interactive fiction. Other adventure games, such as *Orthanc* "allowed players to meet and talk in the dungeon, but otherwise was a single-player game."[7] MUD1 was designed to facilitate human interaction as much as interaction with the computer, and this necessitated a greater role for representational bodies in the shared space.

[7] Eric Hagstrom, quoted in Raph Koster, Raph Koster's Website. Accessed April 19, 2009. http://www.raphkoster.com/gaming/mudtimeline.shtml.

Initially, Bartle resisted the impulse to allow players to create character descriptions, arguing that players could explore identity more freely if they weren't "tied to some image."[8] Before long, however, Bartle became enthusiastic about the possibilities of playing with textual representations of self and character, and produced a taxonomy of levels of engagement from casual play to full-blown persona as a measure of users' psychological and social integration with their self-representations. The signification of these 'images', he suggests, is a product of both dissonance and consonance, as "[signs] arise because of the difference between virtual world technology and the way reality works. . . . [where] immersion is accepting the signifier as the signified."[9] The reconciliation Bartle proposes seems to be the solution to a split seemingly effected by the existence of the virtual environment itself – one for which images initially seemed part of the problem, and later the means for integrating the physical and virtual selves.

MUDs and adventure games were very conscious of space and subsequently bodies by virtue of the fact that visual objects had to be described. Reading the text was conflated with looking, as the short descriptions tended to include basic visual information, and as the social element of MUDs became popular, descriptions of character became expressions of personality. Due to this strong visual component, as well as the increasing popularity of console and then home computer games in the early eighties, it is not surprising that the MUD went graphical. Work on Habitat, "one of the first attempts to create a very large scale commercial multi-user environment," began in 1985, the same year Nintendo released the popular *Super Mario Brothers* and only a year after an improved MUD1 was released commercially; the beta version of Habitat was released the following year.[10] Aesthetically, Habitat took a different direction than

[8] Bartle, *Designing Virtual Worlds*, 184.
[9] Ibid., 635.
[10] Farmer, F. Randall and Morningstar, Chip. "The Lessons of Lucasfilm's *Habitat*." Presented at *The First International Conference on Cyberspace*, May 1990. Accessed April 14, 2009.

many of the text-based spaces and videogames of the period, minimizing fantasy content in favor of a more quotidian environment. While quests could be undertaken, Habitat was conceived as a place where users "can communicate, play games, go on adventures, fall in love, get married, get divorced, start businesses, found religions, wage wars, protest against them, and experiment with self-government."[11] Habitat was thus a precursor to contemporary social spaces like Second Life and other MUVEs (multi-user virtual environments, as distinct from the more goal-driven MMOs), as well as the domestic simulation game *The Sims* (2000, Electronic Arts).

Graphics for avatars in Habitat were rather rudimentary, but they did have interchangeability, such as options for clothing, skin color, and a number of faces and body types to choose from, which made them more expressive (Fig. 11). Even with the limited options presented by the game, this was an important step in the development of the avatar body, as it began to conflate sign and body. Pictures begin to act more like bodies not only when they move, as the avatars in Habitat did (crudely), but when their modes of expression become more nuanced. Bodies do not signify the same way that pictures do; the avatars in Habitat were simple, two-dimensional, and rather cartoonish, but they could be distinguished from videogame characters in the shift from signifying through what they *were*, such as Italian plumbers, to signifying through what they *wore*, for instance, as clothing and hairstyles as the adornment of the body started to become the primary signifiers of the human-like avatar.[12] (The potent cultural signifiers of skin color and gender are discussed more thoroughly below.)

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http://www.fudco.com/chip/lessons.html. In denoting titles, I follow the common practice of italicizing game titles and indicating shared online spaces in Roman.

[11] Ibid.

[12] Ken Hillis refers to avatars as 'sign/bodies', interpreting the iconic status of digital avatars as part of the signifying discourse in which avatars are set, and thus accords them the status of meaningful images. While I don't disagree with his logic, to my mind the move toward the body is a move away from the clearer signification of traditional images imported into virtual spaces, and thus I prefer the term 'image bodies' as a way of conceptualizing their synthesis of high visibility and semantic ambiguity. Ken Hillis, *Online a Lot of the Time: Ritual, Fetish, Sign* (Durham: Duke University Press, 2009).

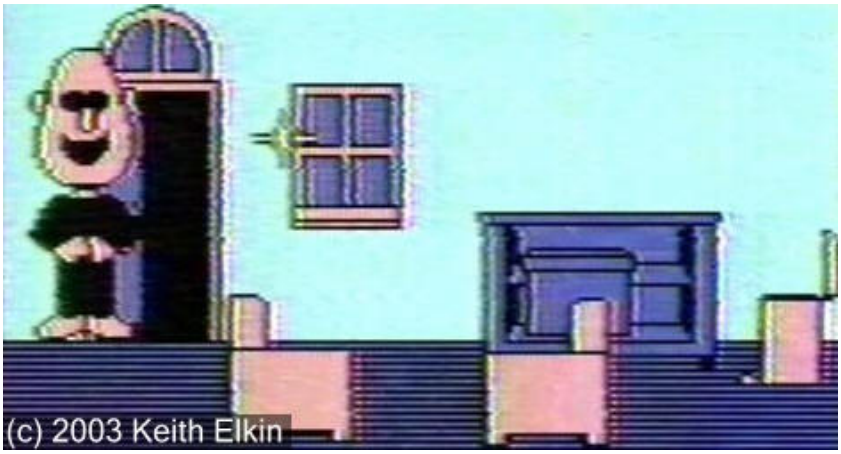

Figure 11. At home in Habitat.

A decade after Habitat, the differences between the trifurcation of videogames, graphical MUVEs, and textual MUDs had increased, generating significant implications for the avatarial body. In fact, the period of the mid-nineties represented perhaps the greatest range of possibility for user representation in virtual spaces, with each alternative bearing different ramifications for user experience. As I have noted, virtuality is contingent, and various forms of virtual embodiment interact with human embodiment differently. Videogames had by this period become increasingly popular, and while 3D games using vector graphics had been around for some years, it was the release of id Software's *Wolfenstein 3D* in 1992, followed the next year by the extremely influential *Doom*, that established a new benchmark for gaming. The fast pace of these dungeon crawls and the sense of immersion they engendered established a new era of gaming, and cemented the place of the first-person shooter (FPS). In many ways the FPS constituted the visual instantiation of the second-person adventure game, with the player at the center of action instead of abstracted from a player character or avatar (the designative 'you', which Bob Rehak refers to as a syntactical *méconaissance*, an interpellation effected when the 'you' of the descriptive text is conflated with the 'I' of the player). The avatar body in these

games had become implicit – still vulnerable and, as multiplayer versions developed, visual to other players, but otherwise absent, visually distilled in the phallic weapon jutting obliquely and menacingly into frame.[13]

The violent, disembodied gaze of the FPS that removed the avatar visually from the space of the game was antithetical to the emphasis on self-representation in the MUVEs, which were themselves developing in different directions. The Palace was essentially a collection of pictorial chat spaces, and while users could move their avatars across the screen or into a different room, each room was simply a static 2D backdrop. Guests were given a yellow smiley face avatar, and after registering the face would turn red and the user could attach custom images, which were typically imported from scans or the internet. These picture avatars, while sometimes following various trends, were quite diverse in comparison with the relatively limited modular bodies in Habitat in that they could be pictures of anything. As such, the Palace avatars operated much more clearly in a symbolic register, and less like the iconic and functional bodies developing in other graphical worlds. AlphaWorld, on the other hand, might be called a prototype for Second Life, where avatars were 3D and highly customizable, and building was a common activity. The player's view could be switched between first-person and a 'god view', which was somewhat above and behind the avatar, and in distinction from the picture avatars of The Palace, the avatars in AlphaWorld, while incorporating user preferences and designs, were relatively uniform overall, thus eliding the wider disparity in signification that could characterize the more chaotic Palace. The AlphaWorld avatars thus most clearly represented the trend toward realistic bodies that were organic to their virtual environment.

[13] Cutscenes introduce a cinematic identification that becomes an avatarial one for both first-person and third-person games. A FPS player may only see his or her avatar during these interstitial, non-interactive scenes, and then 're-inhabit' the character once gameplay resumes.

Worlds Chat was something of a combination of these two MUVEs. Set in 3D space but permitting the importation of 2D images, Worlds Chat actually served as one of the more interesting experiments in virtual embodiment with its motley combination of avatarial pictures and dimensional game space (Fig. 12). Avatars could be scanned photographs of users, computer art creatures, or any number of images culled from the web or otherwise created, appearing in various scales and resolutions as they glided through the space station setting. For all of its visual interest, however, the platform somewhat paradoxically employed a first-person view – influenced, perhaps, by *Doom*'s popularity and immersiveness, but also interestingly granting a 'view' to the picture serving as an avatar.[14]

Figure 12. Heterogeneity in Worlds Chat.

The persistent popularity of MUDs and their variations throughout the nineties, despite the surge of videogaming and the many MUVE options, attests to the particular opportunities they afforded for the conceptualization of space and practices of embodied interaction. While

[14] For a comprehensive overview of these and other virtual worlds of the period see Bruce Damer, *Avatars!: Exploring and Building Virtual Worlds on the Internet* (Berkeley: Peachpit Press, 1998).

socializing came to predominate over the exploratory aims of adventure games and early MUDs, these spaces were distinct from chat rooms in that they included character and setting descriptions, and their characters could be made to perform embodied actions through bits of literary illustration. Characters were discursively produced with descriptions, while the user's presence was marked by a screen name, indicators of action or entry and exit into a room, and any conversation made through the chat interface. Character descriptions actually only appeared when another user executed a 'look' command, and so while situated quite distinctly as the object of a look, without this look the character was invisible – and without a contribution to the chat stream, the user is for the most part as well (a hovering that could make other users uncomfortable, who often called out the 'lurker').

The informational composition of the character can range from a few words of straightforward description to the lyrical passages Julian Dibbell recalls in his memoir of time spent in LambdaMOO.[15] Dibbell makes it clear that there were plenty of uninspired descriptions, but his observations of the textual interactions amidst the literati collective he fell in with illustrate a different intersection, between the descriptive image and the body. Well-written passages could include information about attitude, history, and desire of the character (or the user's persona), or could be "essentially nothing but the details of their clothing and their hairstyles, presented nonetheless with such precision and flair that they seemed almost the distillation of a personality, the story of a character condensed, as it were, into the moment just before its telling."[16] While these descriptions could be highly expressive, their presence could be

[15] MOO is an acronym for MUD object-oriented, referring to MUDs in which users could build onto (or rather add descriptions of) the virtual world and do more with objects. (Not to be confused with MMO, which refers to a massively multiplayer online game.)

[16] Julian Dibbell, *My Tiny Life: Crime and Passion in a Virtual World* (New York: Holt, 1998), 134. An example he gives of a character description by user Niacin: "Having pissed away what was left of the family money and nothing to show for it but an old red and black BSA motorbike that he keeps in perfect working order, he ended up in the North Woods, where he does carpentry sometimes. He keeps his long, sandy hair tied back mostly. His eyes are a

inconsistent in the shared virtual space. A graphical avatar remains on the screen, but a textual character only appears with a 'look' command, and can slip quickly off-screen with the cascading conversation. A user can speak in character or integrate visual descriptions into his or her conversation in order to maintain a certain perceptual engagement, but sustained discourse of this kind can be difficult.[17]

It is useful to note however, how the 'informational' body of the textual character actually includes much more than the description, as every aspect of MUD users is expressed verbally. This body of information includes screen name, the description, and any conversational text contributed by the user. There are obvious parallels here with the construction of a character in a book (and it is this literary aspect that Dibbell's silver-tongued comrades exploited); the distinction lies in what Ken Hillis calls "iconic indexicality or indexical iconicity," which seems to users to transmit "some material aspect of the geographically distinct individual to whom it directly points."[18] For Hillis, avatars are indexical by virtue of their real-time technological connection to the actions of a user; their iconicity is due to the resemblance to a body to at least some extent, both in appearance and function. From a technological standpoint this is based in the automatism of the interface – the avatar doesn't move without a command, and so avatar movement is a result of user activity. While the movements themselves may differ in form, as wind and weathervane are (user pushes a key, the avatar waves), one produces the other.

The real-time performance and automatic processes distinguish this action from the hand of the animator, for instance (after all, a painting does not have an indexical relation to the hand

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pale blue, with flecks of gold in them and grey rings around the iris. High cheekbones, mouth quirked up in an ironic grin. He's wearing a black t-shirt tucked into a pair of tight, faded levis and black work boots. In the pocket of his shirt, a pack of Lucky Strikes and the tooth of a wolf" (137).

[17] Dibbell refers to lengthy encounters, sexual and otherwise, which were highly textural through their textuality. However, Lori Kendall points out that while role-play was practiced in some virtual communities, in general its influence and pervasiveness have been overblown. Long-term roles are difficult to maintain, and many descriptions are less about producing character than giving a brief insight into personality.

[18] Hillis, *Online a Lot of the Time*, 114.

of the artist). Hillis is just as interested, however, in the phenomenological aspect of indexicality, in the way in which avatars are experientially understood to transmit some material aspect, and here he approaches the virtual. Mixed-media artist Lynne Heller captures it more lyrically when she states "the most basic of human interaction with objects, particularly images, causes us to necessarily invest them with spirit in order to understand, control, and dominate the 'stuff' of our existence."[19] From a phenomenological standpoint we look for those human aspects (including embodiment) transmitted through a network, reconstructed digitally, appearing in a form that facilitates affective responses. Heller's recourse to the spiritual in what she calls 'virtual-materiality' evokes the ephemerality of the virtual – that which perplexes and enchants within the processes of framing digital information and images. The textual body is a very simple form of what is done in other media transmissions with much more data (in photos or video chat, for instance), and can be quite fascinating in its spartan reliance on verbal communication – on the ways in which humans have encoded their interactions for millennia. Within these constraints Dibbell addresses the "terminal paradox" of approaching a "wordless knowledge of another person through a medium composed entirely of words," as intimate verbal encounters produce bodies of human data integrating the rhetorical and corporeal:

> What had it truly been then, underneath the surface? . . . perhaps nothing else but what its surface mutely insisted it be: *an unresolved pastiche of possible bodies both real and imagined*, a moment of attraction suspended among the available categories of gender-marked desire like an image lost amid a house of mirrors, bounced endlessly from one to another to the next and back until you knew that if you tried to find where the truth of it stood you'd only end up equally as lost?[20]

[19] Lynne Heller, "Fuzzy Precincts and Bleeding Edges: Feminist Theory and the Study of Virtual-Materiality" (ISEA2011 Istanbul, The 17th International Symposium on Electronic Art, September 14-21, 2011, Keynote address).
[20] Dibbell, *My Tiny Life*, 146, 133.

This brings me to the final historical moment, which extends into the present. Second Life launched in 2003, followed by World of Warcraft the next year. This period also marked the sixth generation of videogame consoles, with the release of the still-popular PlayStation 2, Microsoft's introduction of the Xbox, and the waning of Sega and Atari, flagships of of erstwhile generations of gaming. The graphical capabilities ushered in by these platforms gave rise to a new breed of hyperrealistic game environments and avatar bodies that has continued with seventh-generation consoles (PlayStation 3, Xbox 360, Nintendo Wii) and for the foreseeable future. Second Life has more or less kept pace by crowdsourcing development, giving its users increasingly powerful tools for rendering realistic bodies, clothing, and hair (although server capacity and processing speeds occasionally prove insufficient for user ambitions).

The aesthetic of the hyperreal in virtual environments trends strongly toward the natural. Verdant landscapes replete with diverse foliage, wooden bridges over babbling brooks, moonlight shimmering on ocean vistas – such is also the trend of digital culture, away from machine aesthetics and toward the imagistic. The design of bodies follows suit, eschewing pixilation and classic videogame animations in an attempt to accurately simulate human appearance and movement. These bodies seem to enter a different register of graphical production, one that is closer to the photorealism of contemporary digital effects in cinema to traditional notions of iconicity in virtual environments. This is not to say that avatars have achieved such a level of realism – they haven't – but the quest toward fidelity changes the relationship between body and image, and thus the nature of the experiential opportunities they afford relative to the virtual.

Virtual Materiality

Definitions of the term 'body' reveal the dichotomy between holism and fragmentation in the word itself. The concept of an "assemblage of parts, organs, and tissues that constitutes the whole material organism" manifests the holistic view of parts that only become a body when they form a whole, and a whole that is never simply one thing; another definition of a body as a "collective mass" alludes to the utility of seeing atomized fragments as a whole, even though they don't constitute one per se.[21] I have reviewed the development of the avatar in its most popular form toward greater visual and functional complexity, away from iconicity and toward corporeality, and here turn to a consideration of the avatar 'body' as a collection of multiple informational elements held in layers of programs and data, images and simulations. This is more than a 'collection', I suggest, which implies a grouping of distinct objects, but something like a 'body' – a single entity or gestalt arising from of disparate fragments.

Regarding the materiality implicit in the term 'avatar', Boellstorff notes that "while 'avatar' historically referred to incarnation – a movement from virtual to actual – with respect to online worlds it connotes the opposite movement from actual to virtual, a decarnation or invirtualization."[22] Shifts in materiality are inherent in the concept of the avatar, although in contemporary avatar use there are two bodies, one biological and the other digital, meeting in the plane of the virtual. I have endeavored thus far to demonstrate that the digital avatar is more than just an image of a body, or a tool resembling a body, and with a bit of critical dissection I will autopsy the avatar in a demonstration of its depth, systems, and layers, attempting to identify those properties facilitating phenomenological connections.

This body is made up of a number of parts that cohere into the entity on the screen – layers of information and programming concealed beneath a visual surface of skin, clothing, and

[21] "body, n.". OED Online, Oxford University Press (accessed July 10, 2012).
[22] Boellstorff, *Coming of Age in Second Life*, 128.

hair. This layering is to a limited extent on display during instances of 'lag' (the delay in rendering objects on screen due to server demands or connection speeds) as the user waits while the environment and avatar body are assembled (in Second Life, this results in grayish coloring, lack of clothing or hair, or a partial body). Manovich argues that in instances of lag the artificiality and constructedness of virtual worlds and objects are brought to the fore, breaking the user's immersive experience. However, the temporal construction of the avatar body during lag isn't necessarily a negative, as it also, I suggest, contributes to an appreciation of the avatar as a body. One might note for instance the popularity and near ubiquity of behind-the-scenes appendices on DVDs that demonstrate CG production techniques; rather than simply breaking the illusion of animated and visual effects, the peek behind the curtain can be understood as adding a certain depth or dimension to images whose pro-filmic referent is absent or concealed, grounding them in real-world technology and the work of animators and motion-capture performances in addition to demonstrating the numerous layers that go into making a realistic composite. Not only do these revelatory appendices not spoil the effect, but they seem to be part of the overall fascination with CG imagery.

Theorist Bernadette Wegenstein writes that "the advent of new media has facilitated enormously the move of the reunion between holism and fragmentation" – a holism manifested in plurality that on the one hand evokes postmodern multiplicity, but on the other gestalt, in that digital information can be encountered in embodied terms, producing virtual entities (such as avatars) that are more than the sum of their parts, and that hold together experientially in a way that acknowledges fragmentation.[23] Against Manovich, I argue that the manifest constructedness of the avatar actually contributes to the holism of the avatar, as it demonstrates that the avatar

[23] Bernadette Wegenstein, *Getting Under the Skin: The Body and Media Theory* (Cambridge: MIT Press, 2006), 36.

body is more than just an image or surface, but a multi-layered entity whose embodiment vaguely mirrors the 'layers' of human embodiment. As Alexander Galloway writes:

> The *disabling act* . . . any type of gamic aggression or gamic deficiency that arrives from outside the world of the game and infringes negatively on the game in some way, [including] crashes, low polygon counts, bugs, slowdowns, temporary freezes, and network lag, [can be irritating] but at the same time, they are often the most constitutive category of game acts, for they have the ability to define the outer boundaries of aesthetics in gaming, the degree zero for an entire medium.[24]

The disabling act is a defining act, and in avatar use can serve as an (all too frequent) reminder that entire structures lie under the imaginal surfaces of environment and avatars.

Turning to the avatar body on the table, as it were, we first notice the clothing – an interesting aspect of the virtual realm in which bodies are visually created and then partially concealed. Virtual worlds researchers Jim Blascovich and Jeremy Bailenson refer to avatars as 'worn' by users, but we can see that even avatars wear things. Clothing is a bodily adornment, expressive of taste and identity, something commonly purchased and frequently changed. As a second surface, clothing to some extent reflects (and initially 'adhered' to) skins in Second Life, which can also be expressive and exchanged, but trends in avatar fashion have moved toward distinguishing clothing from the skin. In its basic form, as was the case in earlier virtual worlds, virtual clothing is simply a 'paint' applied to the avatar body without altering its shape, but contemporary fashion sits atop the skin and flows around the avatar body, accentuating its form as a dimensional and social body in that the clothing is situated externally and complementary to it.

We are now to the skin, that external organ which for humans acts as interface with the world, and for avatars marks a bodily boundary in human interfacing with virtual objects and

[24] Alexander R. Galloway, *Gaming: Essays on Algorithmic Culture* (Minneapolis: University of Minnesota Press, 2006), 31.

terrain. Skin is "always ambivalent: on the one hand, an endless surface without beginning or end, similar to the Möbius strip, and, on the other hand, more than a wrapping for the body, but a semantically productive expanse."[25] As with the human body, the visual surface of the avatar cannot be viewed in its entirety all at once, as a picture can; it is always partly hidden, always moving and changing in appearance depending on the angle from which it is viewed. From robots to furries, avatar skin is certainly mutable in Second Life, but, as in CG cinema, simulations of human skin have represented a holy grail for virtual bodies, and skin in many ways has come to define the potential for avatarial embodiment. Increasing levels of realism in virtual environments have invited ever greater associations with the human body, and skin is a key element of what constitutes humanness in realms virtual (Fig. 13).

Figure 13. Skins for sale in Second Life.

Human-like figures (however cartoonish) have been a common fixture in virtual environments long before contemporary technologies made realistic skins possible, but a fixation with skin that has attended technological advances in graphical rendering toward unifying the

[25] Thomas Elsaesser and Malte Hagener, *Film Theory: An Introduction Through the Senses* (New York: Routledge, 2010), 116.

modular avatar body – the more realistic the surface, the greater the sense of holism, as skin is associated with the coherence and integrity of the body. With increasingly realistic skin textures, facial appearance, and body shape, developers have produced highly affective bodies – though not entirely escaping of the uncanny valley or uncanniness of the automaton.[26] Uncanniness can occur not only in the small disjunctures in appearance and movement, but in the subtler way that these avatars seem to exhibit a degree of self-existence or belonging to themselves, in "the illusion of avatars in that environment possessing souls and controlling their own destinies – a virtual existence," as Heller puts it.[27] Skin carries ontological weight, and those in possession of it within a virtual environment are of a different order, distinct from other objects. An encounter with a finely rendered avatar necessitates a sort of 'double consciousness' in which the avatar is understood as simultaneously inanimate and alive, belonging to users and at the same time exhibiting its own bodily presence.[28]

Skins in Second Life are bought and sold, featured at in-world boutiques and online websites, and given names – Melissa, Sam, Yvonne – in place of model numbers.[29] Genitals and nipples come attached with these models; for standard issue Second Life avatars, however, they must be purchased separately. With skin comes sex, and graphical avatars in general preserve the binarism that characterizes real world cultural definitions of the body – definitions, as Foucault argues, that are inscribed on the body, producing its materiality discursively. The conformity of

[26] Masahiro Mori developed the concept of the uncanny valley, in which a plot of the response of an observer to robots (or CG characters) becomes increasingly positive and empathetic as the appearance and/or movement of the robot or character becomes more human-like. At the point at which appearance and/or movement approach nearly or barely human, the response becomes one of revulsion and the line dips into the 'uncanny valley' before quickly rising again in response to a healthy human. The realism of contemporary avatars is frequently countered by disjointing during movement, odd overlaps or penetrations between clothing and bodies, 'dead eyes', etc., that can contribute to an occasional sense of the uncanny valley.
[27] Heller, "Fuzzy Precincts and Bleeding Edges."
[28] Mitchell, *What Do Pictures Want?*, 7.
[29] This aspect calls to mind the *Blade Runner* replicants who, while designed for specific labors, are given names – Zhora, Leon, Pris, Roy – as part of their integration into human society.

avatar bodies to sex designations despite the potential fluidity of gender play helps produce their virtual materiality by appealing to normative ideas of what a body is, especially as the relationship between virtual gender and real-world sex is easily troubled. Race as well becomes an ironically stabilizing force in the face of perceived bodily instability, providing "familiar, solid, and reassuring versions of race which other users can readily accept and understand," reifying the white, Western male subject by providing "the necessary contrast, the dark background, against which the user can feel even more 'himself' than he did before."[30]

Skin and its color, bodies and their shapes, become the virtually material substrates of race and gender, and avatar bodies take part in this discursive inscription. This occurs on the one hand through conventional signs – for instance, in the hair and clothing of a female avatar. But such signs are to some extent available to, and widely used by, less nuanced figures in gaming and virtual worlds, as in the gendering of Pac-Man with a bow and lipstick to create Ms. Pac-Man, adding signs of (female) gender to a basic shape. The gendering of more sophisticated avatar bodies, while often employing similar forms of signification, at the same time resist obvious signification through the naturalization of the body: while Ms. Pac-Man is female because of the signs that code her so, a female avatar is styled femininely 'because' she is female.

The face, the most expressive part of the body and as the part most often associated with self, is also a well-equipped, affective 'interface' (Fig. 14). With its concentration of sensory organs the face becomes the primary input mechanism for interfacing with the material world, as well as for expression and communication with others. We commonly 'read' faces for information about a person's feelings or intent, and can keenly detect subtle shifts. Mark Hansen sees the face as a potential catalyst for affective interfacing with computers, where it may offer

[30] Lisa Nakamura, *Cybertypes*, 39-40.

"a promising alternative to the profoundly impoverished, yet currently dominant model of the human-computer interface."[31] Relative to the face (or what he refers to in new media applications as the 'digital facial image'), icons and information insufficiently address the potential for more human-compatible interfaces. Rather than a GUI that reduces "the wide bandwidth of embodied human expressivity to a fixed repertoire of functions and icons," he envisions an "open-ended, positive feedback loop linking information to the entire affective register."[32] While avatars do not generally constitute such a functional interface, they do prompt affective responses; such responses contribute to one of the avatar's visual paradoxes, in that one intuitively seeks expression and reaction in the face, which is not there. However, developments in facial recognition software are pushing toward fully mimetic avatars that will convey expression and lip movement, while on the gaming front exploring the potential for the integration of player expressions into gameplay.[33] To a significant extent the face is situated as the next frontier for human-computer interaction.

[31] Hansen, *New Philosophy for New Media*, 129.
[32] Ibid., 129-30.
[33] See "Facial-Capture Avatars Go from Hollywood to Home PCs," *Innovation News Daily* (June 11, 2012). http://www.innovationnewsdaily.com/1256-facial-capture-avatars-hollywood.html.

Figure 14. The face as affective interface.

Beneath the skin we find the skeleton, the frame that moves the body and to which the prims that shape the avatar are attached. The skeleton is that invisible part of the avatar body that remains constant within the mutability of shape and appearance, and which, as the instrument for movement, has a key role in the enactment of the avatar body as a body instead of an imagistic object or bit of digital statuary. Movement occurs within the simulated physics of the virtual environment, encompassing gravity, distance, solidity, and dimensionality, so that avatar bodies are moved relative to other objects and within a spatiality that reinforces the sense of their 'bodyness'. Avatars don't need to walk or run in virtual environments, yet they typically do, on legs that recall Katherine Hayles's discussion of skeuomorphs – design features that were once functional but, having lost their utility, are kept for aesthetic reasons. Movement through space is a defining quality of virtual environments, and movement of an avatar body conflates entry into virtual space with embodiment, allowing virtual environments to become spaces that are not simply interactive and spatialized, but places for embodied engagement, places in which to be enworlded.

We now put the avatar's tissues under the microscope. In the skin and clothing we find textures, those patterns and pictures either created in-world or, more often, derived from photographs. Avatars wearing textures can thus literally be clothed in images, and much of their virtual materiality is dependent on these textures which import and repurpose the materiality of the photograph, taking advantage of both its depth (being able to see into the photograph) and its superficiality (the way depth is rendered as surface). The use of images as digital flesh or sartorial covering recalls new media theorist Alluquere Rosanne Stone's description of putting on "cybernetic space like a garment," but relative to the fabrics and flesh of Second Life fashion

and bodies, her sense, formulated within early computer graphics and text-based virtual communities, comes off as ironic – more akin to putting on information and electronic pulses, the no-space of cyberspace, a diaphanous digitality rather than virtual velvet.[34]

Examining the surface more closely, we note that the digital material of computerized images is visually manifest on the display as arrangements of pixels, the basic unity of digital imagery. Pixels are often thought of as informational bits, but in actuality are not 'contained' in the image data except as a raster grid of integers; the pixel itself is the physical part of the display whose color and shading is dictated by the data that define it, and thus pixels are the point at which immaterial information stored materially on a drive is rematerialized (at sixty hertz) in visual form. The materiality of the pixel operates as the point of contact between embodied user and computer space, in a way distinct from the cinematic image where grain is part of the film stock that is illuminated by a projector and reflected off a screen, and the photographic print in which the grain is fixed: the materiality of the pixel is tied to the display rather than the image, and is instantly mutable even while being physical.

Changing lenses, we go deeper, into software and code and the programs for movement and appearance and the existence of the avatar body itself. It is here that the avatar body is formed as a collection or 'body' of digital information, indirectly engaged when users want to move their avatar or perform other actions. It is this programming that is added to or altered when Second Life users script their own movements and poses, or purchase skins, hair, and clothing, adding to or changing the body of the program and content of the database. Programming in Second Life is tied to the larger platform, but is also an individual creation, a part of the program for just the user; it is this program that reflects visually the choices and

[34] Alllucquere Rosanne Stone, "Will the Real Body Please Stand Up? Boundary Stories about Virtual Cultures," In *Cyberspace: First Steps*, ed. Michael Benedikt (Cambridge: MIT Press, 1991), 109.

agency of the user, inhered in the avatar body. It is here that we also find the username, that bit of information that becomes in many ways the essential part of any avatar; the avatar's appearance may change completely with the use of different skins, but the username is the information that resides at the core of the avatar's programming and identity within the system, and also on the surface as information for users – in Second Life, hanging prominently above the avatar's head. In a rather abstract sense the username might be thought of as the 'soul' of the avatar in that it becomes the signifier, as information attached and integral to the body, for the underlying and invisible informational structures of the avatar body relative to the imaginal presence of its visible overlay.

At the atomic level we find binary code, the fundamental dyadic form of digital information in which all computer information is preserved. At this point it may seem that we have thoroughly dematerialized the avatar body, but on the contrary it is at the level of computer code that we have reached the physical instantiation of the avatar in which its information is inscribed on hard drives. Of course, avatar bodies share this quality with everything else digital, and in that sense are hardly unique, but what is compelling about the avatar is the way it presents information – which, as Hayles reminds us, requires a body – in the actual *form* of a body. Machine alterity comes to characterize the computer at the level of this language accessible only to computers, that its creators can't read except through the use of computers, and that is in itself incomprehensible to the human mind – or perhaps, thinking again in metaphysical terms, rather than alterity, spirituality.[35] While resorting to metaphysical language does not make the avatar any more a body in the same sense as the sensorial human body, the concept of there being something inside a body, invisible and complex, that enlivens it and makes it more than it

[35] Heller's understanding of the material world being accessed through an injection of 'spirit' comes to mind here, by which she implies that we not only respond affectively to the world, but inject it perceptually with a quickening force.

appears on its surface, is well-rooted in the cultural understanding of embodiment, and thus the phenomenological experience of avatar bodies as bodies certainly allows for such associations. Of course, the most obvious animating influence on the avatar body is the user, and in this respect *we* become the spirit element enlivening the avatar body – and also a defining aspect of its materiality.

Finally, the avatar body is linked to a virtual 'camera', a point in space that provides a view of the avatar relative to the environment that is drawn around it in the moment of viewing. The camera is the point of visual connection between user and avatar that facilitates a number of other connections, functional, communicative, aesthetic, and experiential. That is, while the visual is certainly primary, it is also primarily a facilitator for other forms of interaction beyond the look, including the haptic connection through the controller, navigation of space, cognitive puzzle-solving, chatting, building, etc.

Collectively, these layers of graphical, algorithmic, and informational layers comprise the body of the avatar. We become aware of these layers through the lag that reveals constructed elements, glitches that expose their programming, and the general knowledge that digital imagery is numerically based. Composited together, they produce an image that "is not 'one', or identical with itself," as D. N. Rodowick writes of these images that have no "visible presence for us or to us without the aid of a display."[36] Yet it appears as one, as a collection of systems, information, and vivifying animation 'contained' within a virtual skin – an entity at the intersection of the representational human body and a body of information, interfaced with an embodied human who relates to each of these aspects differently. This brings us back to the reflection, for what is the nature of the body in the mirror? It is an image, to be certain, but one known to have an interior, even if making the connection between the subjective I and the

[36] Rodowick, *The Virtual Life of Film*, 135.

objective image body can be perplexing. The mirror image has a depth, a presence that the photograph does not, and while the picture of the exteriorized self the mirror returns is always just out of reach, at the same time we are always present to it as it is to us, always connected. "Identification is, from the beginning, a question of *relation*, of self to other, subject to object, inside to outside."[37] The avatar reminds us however that the relation to self is not vectorial, but a circuit. As a 'virtual image', the mirror reflection necessitates the presence of the object being reflected – the mirror requires two. It pictures me, but I am its image as well.

Constitutive Mediation

Soft piano music over black, then two names appear in elegant script: Sunni Irvine and Ocean Lane. The names dissolve into a long, gliding shot drifting toward an ethereal island cathedral set amidst delicate white and blue trees. Dissolve again to the interior where a bridesmaid begins her slow promenade down the aisle, flanked on either side by white and burgundy pews and ornate flower arrangements. A singer's voice joins the piano as the video dissolves to a wide shot of the bride's extravagant gown, then cutting to a closer shot and a slow push on a well-tanned Sunni, resplendent in her garland, veil, and jewelry. The breeze tousles her hair, and her big blue eyes gaze longingly down the aisle where Ocean awaits. This is their wedding video.

Or the ultimate in digital fantasy – the machinima video of the Second Life wedding, where simulacral layers stack as high as the cake: the opulence of the dream wedding, the union of perfect bodies, and the video running through the clichéd conventions of slow dissolves, romantic poses, and photos of their courtship (in Second Life) mingled with footage of the ceremony, with the entire event taking place in a virtual world. But at the same time, its

[37] Diana Fuss, *Identification Papers* (New York: Routledge, 1995), 3.

connections to the real world are plain. Weddings are typically designed to be fantasy affairs, and ritual serves to reify the virtuality of cultural norms. And while kisses and handshakes in Second Life lack physical contact and sensory stimulation, nevertheless the performance of such actions serve as social interactions that are not only appreciated for their symbolic value, but can also be 'felt' in the body through body memory and imagination. Anecdotes of such events, including the comments attached to their video records, reflect the degree to which participants frequently understand these events, and the bodies through which they are performed, as experientially real.[38]

I have presented the case for the avatar as a body in certain ways mirroring our own from a technological perspective, but affectively the avatar is also a body in that it is perceived as a body, treated as a body, cared for as a body, used and abused as a body. Avatars draw the kinds of looks and reactions that are associable with bodies, and they perform embodied actions on behalf of their users, strolling through galleries, drinking virtual Coke, meditating in the Zen garden, having virtual sex. A clear distinction can be drawn, for instance, in the difference in behavior toward an avatar and a 'bot' or NPC (non-player character); the bodies are made of the same stuff, but one performs a programmed series of actions while the other is performed by a user. Bots look like avatars, and can interact with players or users to a limited extent (in social or expeditionary situations they typically give the user information; in gaming, NPCs are often killed by the player), but they are treated very differently, even with various forms of bodily contact and emoting. It is clear that through all the layers that make up the avatar body, in order to make it an 'avatar' in the full sense of the word, it requires a connection to a user – that is, to a body. Operated by a user, the avatar responds to physical interfacial touch in a way distinct from

[38] Part of this reality includes real world expenses. The YouTube note for one Second Life wedding reports that it cost 65,000 Lindens, or about $225.

the use of other media and information – rather than handling a tool or writing a word, using the body to move and perform another body in a space that facilitates and encourages a particular kind of phenomenological engagement, body to body.

The avatar body connected temporally, haptically, and through an experiential virtual materiality to a human body produces a connective entity exhibiting "the body as constitutive mediation," as Bernadette Wegenstein writes in regard to new media artifacts that engage embodiment in new ways: "what has previously been known as a *medium* has adopted the characteristics of *body* within the techno- and new media sphere of the new millennium."[39] Digital media, whose visual components extend beyond the traditional definitions of images as exemplified in the avatar body, and which are in a certain sense more proximate to the human body in that they are subject to use, manipulation, and the touch of the interface, take on the qualities of a body. The new media works analyzed by Wegenstein relate to human embodiment in multiple ways, from proprioceptive interaction in VR displays that take shape according to the movement of the participant's body, to conceptual architecture incorporating biological and organic design.

On the other hand, Wegenstein understands the human body as defined by its connections and capacity for mediation, indeed as mediation itself, which can be understood as the condition in which a person's interaction with the world as well as with his or her own body is a product of language, interpretation, projection, and imagination. Her conception, however, is not simply a reiteration of the poststructuralist deconstruction of the subject, but a consideration of how virtual technologies don't simply contribute to the fragmentation of embodied experience but rather how fragmentation can be understood as gestalt. If human subjectivity is inherently

[39] Bernadette Wegenstein, *Getting Under the Skin: The Body and Media Theory* (Cambridge: MIT Press, 2006), 120.

fragmented, understanding it as such doesn't necessarily eliminate the possibility for holism if holism is reconceived in terms of the *connections* between disparate material and experiential elements. One might then think of the connection between the physical body of the user and a visualized, interactive form of its virtuality in the avatar body, touching at the interface (which is itself is materially immaterial, defined by connections, images, invisible processes) as a sort of 'body'. The avatar, which can only be avatarial when connected to a user, and the user, who is in certain ways virtual, incorporate at the interface to form a body defined by connection and mediation – what might be designated an 'avatar'.

This 'avatar' is unstable, temporary, and contingent – reflecting the virtuality of human embodiment – but at the same time a compelling and even comfortable arrangement. I have hitherto directed attention to the avatar *body* in order to distinguish it from the connection that animates this body and produces it as an avatar, rather than as solely an avatar body (as when the user is 'afk', away from keyboard) or a picture of an avatar as produced with a snapshot function. Identifying the avatar body as an entity with depth and complexity and exuding self-existence, I have sought to isolate it within the avatar relation; while accepted nomenclature designates this entity as the 'avatar', I argue that the avatar body is not the avatar *per se*, but the object that facilitates an avatarial connection within shared online space, and provides a digital body connected to the physical one, facilitating a particular form for experiential virtuality. The avatar body is avatarial when interfaced with another body, and thus the 'avatar' is composed of these two bodies and the connection between them; this relation constitutes its body and its materiality, including the two bodies and the interface at which they touch. In other words, we are avatar in the fact that we use avatars – our materiality is theirs, our bodies avatarial.

In this regard I follow Galloway's approach to the gaming apparatus as including the 'entire apparatus' of machine *and* operator. "If photographs are images, and films are moving images, then *video games are actions*," he writes, "video games come into being when the machine is powered up and the software is executed; they exist when enacted."[40] The operator and machine play the videogame together, and for Galloway, "the two types of action [machine action and operator action] are ontologically the same. In fact, in much of gameplay, the two actions exist as a *unified, single phenomenon*, even if they are distinguishable for the purposes of analysis."[41] Avatars are doubles; their ontology is connection, and they depend on their users for action and being. Avatars are also halves – perhaps only halves, masquerading as doubles, and the model of the 'avatar' suggests that our ontology shares something with theirs. The 'avatar' proposes a gestalt that is not inherent but established in the connections made through the virtual – that is, not achieved subsequent to or separate from the connections, but precisely in the action of making and utilizing connections.

This ontological model represents the figural potential of the avatar, to which I will later return in considering its implications in regard to motion-capture and digital effects cinema. For the moment, however, I turn my attention to the way in which connectivity is problematized in avatar films. As with the cyborg, theoretical promise can run contrary to representation in popular media, and in the next chapter I follow the question of agency relative to the avatar as the source of certain tensions, tying it back to interactivity as problematic in itself. Echoes of the cyborg resound as the malformed gestalt of human and technology is feared much more often than embraced, but I also attempt in this chapter to move toward doubles, reflections, and

[40] Galloway, *Gaming*, 2.
[41] Ibid., 5.

images, and the discursive distinction between players and those played – an especially vexing problem when one is playing oneself.

CHAPTER 3

WHO'S PLAYING YOU?

> Guard: Who aims – the player or the slayer?
> Tillman: I'm the hand. Someone somewhere else is the eye.
> Guard: That's tripped out, man.
> Tillman: Sometimes they take over completely. Move you around like a robot. But that don't work so good.
> Guard: Why not?
> Tillman: The delay.
> Guard: Right, the 'ping'. They talk about that. The time it takes for the slayer to respond to the player's commands.
> Tillman: Whatever they call it, when you're in the game, a slice of a second is the difference between living and dying. When that trigger pulls . . . it's just me.
>
> From *Gamer*

The tagline for the film *Gamer* is the deliberately provocative question "Who's Playing You?" which not only upends the conventional notion of control in gaming (as extending from the player) but also situates the potential moviegoer in the position of the avatar – as an object of control, devoid of agency. This bleak outlook on contemporary subjectivity as that of a videogame character can be compared with the slogan for Kinect, Microsoft's motion-sensing input device for Xbox, which declares "You Are the Controller" (Fig. 15). Being the controller rather than the controlled holds on its surface the promise of agentive fulfillment, but on closer inspection the two slogans are more similar than dissimilar; in gaming the controller is, traditionally at least, the plastic, tethered, utilitarian input device that is gripped and manipulated, sometimes even pounded or thrown, in service of the more animated or complex movements of the bodies on the screen. To be the 'controller' holds the double meaning of being the one *in* control, as the player, as well as being the object *of* control – the hardware (or in this case wetware) through which the game is played.

Figure. 15. Advertisement for Kinect.

In this doubling we find the body circuitously implicated within the relationship between player, machine, and code in gaming that Alexander Galloway identifies as "a singularity . . . an undivided act wherein meaning and doing transpire in the same gamic gesture."[1] As previously noted, rather than reading a text from a critical distance, as with traditional media forms, Galloway avers that the player creates the gamic text in the moment of play by 'doing', in a process that with practice becomes intuitive, producing a singularity. The Kinect sensor adds somatic performance to this unifying process, as the player must precisely perform her own body in order to succeed in the game – to play by 'being' the controller in both senses simultaneously. In the game *Dance Central* (2010, Harmonix) the circuit of performance and control is clearly manifest, as the player must follow the onscreen movements of the character while the Kinect sensor records missteps and delays in keeping time with the rhythm – or *lag*, we might say, recalling both the wait time for an overloaded network and the 'ping' in *Gamer*. In *Dance*

[1] Galloway, *Gaming*, 104.

Central, who is playing whom is ambiguous to say the least, as the best players are essentially the best puppets. The game recalls a certain scene from *Gamer* in which protagonist John Tillman (Gerard Butler), a death row convict and mind-controlled avatar in the lethal battle game 'Slayers', where his avatar handle is Kable, is made to dance by his seventeen-year-old controller Simon (Logan Lerman) amidst gunfire and explosions; in this moment of ludic movement and corporeal vulnerability, Tillman incarnates the film's blood-spattered answer to the discourses of disembodiment that once prevailed in the theorization of gaming and virtual technologies, as he (as with Kinect) demonstrates that the body, rather than being disposable, is *indispensable* in the engagement of virtual spaces, appropriated in the service of the game (Fig. 16).

Figure 16. The privileged Simon and his battle weary avatar Kable (Tillman) in Gamer.

In both of these examples the body is aligned with the interface, with Kinect and the "You Are the Controller" slogan positioning the body as game hardware, and "Who's Playing You?" and *Gamer* situating the human as software, as the avatar that represents the player in the

virtual environment. Positing the body as interface carries multiple implications, from mirror neurons and psychosomatics to phenomenological experience and gender constructivism, but the technological interfaces for videogames and virtual environments insert a tangible and perceptual apparatus between the player and the various modes of embodied engagement with the game space. The controller and avatar are objects that not only exist between the physical and virtual worlds, but which make the separation of these spaces within the gamic text possible. When the avatar is seen as a primarily functional extension of self in game space, and the controller a tool for access and manipulation, the interface position is utilitarian; but when the avatarial position is inflected back on the user, and the body conscripted into the dance steps that make *Dance Central* an entertaining party game (for the movement it imposes on real bodies), the interface becomes symbolic of powerlessness. The menacing tone of "Who's Playing You?" is not the product of a suggestion of equally matched players meeting as opponents, but for its association of the reader or moviegoer with the disempowered avatar – and further for its insinuation that there is no existence outside of game space (or 'gamespace', as McKenzie Wark puts it). In *Gamer*, as with *Surrogates* and *The Matrix*, avatar ontology serves as a model for ideological and informational manipulation, in which autonomy is an illusion within a society of simulation (*The Matrix*), ideologically suspect in a culture of vicarious living (*Surrogates*), or subject to the machinations of a ubiquitous and perverse game culture (*Gamer*).

Steven Shaviro devotes an extensive essay to the latter film, performing a reading of *Gamer* as a film about and existing within a control society, offering a 'map' (if not quite a critique) of contemporary entertainment as postmodern gamespace and neoliberal capitalism as the invisible hand making puppets of it subjects.[2] *Gamer*'s videogame-derived aesthetics and manic, impressionistic editing style (which Shaviro defines as 'post-continuity') operate in

[2] Shaviro, *Post-Cinematic Affect*.

concert with the diegetic setting of a society consumed either by playing games with the bodies of other people, or viewing the avatarial spectacle as reality television. In this chapter I ask not only what it means to have an avatar, but to *be* an avatar in terms of the cultural and critical discourse by which films that depict avatars and avatarial relationships participate in the evolving conceptions of interactivity and virtual embodiment. *Gamer*'s figuring of post-industrial capitalism – and the way in which it 'plays' with its subjects in more ways than one, as I discuss further below – contributes additional layers to the cultural understanding of what avatars 'mean' and how they pertain to the increasing virtualization of embodiment through multiple informational and imaging technologies. Our use and manipulation of, and desire for or suspicion of a secondary order of bodies in the image of our own raises the question of how the societal forces we feel (as well as enact) upon ourselves might be reflected, reenacted, or repudiated in the bodies we create and control.

The 2007 game *Assassin's Creed* (Ubisoft) bears mentioning here for its illustration of the reiterative nature of avatarism. In the game, one plays what is essentially the avatar of an avatar, as bartender Desmond Miles is abducted by a corporation determined to locate a number of ancient artifacts by which it can exert mental control over people (a recurring theme in avatar texts). The corporation forces Desmond to relive the genetic memories of his assassin forebears – or, considering both the interface used by the player and the technology of the 'Animus' that facilitates Desmond's spatiotemporal entry into his ancestor Altaïr, to *play* the 'memory' encoded in his DNA. Success in the game is contingent upon successful reenactment, as players are kept on task by a meter displaying the level of 'synchronization' between Desmond and his avatar/ancestor, which of course is actually a measure of the player's synchronization with the

game. Between missions the game returns to Desmond's incarceration, which the player momentarily shares until linking again with Altaïr.

Desmond's enforced sojourns into virtual reality recall the strange entertainment of the Platonic cave, where prisoners exposed to a shadow reality came to prefer it to the blinding world outside. Like Tillman, Desmond plays to be free, while their respective users (Simon, the player) play for fun, and it in this compulsion the film and game are made. Desmond's awareness of his avatarial status is rare for a narrative-based game, while the player, though positioned to identify with Desmond's plight, essentially operates in the service of the corporation, playing Desmond playing Altaïr in order to achieve its objectives; Altaïr, the (unaware) avatar of an avatar, is the one upon whom multiple levels of control are exerted. *Assassin's Creed* puts into play a structure of control that is recursive and compulsory – theoretical territory well-established in Foucault's writings on power and subjectivity. For Foucault subjectivity is twofold, as one is both subject *to* discursive influence and the subject *of* its perpetuation in the disciplining of behavior and the body, as can be seen in his concept of panopticism:

> He who is subjected to a field of visibility, and who knows it, assumes responsibility for the constraints of power; he makes them play spontaneously upon himself; he inscribes in himself the power relation in which he simultaneously plays both roles; he becomes the principle of his own subjection.[3]

For Foucault, the answer to the question of 'who's playing you?' is *you*, as you are ultimately the instrument for the inscription of power on yourself. Avatars are bodies subject, like our own, to control and inscription, and in avatar films it is the avatar with which we are asked to identify – sometimes literally, as with *Gamer*, and other times through sympathy for characters who are victims of an avatarial culture, as in *Surrogates*, in which the protagonist peers through the

[3] Foucault, *Discipline and Punish*, 202-3.

ideological wool to find that the vicarious lifestyles which were meant to enhance the experience of living have drained life of its meaning. While videogames make use of avatars, cinematic depictions of avatars are more concerned with how we have become avatars, in narratives that can be read in terms of Foucauldian subjection and discipline – or, as recent scholarship suggests, relative to control society.

Critics of the political economy of gaming such as Shaviro and Galloway have turned their attention from Foucault to the illusive utopianism of *flexibility*, which Galloway cites as "one of the founding principles of global informatic control. It is to the control society what discipline was to a previous one."[4] Deleuze outlines the 'society of control' in which control operates as *modulation* in contrast with the *mold* of the enclosure theorized by Foucault in his description of docile bodies. However, Foucault proves useful in his particular treatment of power relative to the discipline of the (avatarial) body, as I demonstrate in a discussion of *The Matrix* and *Sleep Dealer*. In the following section I turn my attention to two films, *The Lawnmower Man* and *eXistenZ* that privilege modulation over the mold, and are thus most productively approached with control society in mind.

Issues of gender undergird any discussion of agency in these films, as agentive action primarily falls within the domain of the male protagonist. This in itself isn't unexpected, as male activity and female passivity within the films accord with Hollywood convention; however, the association between masculinity and agency accrues additional significance in the context of the disempowered avatar, as male characters contend against an encroaching virtuality that threatens agency, while their female and raced counterparts, already understood as 'closer' to the avatarial position and more familiar with the virtualization of the body, become facilitators for the medial transitions of the white male, or characters in need of rescue from a virtuality that has consumed

[4] Galloway, *Gaming*, 100.

them. Galloway's preference of the term 'action-based media' over 'interactivity' in his theorization of gaming is particularly interesting relative to these cinematic depictions of masculinity, as action implies a vector, power applied unidirectionally, while interactivity implies greater possibility for bidirectional influence and exchange.[5] Recent scholarship has problematized conventional notions of interactivity, and the figure of the avatar occupies a central place in manifestations of the question of who is playing whom, and when, if ever, we can say "it's just me."

Re-working the Docile Body

Before Neo is Neo, he is Thomas Anderson, hacker and coppertop. *The Matrix* envisions a world in which humans have become a power source for machine overlords; enclosed physically in pods and mentally in the 'neural-interactive simulation' of the Matrix, humans circa 2199 are incarcerated in a world of Baudrillardian simulation, but also as exemplary (if overdetermined) models of the docile body, which "may be subjected, used, transformed, and improved," as described by Foucault.[6] Docile bodies are the bodies of individuals made to conform to certain roles and performances through systems of discipline, generally involving an 'enclosure' (an institution or organization) which provides specialized, ideological education by separating individuals out for training. With the pod and simulation enclosures facilitating docility in the Matrix, the machines separate the physical and mental realms of the subject, supplanting the physical body and world with an immersive virtual reality. Thus integral to the Cartesian structure imposed by the machines is a form of virtual embodiment that engages the

[5] Although game developers have recently boosted the number of titles for girls, videogaming has been and largely remains a male-dominated pursuit. This chapter attends to issues of white masculinity, while femininity and race are covered in the chapter following.
[6] Foucault, *Discipline and Punish*, 136.

embodied mind so it should not miss its sleeping body. Emerging from the Matrix, then, introduces the mind to its actual physical body. But Neo (Keanu Reeves) does not stay out for long, as he soon re-enters the Matrix after working through training simulations in Matrix-like virtual spaces. From our own embodied perspective, it is easy to think of his training as learning to differentiate physical embodiment from virtual embodiment, but of course Neo had for most of his life only experienced the latter, and had been physical only a few days. Thus his return was not simply a transition from the physical to the virtual, but a return to the virtual with a new tool: interactivity.

Christian Krug and Joachim Frenk note that interactivity was key for Neo's break from the simulation of the Matrix; initially freed by a hack, he then becomes a transcendent hacker able to exert control over the Matrix. However, Krug and Frenk note that the tie-in videogame *Enter the Matrix* (2003, Shiny Entertainment), which promised to extend the *Matrix* experience and allow fans to enter and interact with the world presented in the films, was ironically linear and restrictive, allowing only minimal interactivity outside accomplishing pre-designated tasks. Philosophical declarations of determinism in the film extend quite literally to the structure of the game, they write, as playing it only brings about story events that were always going to happen anyway. The game thus becomes a tool for control, figuring as "just another extension of the great game that is the Matrix."[7]

Character-based videogames in general tend to follow a more or less predetermined course through levels and tasks, and a geography that often only yields one correct (or even one possible) course. "Video games are computer-and-monitor-supported activities that select a small basketful out of all the possible ways that embodied brains may relate to worlds and other

[7] Christian Krug and Joachim Frenk, "*Enter the Matrix* – Interactivity and the Logic of Digital Capitalism," in The Matrix *in Theory*, ed. Myriam Diocaretz and Stefan Herbrechter (Amsterdam: Rodopi, 2006), 83.

agents."[8] Interactivity in gaming (particularly the popular character-based adventure variety) tends to offer a limited form of agency, as linearity predominates, and progression is tied to compliance rather than innovation.[9] Repetition comes to typify videogame experience as players rehearse the same actions multiple times in an attempt to get them right rather than devising different solutions to solve problems. "Not only are the conventional limits of the game itself revealed at such moments," writes Andrew Darley, "but so is its pre-programmed character: the element of control and choice it seems to offer is revealed as illusory – just as predetermined as most formulaic narrative."[10]

Thus while interactivity within digital media has certainly changed media consumption and continues to hold many promises, it is clear that interactivity cannot simply be conflated with agency. Lev Manovich argues that in computer culture "authentic creation has been replaced by selection from a menu," and thus the mythos of interactivity must be interrogated to uncover the form of agency it provides in any given context.[11] Examining the forms that interactivity assumes in videogames, we see that while games offer a variety of performative actions (jumping, shooting, etc.), repetition is the action that most succinctly defines gameplay. Behavior within the game world is disciplined through learning to execute certain actions in a particular way, which allows the player to proceed to the next level and reach the (pre-determined, linear) ending of the game. The disciplining of behavior is produced through a disciplining of bodies –

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[8] Andreas Gregersen and Torben Grodal, "Embodiment and Interface," in *The Video Game Theory Reader 2*, ed. Bernard Perron and Mark J. P. Wolf (New York: Routledge, 2009), 81.

[9] Open world or 'sandbox' games, of which the Grand Theft Auto series is a notable and popular example, are exceptions, to varying degrees, of the linearity that predominates in character-based adventure games. Puzzle and strategy games also allow for a greater degree of freedom in problem-solving, and PvP (player versus player) modes in many games remove narrative linearity but typically also limit progression through the game. However, the cinematic influence that has contributed to both the aesthetics and popularity of narrative games becomes participant and interactive in the cultural context of avatarial gaming.

[10] Andrew Darley, *Visual Digital Culture: Surface Play and Spectacle in New Media Genres* (London: Routledge, 2000), 157.

[11] Manovich, *Language of New Media*, 124.

the correct and precise movements of the player's fingers and thumbs on the controller, and the corresponding (though misaligned) movements of the character body in the game.[12] Wii controllers, which facilitate greater body movement, and the camera-based system of Kinect require more involvement of the body and more analogous movement, and thus greater discipline over the body of the player – even as these systems draw on a sense of naturalized movement as the basis for their games (or 'remediate' analog movements, such as swinging a tennis racket).

Shira Chess writes that repetition in videogames is an example of the disciplinary tactics that produce the pliable docile bodies described by Foucault: "the game's controls and interface create a system that both facilitates game mastery and produces an environment where players can be easily taught."[13] Mastery *over* the game is thus ultimately connected to the player's complicity in being mastered *by* the game. This can be seen, as Chess points out, in the way that certain game elements (like a map which directs the player where to go) "not only give the player more control over their actions, but the game's designers more control over the player."[14] Control and being controlled go hand in hand, and between these two points is the avatar body, which is both the object of control and the representation of the controlling subject in the space of the game.[15]

In contrast to videogames, virtual worlds offer a much less structured interactive experience. For some this aspect makes virtual worlds unappealing (videogames remain

[12] The 'misalignment' of movement between player and character is a result of the difference between player input (usually pushing a button or manipulating a joystick) and the character movements on screen (such as walking or shooting). However, though the movements aren't analogous, they do correspond in the basic sense in which one movement initiates another.

[13] Shira Chess, "Playing the Bad Guy: *Grand Theft Auto* in the Panopticon," in *The Meaning and Culture of Grand Theft Auto: Critical Essays*, ed. Nate Garrelts (Jefferson, N.C.: McFarland, 2005), 81.

[14] Ibid., 82.

[15] Hacks, mods, and machinima disrupt game design and appropriate game characters and architecture for uses outside of the designer's intentions. While there is much here worth exploring relative to cinema, in the context of this essay I will note only the strong influence of established design and narrative/linear modes, as mods tend most often to extend the model established by the original design of the game (such as adding levels), and can also be appropriated in commercial design; machinima subverts gameplay, but generally does so in service of producing texts that employ cinematic aesthetics and narrative structure.

exponentially more popular), but others are drawn to the relative freedom afforded by graphical virtual worlds such as Second Life that function as social networks within an open-ended environment. Since avatars in these spaces are generally highly customizable and social interaction occurs through or with avatars, the early mythos of the avatar was centered on its reflexivity. "Virtual worlds provide people with a mirror," writes Richard Bartle, and virtual world designers "get to make the mirror."[16] Avatar-enhanced communication prompted Sherry Turkle's experiments in identity play, which hinged on a two-way interactivity: the user designs the avatar body, the appearance or manifestation of which then influences the behavior of the user. While more recent scholarship has contested the degree to which identities can be refashioned, anecdotal evidence abounds of users acting differently within avatar guises.[17] This impact on behavior does not on its surface seem to be the product of a deterministic design, leading users along a certain path; but to the extent that virtual worlds (not just avatars) act as mirrors, we must also question how experience is structured through the construction of virtual spaces, bodies, and interfaces – and the particular nature of their reflections.

Idealized notions of interactivity, from avatar design to clicking through a website, imply that the user is able to shape his or her experience with digital online media and also shape aspects of the medium itself, choosing what links to click on and what options to engage. But beyond the ways in which users shape computer space, Manovich is concerned with how the computer shapes human experience. For instance, whereas reading a sentence once gave rise to any number of associations the reader might make, a hyperlinked sentence feigns depth while in fact restricting thought to "pre-programmed, objectively existing associations," which Manovich

[16] Bartle, *Desiging Virtual Worlds*, 164.
[17] Lori Kendall, *Hanging Out in the Virtual Pub: Masculinities and Relationships Online* (Berkeley: University of California Press, 2002) and Lisa Nakamura, *Cybertypes: Race, Identity, and Ethnicity on the Internet* (New York: Routledge, 2002) counter Turkle's optimism for identity shifts while tracking patterns of behavioral responses to the combination of social and technological circuits that contribute to interactivity.

aligns with Althusser's concept of interpellation, in which "we are asked to mistake the structure of somebody else's mind for our own." He continues:

> This is a new kind of identification appropriate for the information age of cognitive labor. The cultural technologies of an industrial society – cinema and fashion – asked us to identify with someone else's bodily image. Interactive media ask us to identify with someone else's mental structure. If the cinema viewer, male and female, lusted after and tried to emulate the body of the movie star, the computer user is asked to follow the mental trajectory of the new media designer.[18]

Graphical virtual worlds ask us to do both, as cognition and experiential embodiment intersect in the representations of self within avatar bodies. Thus we can get a sense of the circuitry of designer, user, and avatar, mediated through the technologies of virtual spaces. The designer creates the parameters and possibilities of the world, the types of bodies it supports and permits, the nature of the space in which virtual bodies exist, the amount and type of modifications the user is able to make to bodies and space within the virtual environment, the way it appears to the user and others, etc. Constrained by these possibilities, the user creates and/or controls a virtual body while cognitively and affectively relating his or her own 'bodily image' (and sense of embodiment) to the body on the screen and the space in which it exists. Beyond the technological constraints are ideological concerns, such as capitalistic elements in Second Life: functioning as a relatively free space which privileges user creation over owner design, the Second Life model is yet founded on land ownership and development, and commerce, fashion, and advertising are driving forces in Second Life activity – forces in which avatar bodies are

[18] Manovich, *Language of New Media*, 61.

caught up.[19] (Ideological influences become additionally salient when we consider that virtual worlds are increasingly popular with children.)[20]

Ideological hegemony functions in *The Matrix* as a means of control over the unawakened humans, although the machines are less concerned with content than effects; their aim is the exploitation of the physical body, and the Matrix in its various iterations (we learn that earth life circa 1999 is the one that worked best) is put in place to keep the humans docile rather than to instill any particular ideology (while the film itself critiques a cultural complicity with simulational culture). The ideal form of the Matrix simulation, which results in the greatest degree of control and fewest occurrences of rebellion, is one that not only places humans in the 'shared hallucination' of a large-scale persistent environment, but one that first of all situates them in a form of virtual embodiment that they can accept as real. Thus when the awakened Neo re-enters virtual space, his success there is dependent on learning to divorce his sense of reality from the virtual body that he once simply 'lived' as Thomas Anderson and now must perform or operate as an avatar. Neo applies a hacker ethic to the virtual body and its environment, figuring out how to break through the 'reality' of gravity and physical space. "Do you think that's air you're breathing?" Morpheus (Laurence Fishburne) asks Neo in the simulation, provoking him to change his cognitive relationship with his avatar body through repetition and what James L. Ford calls "a techno-cyber version of meditation."[21] Meditation is a means of 'reprogramming' the mind through the discipline of the body, held in quiet repose or the careful movements of

[19] For a critical view of capitalistic practices in Second Life see Samuel K. Bonsu and Aron Darmody, "Co-creating in Second Life: Market-Consumer Cooperation in Contemporary Economy," *Journal of Marcromarketing* 2008 28: 355.

[20] "Are ads on children's social networking sites harmless child's play or virtual insanity?" Meg Carter, *The Independent*, June 2, 2008. Accessed July 7, 2011 from www.independent.co.uk. (cf. Maria Rousou, "Learning by Doing and Learning Through Play: An Exploration of Interactivity in Virtual Environments for Children," *Computers in Entertainment*, Vol. 2, Issue 1, January 2004.)

[21] James L. Ford, "Buddhism, Mythology, and *The Matrix*," in *Taking the Red Pill: Science, Philosophy and Religigion in* The Matrix, ed. Glenn Yeffeth (West Sussex: Summersdale, 2003), 166.

martial arts. Following the download of the kung fu program, Neo must translate his computer-generated 'knowledge' to the virtual body that has never performed the movements he now knows how to do, while we watch the computer-aided body of Keanu Reeves float across the screen, transitioning from photographic body to what Andrew Shail refers to as the gravity-irrespective 'cinematic body' that defines movement in the Matrix.[22]

The discipline of the mind through philosophy, meditation, and training works to integrate Neo's cognitive relation to his avatar body with the phenomenological experience of his embodiment. It is not his physical body that learns kung fu (he doesn't fight in the real world like he does in the Matrix[23]), but his embodied mind, through the interactive embodiment which controls his avatar or 'residual self-image' (an image that wasn't really imported from the physical world – otherwise it would be shorn and pale – but from another virtual space, where he once performed his avatar body differently).

In *The Matrix*, hacking computers is visually translated to martial arts fighting, rejecting the disembodying informational computer space that provides the menacing context for other cyberspace texts in favor of the movement and mastery of the stylized body. David Gabbard identifies a 'double-enclosure' in *The Matrix* that corresponds to Foucault's definition of the enclosures that produce docile bodies: the Matrix as a 'prison of the mind', but also the enclosure of the body. The avatar gives form to the abstractions of embodiment, but also enables, restricts, and colors embodiment through its particular modalities. Learning to use an avatar, whether in a videogame or virtual world, means learning to be embodied in the new space and body, and learning to use one's own body to facilitate the new embodiment – the combination of buttons to

[22] Andrew Shail, "'You Hear About Them All the Time': A Genealogy of the Sentient Program," in *The* Matrix *Trilogy: Cyberpunk Reloaded*, ed. Stacy Gillis (London: Wallflower, 2005), 25.
[23] Neo's rough, injurious fight with Bane in *The Matrix Reloaded* is a stark contrast with the graceful, bloodless violence in the Matrix.

jump and kick at the same time, for instance, or the best time to flick the Wii controller to adjust for the slight delay in response. The bodies of jacked-in characters in *The Matrix* are for the most part inert, and thus the step of moving one body to control the movement of another is eliminated; however, Neo still moves with his residual 'body' – or residual sense of embodiment, rather than simply the body image – which is then trained to become a powerful avatar.

In the film, humans are exploited in pods while their avatars are free to roam within the virtual simulation – or in the 'reality' of this virtuality – free to work at their virtual jobs, for avatar bosses who penalize for tardiness (even though no one has left the pod). This double exploitation – of humans by machines, and humans by other humans – places bodies at the center of ideological and systemic pulls, with the machines on one end and a capitalist system of labor on the other, and human bodies and their avatars doing double work to sustain both. In their docility these bodies become both "subjected and practised," as

> discipline increases the forces of the body (in economic terms of utility) and diminishes these same forces (in political terms of obedience). In short, it dissociates power from the body; on the one hand, it turns it into an 'aptitude', a 'capacity', which it seeks to increase; on the other hand, it reverses the course of the energy, the power that might result from it, and turns it into a relation of strict subjection. If economic exploitation separates the force and the product of labour, let us say that disciplinary coercion establishes in the body the constricting link between an increased aptitude and an increased domination.[24]

In the avatarial relation, bodies are situated interstitially, as connecting links: between the videogame player and the game designer, or between player and the game world to be conquered; between social relationships among users in virtual worlds, the user and his or her perception of self, and the user and the image culture that informs the construction of avatar

[24] Foucault, *Discipline and Punish*, 138.

bodies; and in avatar films often between character and diegetic growth or fulfillment, as a facilitator or an obstacle, or both. In *The Matrix*, to assume the avatar from outside the pod is to hack and re-work the docile body, converting it from anesthetized cubicle worker (a passive power source) to a dynamic virtual agent of the user. Interestingly, it becomes the task of the character to discipline his or her own body, as we see in Neo's training. He has been fitted with new knowledge, and is guided in his training by Morpheus, but Neo must do the final and most personal work in disciplining the body, that it might operate at greatest capacity in the tasks for which it has been enlisted.

Trinity becomes the mirror to his quest, intimately tied to him (and his double in appearance), but never able to be the One, as her proficiency in the Matrix only makes her a better 'two'; her name alludes to the irresolvable assemblage of deity that is never quite one because it is always also three. Neo's white masculinity positions him as antagonistic to his bifurcated avatarial position (a dilemma he shares with Cypher [Joe Pantoliano], who opts to return to the false unity of ignorance in the Matrix), and his agency is directed toward overcoming the virtuality of the Matrix by defeating its source and freeing the humans from their enclosures. Trinity serves as helpmeet, furthering Neo's trajectory toward transcendence and unity – which we must note, however, he never fully achieves, his sacrifice instead resulting in stasis.[25]

Sleep Dealer explores the utility of the docile body, and the exploitation not only of bodies but of the avatarial relation itself. The film interweaves boundary transgression and border crossing in a story about Mexican workers who are employed in the U.S. but never leave

[25] Deleuze identifies equilibrium as a defining element of the factory and, by extension, the disciplinary society; it is interesting then that the battle against hegemony results in its balanced and pacific perpetuation – a disciplinary ideal. I take up the equilibrium at the end of *The Matrix Revolutions* in Chapter 5.

Mexico. With nodes implanted in their arms and necks they manipulate high-tech robots in the U.S. from Tijuana factories – the 'sleep dealers', so-called for the tendency of workers to lose themselves during long shifts and eventually collapse (Fig. 17). In the story, Memo (Luis Fernando Peña) leaves his family's milpa after the death of his father, which results when his own amateur hacking attempts are picked up by authorities. He gets a job as a virtual construction worker in San Diego and, standing in a long line of workers connected to cables and oxygen masks, performs his labor by pantomime in a dark yet oddly beautiful dance of particularly alien(ated) labor.

Figure 17. Telepresent labor in Sleep Dealer.

The film does not explain why the robots in this futuristic world do not work autonomously, though one can infer that, in what seems to be a keen observation on the economics of advanced technology, foreign workers remain cheaper than advanced AI. The work is long and draining, producing a loss of essence or vitality: "sometimes you control the machine, sometimes it controls you," warns Luz (Leonor Varela), the young woman who gives Memo his 'node job' – another feminine facilitator. The economic hold of the job over the

worker is instantiated in the images of Memo's labor, as the glowing interface cables that stream from the ceiling to the arms and wrists of the workers form an image of strange marionettes, puppets on vascular and neurological strings.

Indeed, the placement of the nodes on the body are situated to evoke manual labor, with multiple points at the hand, arm, and shoulder rather than the *Matrix*-style single spike to the brain (those freed from the pods actually have multiple nodes distributed across their bodies, but these are neglected in their return to the Matrix). The spike produces a cerebral virtuality that leaves the physical body inert, while the virtual movements in *Sleep Dealer* require an enactment of the labor, its movements without its materials. Strapped to wires and limited in this way, the virtual worker could scarcely perform, say, acrobatic kung fu, as in *The Matrix*; nor could he or she, tethered to an assigned robot, live vicariously through a cosmetically ideal body, as in *Surrogates*. In the movies not all virtualities are equal – a condition that parallels Jennifer Gonzalez's observation of historical cyborgism, wherein "those who had access to certain machines were privileged, those who were expected to behave like certain machines were subjugated."[26] Inequality is evident in the various interfaces employed by cinematic avatar users: the prongs and sockets that mark the bodies in *Sleep Dealer* and *The Matrix*, the softer interface that lays over the eyes in *Surrogates* or lightly on the face in *Avatar,* and the hypermedia womb of the spoiled rich boy in *Gamer*. The marginalized and poor bear the marks and components of technology and are subjected to the physical penetration of a hard connection; the consumer class wears it gently on the skin while in repose; the privileged user, for whom the interface has become purely a screen, doesn't touch the equipment at all.[27] The vascular cabling and multiple

[26] Jennifer Gonzalez, "Envisioning Cyborg Bodies: Notes from Current Research," in *The Cyborg Handbook*, ed. Chris Hables Gray (New York: Routledge, 1995), 269.
[27] David Cronenberg's *ExistenZ*, which I address later in this chapter, to some extent contradicts this pattern, as the main characters are middle class and, in the case of Allegra, socially prominent, yet are subject to penetrating hard

node sites in *Sleep Dealer* also illustrate the requirement of the worker to give not only time and energy over to the labor of the avatar, but the vitality of the biological body as well. The contact points embedded in the hand, arm, and shoulder reflect the role of these parts as embodied tools of the worker – unusual in an avatar film, where the movements of one body are typically divorced from the other (Fig. 18).

Figure 18. Vascuar cabling in Sleep Dealer.

The worker in *Sleep Dealer* is both puppet and puppeteer, virtual and embodied, alien and alienated. In a Foucauldian diffusion of power the virtual laborer produces a miniaturized enactment of the influences of power on his own body transferred onto another. Power is not simply conveyed, however, as if Memo as the intermediary subject were merely a conduit, but it becomes part of his subjectivity, so that in the instantiation of power the subject finds himself alone – Memo is compelled to work the robot body as a condition of his employment, but the job only creates the conditions for the intimate power he must exercise in the uncanny dance of the

connections. However, their appearance as revolutionaries of a sort in the end of the film suggests that they occupy a marginalized position outside of the *ExistenZ* game.

two bodies. In the economics of alienated labor, this exercise of power leaves him powerless still. The film's ending leaves him in Tijuana, presumably still employed at the sleep dealer, having more or less accepted his (unjust) fate. Luz, who uses her own nodes to upload the memories she sells to make a living, is portrayed by the film in a very different light – not as a victim acquiescing to the reality of the virtualized economy, but as profiting from it (if only marginally) as a 'writer' of sorts, much more in her place than the emasculated Memo.

Avatars of Technology

The virtualization of the economy occupies a central place in Deleuze's description of the society of control, where corporations exist as nebulous, fluid entities in contradistinction to the rigidity of the factory. While Memo's work is wired and futuristically telepresent, the setting for labor perpetuates the model of the factory, even bolstering its Fordist capacities by conforming mobile jobs such as picking fruit and driving a cab into an assembly line model. Race and nationality clearly inform this vision of twenty-first century upgrades to a nineteenth century system, as factory work in our present era is increasingly farmed out to third world countries for lower wages. The corporation, which Deleuze refers to as a 'spirit' or a 'gas', floats above these labor realities as an amorphous, flexible body disassociated from the physical body of the worker.

Control society is also defined by its flexibility, as it modulates itself in response to changing conditions rather than seeking to establish conformity. The machine of the control society is the computer with its capacity for efficient alteration amidst the fluidity of informatics. (It is notable that the dominating technology in both *Sleep Dealer* and *The Matrix* is robotic hardware, which is itself rooted in the clockwork ideal emblematized by the automaton.) Computers, VR interfaces, and avatars are the potent images in *The Lawnmower Man*, where

virtual technologies are presented as promise turned pathogen, metastasizing through the avatarial body. Jobe (Jeff Fahey) transforms from feminized simpleton to intelligent hard body through the disciplinary regime imposed on him, but doesn't stop there, growing cancerously instead into an unfettered cyber-god. *eXistenZ* places its characters in a VR game with shifting logic and biological hardware that makes it difficult to discern where agency and bodies begin and end. While the direction of control in *eXistenZ* is clearly manifested in a one-to-one relation between player and avatar (a relationship also particularly indexical, as the appearance of the actors doesn't change across the interface), the Cronenbergian horror of the game lies in its iterative nature, as every player is also an avatar, and thus agentive control imposed on one's character may simply be a reflection of the control imposed on oneself.

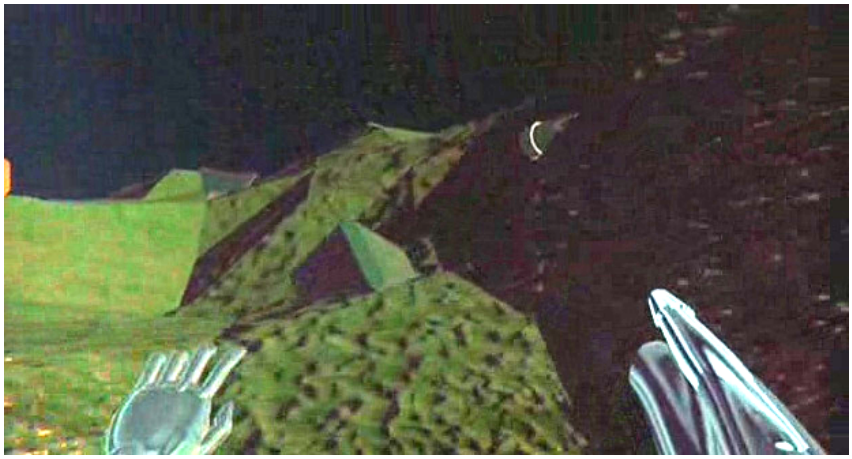

Figure 19. Chimp POV in a training simulation in The Lawnmower Man.

The Lawnmower Man begins with a Foucauldian image of the soldier, which Foucault uses to typify the docile body. Whereas men who demonstrated certain qualities were once plucked from the populace to be soldiers, training regimens came to supplant selection with production as soldiers were made rather than found. *The Lawnmower Man* opens with an interesting play on the soldier made, as a VR interface and a game-like battle simulation are used

to turn chimpanzees into killing machines (Fig. 19). The chimp successfully performs in the simulation, but the VR training and psychotropic drugs have produced a surplus of aggression and the chimp goes on a rampage, shooting guards and mounting a failed escape from the laboratory compound where Dr. Angelo (Pierce Brosnan) conducts his experiments.

Although through this incident Angelo has recently witnessed the negative effects that mind control can have on bodies, his first impulse upon getting to know the mentally handicapped Jobe is to give him a similar treatment, with some adjustments to temper the aggression (which ultimately fail). He promises Jobe that he can make him smarter while bettering his social standing, preventing people from taking advantage of him. The training begins with videogames, and while Jobe performs poorly in a computer-administered intelligence test he does better in a flying game, where we see his first engagement with virtual space through an avatar. Going deeper, Angelo introduces him to more advanced VR applications which Angelo sees as "the key to the evolution of the human mind," reflecting the longstanding assumption that new ways of seeing and organizing space produce new epistemological possibilities (which the film ultimately counters with the paranoia of information technology producing new ways of being influenced and controlled). Jobe's training progresses with his acclimation to virtual space, and then to the sort of downloaded education that would later appear in *The Matrix* – except for Jobe it brings pain rather than a rush.

Pain becomes a defining aspect of Jobe's transformation, and it is pain he later vindictively inflicts on others. The intense drug regimen and accelerated mental enhancement seem to be literally restructuring his neural network, manifest in the torment and perspiration on his face. The discipline of the mind exacts a toll on the body, and Jobe's increasing mental power is also marked with bodily shifts. Claudia Springer notes that initially Jobe is coded feminine,

with his long hair and submissive personality, but after the VR treatments becomes hypermasculine, with taut muscles and a cowboy's swagger – thus rejecting the possibility that biological gender might give way to more fluid definitions. His physical transformation thus serves a compensatory role in re-establishing gender roles, and I would also add that it compensates for the inertness of the body in front of the computer monitor – like Neo, Jobe is no desk jockey. Rather than the power of information on a server or network, power is located in the body, and the muscles signify his power (or the power enacted through him) corresponding to the avatar bodies he assumes in the virtual world, which evolve in their iterations from innocuous to menacing (Fig. 20). Virtual embodiment is what distinguishes his experience from more conventional computer use, aligning the power of the computer and the locus of the embodied self in a dangerous and unstable fusion. Eventually, virtual embodiment in the avatar is not enough, and Jobe seeks a new body – a body of cables and computers and endless virtual space, in the hardware and software of networked technology itself.

The training that Angelo institutes for Jobe thus reintroduces the problem encountered earlier with the chimp: endowing the subject with greater capacity for self-determination results in decreased control over the subject. But Jobe's increased agency is not only a problem for Angelo, it also brings difficulty for Jobe, whose transformation as a result of his use of VR is not simply an IQ bump but a complete psychological and physiological change. Notably, it is not until he becomes more aggressive as a result of the training and drugs that Jobe even begins to assert himself within virtual space, as previously he was always guided by Angelo and subjected to the technological re-education facilitated by the program. In the question of who is in control and who is being controlled, Jobe never enjoys the sense of interactive control promised by the technology until it has already exerted control over him, and thus the trajectory of his character

from one of limited to ultimate agency is imbued with the technology that produces him – that is, it is no longer Jobe's story, it seems, but the story of the technology that forms the new Jobe, instantiated in Jobe's old body before it is finally shed.

Figure 20. Jobe's avatars grow increasingly menacing in The Lawnmower Man.

Even as Jobe begins to exert his destructive power over other characters, he is yet a victim, as Paul Young sees him – but a victim in that he (and we) are part of a society in which information systems have thoroughly permeated contemporary life. Thus Jobe is a "victim of VR's encroachment on the real, rather than a victimizing hacker pure and simple," who "turns into a fascistic monster in part because he is too mentally immature to understand the implications of the powers he wields" – a Frankenstein for the digital age.[28] Young further points out that the origin of the telepathic and telekinetic powers Jobe develops are given no explanation other than being generally associated with his use of VR, and in this the film exudes a paranoia of virtual technologies while at the same time granting them mystical powers – not only for use in controlling others, but comprising forces that threaten to control the user as well. *The Lawnmower Man* exemplifies what Young calls the 'hacker myth' (computers offer

[28] Young, *Cinema Dreams its Rivals*, 200, 199.

uncontrollable power to irresponsible subjects) and the 'myth of total media' (the fear that computer media will completely penetrate reality) in that Jobe the hacked becomes Jobe the hacker, who accesses minds and disintegrates bodies on his way to diffusing himself within the network, taking over the global telecommunications system. However, the genesis of Jobe the techno-god lies with Dr. Angelo and VR; since Angelo's intentions were relatively good (if misguided), the film places culpability on the technology itself, for "ultimately the technology provides the conduit and powerfully determines its own use; human input is neither requested nor desired."[29] The cinematic response of *The Lawnmower Man* to the competing technology of computer media is to characterize interactivity as an unpredictable, mysterious force, where the agency and control facilitated by interactive media threaten both the public and the individual.

VR in the popular imagination augurs a possible future modality for interactions with computers and digital media that would be defined by senses of immersion and direct perception. VR collapses the distance between users and the mediated images and information that are presented for their 'experience', rather than simply for viewing. Ken Hillis argues that "virtual technology achieves a new form of spatialized power, based on unseen computational abilities with which my body is rendered complicit."[30] Whereas in embodied reality perception precedes conception – I perceive my environment and base my comprehension on what I see or sense – in VR the conception of the designer of a virtual space precedes the user's perception, which suggests "the loss of my perception's primacy, and by extension, loss of self-reflexive abilities."[31] The conjunction of a highly constructed media environment with a user position (overly) near the medium, which prohibits or diminishes the ability to maintain a critical or

[29] Ibid., 201.
[30] Ken Hillis, *Digital Sensations: Space, Identity, and Embodiment in Virtual Reality* (Minneapolis: University of Minnesota Press, 1999), 71.
[31] Ibid., 72.

thoughtful distance, produces the potential for ideological control (the same potential theorized in the cinematic apparatus).[32]

The feminized Jobe is subsumed by the technology because he is unable to achieve an objective distance, instead receiving its effects in his body as much as his mind.[33] The more intelligent Angelo is able to maintain a critical distance in his own use of VR, saving the full treatment for his hapless subject in the Dr. Frankenstein role he assumes – recklessly playing god (and creating one). Jobe's inexperience with virtual technology makes him vulnerable, as his adeptness with machines is limited to the mechanical, casting him as a machine age relic who is unprepared for a technology that manifests itself in computer-generated images and informational abstraction. Technology no longer appears as what it is, but dissimulates itself behind screens as it channels information; Jobe, failing to discern the difference, flies too near. Also, as with the cinematic apparatus, the sense of direct perception in VR is associated with a subconscious level of reception: "The VR experience eludes cognitive defences and directly stimulates the subconscious," concludes one paper on VR and psychotherapy.[34] In the film, direct stimulation becomes a portal to the brain through which information can be transferred. As with *The Matrix*, traditional learning is superseded by the download, but access to the mind leaves marks on the body.

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[32] Jean-Louis Baudry's model of the cinema as an ideological machine was dependent on this conflation of film-viewing and direct perception. By this model of spatiality, VR (at least in some idealized form) has even greater potential for ideological influence, as digital media can transmit information with much more flexibility than photographic media, and the immersive wrapping of the image in VR prohibits the user from looking outside of the screen.

[33] This over-closeness evokes the theorization of femininity by Mary Ann Doane and others as too close to the body. I take up this thread further in Chapter 6.

[34] Gabriel Optale, et al., "Male Sexual Dysfunctions: Immersive Virtual Reality and Multimedia Therapy," in *Cybertherapy: Internet and Virtual Reality as Assessment and Rehabilitations Tools for Clinical Psychology and Neuroscience*, ed. Giuseppe Riva, et al. (Amsterdam: IOS Press, 2004), 168. See also Binik, et al., "From the Couch to the Keyboard: Psychotherapy in Cyberspace" in *Culture of the Internet*, edited by Sara Kiesler (London: Psychology Press, 1997).

In *The Matrix* the plug penetrates, but Jobe receives his information through the eyes in a sort of inversive gaze, as he is penetrated ocularly by the VR interface that forces information into his brain. It is interesting to note, then, that the first manifestation of his growing aggression takes feminine form as he inflicts a version of the technological suffering he has endured, repeating his victimization. His cybersexual encounter with Marnie (Jenny Wright) is initially pictured as an ideal of cohesion and harmony as the two bodies become one, melding into a two-headed dragonfly; after they have disjoined, however, he takes monstrous form and rapes her mind, leaving her debilitated.[35] No particular action by Marnie provokes this reaction, and so it seems to come from somewhere deep inside him, from a place that he himself is not entirely aware of. Springer describes his transmuted form as a "roaring monster from the id," the "rage of the patriarchal unconscious," but overlooks the particularly vaginal shape of his monstrous mouth.[36] In a visual contrast to a penetrative characterization of cyberspace (such as that made by Alluquere Rosanne Stone, attributed to an "inarticulate longing of the male for the female," Marnie (and the viewer) are swallowed up by an enveloping orifice.[37] Situated as mouth the orifice suggests incorporation, but its smoothness and roundness imply a different violence, of being consumed by a (toothless) vagina dentata that surrounds and overwhelms rather than penetrates. Jobe rapes by envelopment and subsumption, stealing Marnie's mind into himself while evoking the mental penetration enacted on him in his training, in which Angelo rapidly and repeatedly forces information into Jobe's brain; in other words, he rapes from the position of victim.

Eventually, Jobe 'becomes' his avatar, leaving his physical body behind and existing only in the virtual world or the body of the network, obliterating the avatarial relation between two

[35] Cf. Hitchcock's character of the same name who is raped by her husband in *Marnie* (1964).
[36] Springer, *Electronic Eros*, 93.
[37] Stone, "Will the Real Body Please Stand Up?" 108.

bodies through the destruction of one of them. What is monstrous in *The Lawnmower Man*, however, is triumphant in *Avatar* as Jake exchanges his human body for his avatar body, and a life incomplete for one fulfilled. In each case the photographic physical body is traded for a digital one, but whereas the aesthetic of Jake's lithe new body is naturalistic and smooth, Jobe's avatar is caught up in the spectacle of itself as a digital effect, exuding an otherness that must be diegetically contained and destroyed. The evolving Jobe considers his physical body restrictive and his docility past its usefulness, and thus a new body is needed in order to accommodate his increasing modulations.

Jobe's transformation encompasses dual myths of disembodiment, as both a transcendent victory over his handicapped, feminized body, and as a monstrous, dehumanized void. Abstracted from his fleshy body, Jobe becomes dependent on the mainframe computer that contains the essence of the self that he has withdrawn from his body. The fact that he is threatened by the bombs that destroy the laboratory demonstrates that Jobe's 'body' remains in some sense physical – that he cannot simply become pure information. His escape into the telecommunications network can thus be seen as the assumption of a new body, distributed and dehumanized but still physical. Throughout the film, Jobe's increasing presence in the virtual world and his violations of physical law are consistently grounded in the material body – in his muscles and sexuality, his pain and perspiration, and finally the body of the computer and network. Jobe manages to escape the mainframe's firewalls and execute his birth cry of making every phone in the world ring simultaneously, but since we never return to his digital avatar body, the ringing of the phones becomes the singular expression of the networked being; thus at the conclusion of the film he is not quite an entity contained within a technological system, but

one seemingly absorbed by it, the two becoming one – the technology that he has become, or that has overcome him.

A disturbing nearness to technology also permeates David Cronenberg's *eXistenZ* (1999) in the biotechnologies that facilitate access to the game and resurface in its play. The organic MetaFlesh game pod, made from mutated amphibian parts, connects to the player via a Bio-Port, located at the base of the spine. The UmbyCord (as in 'umbilical', which it resembles) carries game information from the pod to the user, but also the energy and emotion of the user back to the pod (Fig. 21). The strange, organ-like flesh of the game pod makes the connection between human and machine at some indeterminate animalistic point in between; when Donna Haraway broke down boundaries between humans, animals, and machines, she perhaps could not have anticipated this strange image of the conflation of all three.

Figure 21. Players linked in to the game eXistenZ *via UmbyCords.*

Not only are the players of the game eXistenZ situated biologically near their technology, the technology is too intimate with them. Steve Keane writes of the MetaFlesh pod, "it plugs into the players, rather than vice-versa," interiorizing gamespace in the collective minds and bodies

of the players.[38] The game pod is an odd interface in that it does not feature buttons or other traditional input devices for controlling the game, but is rather controlled by suggestive stroking – a sort of pseudo-sexual coaxing – rather than concise input. The connection between body and technology is thus mediated by an uncanny organism that incorporates aspects of each and yet seems to be incomplete or malformed, while connecting to the game seems closer to a blood transfusion than a download. When Pikul (Jude Law) expresses concern about having a hole put in his body, Allegra (Jennifer Jason Leigh), the game's designer who is in certain ways just as lost in it as the neophyte Pikul, offers cold comfort by opening her mouth wide, doing less to naturalize the new umbilicus than to serve as a reminder that mouths, too, are openings for contagion. The implication is that as the pod (and by extension the game) becomes infected or corrupted, so the body and mind of the player are at risk. As a quasi-living thing, the pod is not an instrument but an entity, and to connect to the game is to give oneself over to it. Thus in *eXistenZ*, as with *The Matrix* and *The Lawnmower Man*, immersion in virtual environments is equated with "the psychosomatic nightmare of losing control of the body" – a theme which characterizes much of Cronenberg's other work as well.[39]

The loss of the body and the loss of reality run frequently on parallel planes, as we have seen; the ability to control the virtual body is diegetically restorative, a means of dominating the game environment and reasserting masculinity. Neo's discipline allows him to use his avatar body as a hack, operating not outside of the logic of the Matrix, but achieving virtuosity within it and affecting its reality from the inside; Jobe on the other hand is from the outset lost in his alienating graphical body, while his physical body acts as an interface or opening of sorts for the

[38]Steve Keane, "From Hardware to Fleshware: Plugging into David Cronenberg's *eXistenZ,*" in *ScreenPlay: Cinema/Videogames/Interfaces,* edited by Geoff King and Tanya Krzywinska (London: Wallflower, 2002), 151.

[39] Ibid., 151.

infection of the real world by the virtual. Jobe's supernatural control is equated with a loss of control – a lack of discipline. *ExistenZ*'s MetaFlesh controllers move control of the body to the metonymic abstraction of an externalized organ, and succeeding in the game is in a certain respect dependent on properly coaxing the pod and keeping it healthy while at the same time being subject to its whims; control is circuitous and shared rather than vectorial, for both gameplay with the pod and in the iterative game space in which there is no clear direction of control (Fig. 22).

Figure 22. Controlling the game by subjecting oneself to the pod in eXistenZ.

The game space in *eXistenZ* is simultaneously transparent and opaque, as what appears at first to be a clear logic of avatarial engagement has by the end become ambiguous; Pikul and Allegra, having ascended through a game within a game, are at the end of the film faced with the desperate question: "Are we still in the game?" Cronenberg creates this opacity precisely by omitting the kinds of distinctions between the real and virtual worlds that we see in other avatar films. As Pikul and Allegra occasionally enter and leave the game, their physical and virtual bodies and the physical and virtual spaces are analogous – same actors, same appearance, with a relatively similar palette in the visual look of the film on either side of the interface. Even when

the characters find themselves in rather unusual settings, including a factory for the game pods themselves (placing them for a moment on the production side of the pods they are presently jacked into, as if the pod reflexively ponders its own malformed existence), Cronenberg's restrained, unvarnished treatment avoids the cues that in other films accompany moves across the interface – the digital graphics in *The Lawnmower Man*, the green tint of the Matrix, the airbrushed smoothness of the bodies in *Surrogates*. In this he disavows any sense of a computer game in favor of a ubiquitous cinematic modality – cinema is the real, and the virtual too. The bodies of the characters (and actors) thus become disguises in a bit of cinematic trickery, as the audience is given no means for distinguishing between the physical and the virtual at the level of the image; when Cronenberg pulls the rug out from under the diegetic logic that has separated the various spaces, the uniformity of their visual mode becomes pronounced. Every player is the avatar of another within a perpetual cinema that can only move up or down levels into more cinema, which situates the film medium itself as a sort of interface between the virtual and the real.

The answer here to the question of 'who's playing you' seems again to be you, as the characters seem to be playing themselves – but a you that you don't know and can't see, with an agenda that is invisible to you. In addition, the characters seem to be played by the film in a manner recalling Godard's *Weekend* (1967), in which the beleaguered characters ask passersby whether they are in reality or a film; discovering that they seem to be in the latter provides no relief or escape however, as they are eventually captured (and eaten) by cannibalistic revolutionaries, never able to overcome their subjection to the film. Cronenberg translates this ethic to an age of virtual reality, and the film is interesting for its malefic imposition of film form on the game, obliquely exposing the invisible hand of control that is here 'played' by the

director. In the final scene of the film Pikul and Allegra shoot the designer of the game (a stand-in for Cronenberg, and the position held by Allegra within the other game iterations) for deforming reality, but their fire misses the mark as Cronenberg has stepped aside, leaving the audience in the position of the 'player', complicit in the manipulation of the characters on the screen.

Playing the Player

Virtual reality theorist Michael Heim once diagnosed the sensory discord following the use of a VR device as 'Alternate World Syndrome', a "technology sickness, a *lag* between the natural and artificial environments" that shows "the human being merging, yet still out of phase, with the machine."[40] Lag as pathology is reconfigured in *Gamer* as the 'ping', the infinitesimal delay in (the inevitable) compliance to the voice of control, but the sickness is a societal complicity with the mechanisms of a control that consumes and manipulates its subjects, moving from a VR fantasy of imaginary worlds to a dystopian vision of play as sadism. The schizophrenic *Gamer* comes across as a hypocritical didacticism, chastening videogame culture with a cinema of exploitation and violence of the sort that provided the aesthetic foundation for the kinds of games the film is critical of. The film generates sympathy for the avatar, but also, like *eXistenZ*, places the audience in the player position as we must to a certain extent go along with the way the directors play with their characters. Tillman is given the capacity to resist, but Angie is trapped in her own body as a Society avatar played by a slovenly, obese man whose enjoyment in debasing her is matched only by his bored disregard for her life. All of the Society players are depicted as depraved and cruel, featured in anonymous close-ups as disembodied

[40] Heim, "Design of Virtual Reality," 68.

faces with lecherous expressions, but Angie's player Gorge (Ramsey Moore) inspires the greatest contempt (Fig. 23).

Figure 23. Angie's player Gorge, in Gamer.

Here again the filmmaker seems to have a stand-in in the film – or rather two, in Simon and Gorge, one for each co-director. The gleeful cynicism that permeates *Gamer* seems rooted in the way that Neveldine and Taylor 'play' the film, from their renegade approach to editing to their embrace of the portable Red One camera that allowed them to shoot action sequences on rollerblades. The avatarial predicament of their characters puts the characters at the mercy of the film via their players: the over-privileged gamer Simon who plays for sport, and the reprehensible Gorge who delights in manipulation. Neveldine and Taylor combine the force of the gaze with the power of the controller, subjecting their characters to eye and thumb while subtly displacing their own sadism onto Simon and Gorge. That is, if *Gamer* operates as an allegory of control as Shaviro asserts (and I agree that it does), its success in doing so appears largely attributable to the pleasure of game-like control the filmmakers derive from its production – a dark pleasure that saturates the film. The excessive repulsiveness of Gorge seems

designed to throw us off the scent, and shame us for enjoying Angie's subjection as much as they have.

As with the iconic images of cyborgs in cinema that helped constitute the discourse of technology and the body in the popular imagination in an earlier era (as well as prefiguring some of the technological developments to come), it is important to recognize the place of avatar films as visual and narratological expressions of evolving conceptions of virtuality – and particularly as it is instantiated in a filmic medium that is redefining itself in the digital era. These films thematize darker counterparts to the liberatory rhetoric promulgated in the marketing and technophilia surrounding interactive technologies. Relative to these allegories of discipline and control, you are player, controller, and avatar all at once, raising not only the question of who's playing you, but also, given the recursivity of discipline and control, and the materialization of gamespace in our wireless, entertainment-driven society, who are you playing?

CHAPTER 4

VIRTUAL MORTALITY

> The greatest thing in the world is to know how to belong to oneself.
> Michel de Montaigne

The existential anxiety of the double is to some extent a matter of possession – the secrets a character possesses and hides from himself (or herself), which come in the end to possess him. When one has an avatar, what exactly does one possess? At what point does self-difference bleed over into self-possession, and what is the difference between encountering the double and possessing it? The cinema itself is a mechanism of the double: reproducing the world, forming a temporalized copy of events, displaying the image of the actor who is no longer there. The double in cinema makes this implicit doubling explicit as film's indexical relation to the real world is troubled by the illusion of correspondence. In avatar films this plays out slightly differently, as the condition of diegetic doubling is typically assumed at the outset, with societies already caught up in or at least accepting of avatarial doubling, and thus characters must contend with ideological aspects of the double as much as technological or ontological ones. The disruption of the index in avatar films is then figured not simply in the appearance of the double, but as a problem of lost reality, of characters' inability to see the double for the disruption it is. While doubles are taken for granted, however, the body remains the scene of contention over indexicality as the body stands in for the index, and the index is grounded in the body. That is, avatar films frequently rely on the body of the actor as an indexical point of contact with the real world in order to sustain their fictions of indexical rupture.

Of course, this fundamental mechanism has been called into question since the advent of cinema, as Mélìes popped off his head, disappeared and reappeared, and produced a half-dozen

copies of himself using spatial and temporal disruptions of the body (it was most often the body that was transient and severed, as the majority of his tricks relied on a static backdrop and a minimum of visible cuts). But while Mélìes' iterations used the body to demonstrate the unique capacity of cinema, avatar films use the doubling capacity of the cinema to investigate the interative aspects of the body. These texts straddle the varied aspects of a digital culture, engaging not only information technology and futuristic machines, but also and especially a return to the body (the body as surplus) and its ontology within a proliferation of images. The *Matrix* trilogy stands astride this juncture at points oppositional as well as transitional, between film and digital, body and embodiment, machine/technology and image. The Wachowskis formulate these dichotomies as equations, and within the equations Neo represents balance, which he must accomplish by balancing his own schismatic embodiment – a balance ultimately achieved in his mortal transition, as passage. Also, Neo's positioning as what Andrew Shail refers to as a 'cinematic body' – a body whose movement concords with cinematic movement, as through the film's visual effects work the body is at points essentially played by the film as much as the actor – serves as an intermediary point between the analog avatar played by an actor in two 'roles' and the CG character which is played from 'within' the image body superimposed upon the actor.

A Spectatorship of Death

> It is no longer a question of survival after death, but of a larger concept, the creation of an ideal world in the likeness of the real, with its own temporal destiny.
>
> André Bazin[1]

The Charlie Kaufman-penned, self-referential twin film *Adaptation* (2002, Spike Jonze) includes a dedication to Kaufman's fictional co-writer, Donald Kaufman, who in the film is the

[1] André Bazin, *What is Cinema?* trans. Hugo Gray (Berkeley: University of California Press, 2005), 10.

Hollywood sell-out doppelgänger to the character Charlie Kaufman (both played by Nicholas Cage), which reads "In loving memory of Donald Kaufman." The passing of the double – Donald dies in the film – whom the Hollywood-averse, real-life Kaufman never wants to be, seems an exorcism of sorts; the character Charlie, standing in for Kaufman, envies Donald's success, even, to his shame, entreating celebrity screenwriting guru Robert McKee in order to become more like Donald. Donald's death removes the double, clearing the way for Charlie to find success and become his own man – but of course Charlie is already (and inseparably) Kaufman's double, even if he doesn't know it, and thus the film becomes a play of the recursivity of postmodern doubling and simulacra (no longer original and copy, but a series of copies or variations) as well as a game of façades, as Cage plays each of Kaufman's doppelgängers.

Kaufman's fascination with the avatarial is even more pronounced in his first feature, *Being John Malkovich* (1999, Jonze), in which Malkovich, playing himself, is manipulated by a series of characters, including failed puppeteer Craig (John Cusack), who enter a portal into his mind located in a back room of an office building. Eventually, Craig takes over Malkovich completely, controlling him as one of his puppets on his way to becoming a revered puppeteer. By making the avatarial object an actor, and a famous theatrical one at that, Kaufman again critiques the entertainment establishment. Cusack plays Craig, who plays Malkovich – while Malkovich the actor plays Cusack/Craig playing his body, with Kaufman's presence permeating the whole self-loathing charade. The actor in a Kaufman film occupies a surreally avatarial position, as if played by the character, rather than vice versa.

Figure 24. *A pair of doubles in* Synecdoche, New York.

In Kaufman's most recent work, *Synecdoche, New York* (2008, Kaufman), character plays out recursively across multiple bodies, and indeed it seems that character is infinitely larger than any single actor. Caden Cotard (an allusion to the Cotard delusion, a mental disorder in which people believe they are dead or do not exist), played by Philip Seymour Hoffman, creates an expansive, fractal theatrical piece that mirrors the world outside the enormous warehouse in which it is staged, and in smaller iterations repeats the simulation as the play becomes increasingly self-referential. Caden enlists an actor to play him, and eventually Caden's double also enlists a double in order to better inhabit the (already doubled) character of 'Caden' (Fig. 24). In one sense, then, Kaufman produces iterations, but in a more profound sense, instantiations. Caden in the end is not the original to the copies, for he cannot even locate himself, does not possess himself. The duplicates seem to imply that the abstract character of 'Caden' is greater than Caden the individual, and thus the theatrical setting of the film is apt, as it is in the theatre that character is never fixed in a single body or performance, but lives eternally through the many bodies that play it, never fully possessed. As the film progresses Caden becomes increasingly dispensable, yielding both his directorial position and the role of 'Caden'

to the actors who now comprise the population of his world. From the new director, with whom he exchanges roles, he takes his cues as the cleaning lady for the model of his estranged wife's apartment (the Lacanian-monikered Adele Lack), leading up to his final direction, "Die." Kaufman offers a collision of theatrical tradition and postmodern desperation in exploring the roles perpetuated by the system, and the fragile mortality of those who play (or are played by) them. Caden dies, but the collection of neuroses and dispossession which comprise 'Caden' does not.

In "The Ontology of the Photographic Image," André Bazin conflates photography with death – with 'time embalmed', rescued from its 'proper corruption' as it is relegated to another. One of Bazin's most vivid comparisons appears in a footnote in which he mentions the automatic process of the death mask, to which photography bears some relation in its impressions of light; Bazin's characterization is not simply one of disappearance, of course, but of immortality through preservation, for death and immortality are closely linked.[2] The metaphor of the death mask is illustrative in its juxtaposition of the active decomposition of the body and the fixity of the quick-drying plaster, as well as in its particular manner of preserving death in an impression of a body that is already a shade of its former animated self. D. N. Rodowick also sees quietus in the film medium, albeit from the perspective of the impermanence of film itself, stating that "one may say that the material basis of film is a chemically encoded process of entropy. This is one of many ways in which watching film is literally a spectatorship of death." The virtuality of the cinematic image can be most poignantly found, he suggests, in "in the sense that what it documents is the disappearance of its object" – not only the temporal absence of its subjects, but its own mortality as a medium.[3]

[2] Ibid., 12.
[3] Rodowick, *Virtual Life of Film*, 20.

Thus when Rodowick remarks that "while film may disappear, cinema nonetheless persists," we must ask, in what form, what substrate?[4] While in the digital era we have become more keenly aware of the active decay of film stock and photo paper – the active decomposition of the picture in which time is embalmed – digital images, with their (mostly) lossless duplication and their (seemingly) immaterial form, have been perceived as a sort of solution to the entropic effects plaguing photographic images – many of which have been scanned into digital format for preservation. However, the susceptibility of digital formats has come increasingly to light as digital photography enters its third decade and digital elements in movie production and distribution have proliferated, with preservation becoming a pressing issue.[5] However, digital imagery, with its crispness and eminent flexibility, a novelty kept fresh by regular advances demonstrated with sleek devices and dazzling effects, and a close association with computer technologies that are increasingly characterized by screens and media, is positioned in the cultural imagination as something like a vital alternative to the death drive of the photographic.[6]

Rodowick argues that the digital image is not a record of the past but an object of the present, while Mark Hansen defines the digital image as as "a processual and necessarily embodied entity," stating that "the image can no longer be restricted to the level of surface appearance, but must be extended to encompass the entire process by which information is made perceivable through embodied experience."[7] Digital images are always in process, ever subject to

[4] Rodowick, *Virtual Life of Film*, 30.
[5] David Bordwell outlines some of the issues of storage already facing studios and archivists on his blog, noting that in many cases the most reliable form of preservation for a digital film is in an analog print. On a much smaller scale, home use of digital photography faces similar issues with corrupted or lost data and outmoded formats, as well as rapidly fading inkjet prints. David Bordwell, "Pandora's Digital Box: Pix and Pixels," *Observations on Film Art*, February 13, 2012. www.davidbordwell.net.
[6] While a (shrinking) majority of Hollywood productions are still shot on film, digital processes have become ubiquitous in post-production, and digital exhibition is a significant and ever-growing presence.
[7] Hansen, *New Philosophies for New Media*, 10.

remaking and thus never complete. Situated always in the present, vivified on electronic displays, digital images are culturally positioned counter to the demise of film.[8]

It is perhaps no coincidence then that *Avatar*, the highest grossing film to date, presents the digital in the form of abundant life – pointedly antagonistic, it seems, to the photographic media increasingly positioned as relics of another era, having preserved their own 'death'. The desolation of the real in the *Matrix* trilogy, on the other hand, while perhaps fostering a hope in renewal at the end of the series, in fact presages only death. Why Neo dies and the Matrix persists, and how this relates to cinema and avatars and the death of the photographic, are the subjects of this chapter's postmortem. Much of this has to do with the way in which the electronic image is not 'one' with itself, as Rodowick puts it, and the troubling of the index brought about by the double, from Balduin to Donald and Caden, and here to Neo, the 'One' in whose dying body the avatarial dyad balances itself out.

Chapter 2 began with a slogan from promotional materials for Second Life, and here I add another: "Become Your Avatar." As with the first, we see two pictures juxtaposed in the style of before-and-after photos, the young woman (they are usually women) and the avatar she has 'become'. The text goes further than the ludic engagement of the slogan for Sony's PlayStation – "Live in Your World, Play in Ours" – to the more ontological implications of becoming. While the Second Life site promotes in-world activities and places to visit, the campaign is centered on the avatar, fashion-driven notions of beauty, and an ethic of becoming. In contrast with avatar texts that begin with characters already in an avatarial state, *The Matrix* and *Avatar* are also about becoming. Neo progresses through four identifiable stages on his way to becoming avatar: the initial acceptance of an avatarial state (achieved with some difficulty),

[8] Rodowick clarifies: "Digital records may be printed, of course. But their 'natural' ontological state is to be manifested on electronic displays." *Virtual Life of Film*, 135.

learning to skillfully use the avatar, acquiring a greater understanding of what it means to be truly avatarial, and making a final transformation in accordance with this new knowledge. Jake moves through the same four stages on his way to becoming, but while his transition is imaginally transformative (at least according to Cameron's own myth of a total digital cinema), in *The Matrix*, balance is paramount – the double cancels itself out, and Neo must die.

End Program

> This illusion of unity, in which a human being is always looking forward to self-mastery, entails a constant danger of sliding back again into the chaos from which he started; it hangs over the abyss of a dizzy Ascent in which one can perhaps see the very essence of Anxiety.
>
> Jacques Lacan[9]

The ubiquitous simulation of the Matrix doesn't produce an ideal world, but rather the fantasy of our world as game space with cinematic bodies that float balletically and violently in slow-motion, undergirded by a machine logic that at least makes some sense of the chaos. Instead of characters entering an idealized space, as is common in fantasy films, *The Matrix* shifts idealization to the body and its performative capacity as a cinematic ideal within a world that looks for the most part like our own. In a dystopian future of machine dominance, to be an avatar is to survive, either in captivity, blissfully ignorant of the terrible reality in which humans have become sources of electricity for the machines, or by fully embracing and utilizing one's avatarial capacities to combat the machines from inside the Matrix, as Morpheus (Laurence Fishburne) and his crew do.

Neo looks with eyes closed, enters by sitting still. He jacks in for the same reason audiences are drawn to the movie, to enter the heightened cinematic space of the Matrix. In what seems to

[9] Jacques Lacan, "Some Reflections on the Ego," *The International Journal of Psychoanalysis* 34: 11-19 (1953).

be a reproduction of classic cinema spectatorship, Neo sits quietly, individuated, and engrossed – on the one hand acting in the avatar body, but on the other a spectator, even standing in for us, entering for us. The videogame logic imposed on this mode of spectatorship, with Neo controlling his avatarial self with his mind through a form of direct, first-person, proprioceptive mental action, does not of course turn our experience of the film into interactive entertainment, but rather appropriates interactive media within the conventions of classical spectatorship. Paul Young sees such appropriations as a dual reaction from the Hollywood establishment, as both an apprehension toward the encroachment of interactive technologies into the mode of classical spectatorship (hence interactive technologies have often been demonized), while at the same time capitalizing on the new media culture that studios have already invested in and to which many popular titles are tied. Neo at the interface becomes the picture of a cinema of *experience*. With eyes shut, he enters a new cinema no longer reliant simply on the look.[10] This is cinema playing the 'real' with the logic of the game.

The final confrontation that such logic dictates ends more or less in a stalemate, with neither the machines conquered nor the Matrix abolished, as Neo's personal battle with Agent Smith (Hugo Weaving) and his agreement with Deus ex Machina, the 'face' of the machines,[11] produce only a ceasefire and the promise that those who want out of the Matrix will be released – which one can assume isn't many, as the psychological difficulty of emerging from the Matrix is

[10] Surround sound saturates the theater (cineplex or home), pounding audience members from all sides; product tie-ins insinuate elements from the movies into life outside the theater; hit songs get radio play, stars walk carpets and get write-ups in magazines, and once the DVD comes out there will be plenty of extras on the disc. Of course theatrical grandiosity is nothing new, and extra-textual publicity has been well-established through the classical era. But the *Matrix* trilogy took the cinema of experience to a greater level of both immersion and diffusion with its multi-platform narrative that spanned films, anime, videogames, a virtual world, and web material, so that the full story could only be accessed through multiply mediated encounters. This apparatus expands far beyond the pseudo-dream state posited by Baudry, even if Neo (and Jake even more so) assume states of semi-slumber that prefigure the 'death' of each.

[11] Deus ex Machina is depicted as a large face composed of small robots – a CG machine 'interfacing' with Neo in human expresion rather than machine language, by speaking and emoting.

evident in Neo's transition. The preservation of the Matrix in the final film of the trilogy is an unexpected ending and, I suggest, a percipient narrative choice by the Wachowskis that helps redeem the series from its descension into its own clichés of philosophical obfuscation and CG action, for the persistence of the Matrix represents the endurance of avatarial existence. Reading the *Matrix* trilogy in terms of the avatar, the ending is significant for understanding its multiple avatarial levels as we observe how Neo fully becomes his avatar – especially as his character trajectory moves toward non-image (death) in contrast with Jake's imaginal embodiment and digital ressurection in *Avatar*.

As a battalion of sentinels storm the subterranean enclave of Zion in the final act of *The Matrix Revolutions*, Neo and Trinity are on their way to the Machine City. Slipping above the cloud layer to avoid the sentinels, they plummet into the inky, lifeless metropolis. Trinity perishes in the crash landing, while Neo is brought to Deus ex Machina, where he offers to rid the Matrix of the viral Smith who has overtaken it, in exchange for peace. The machine entity accepts his terms and connects him, and Neo appears amidst endless iterations of Smith, who has taken over every body in the Matrix. One emerges, declaring that he has seen the end – a provocation that recalls the Oracle (Alice Kay), whom he has assimilated – and the highly physical battle between Smith and Neo commences. The impacts are bigger and more spectacular than those previously in the series, often resembling atom-smashing more than two bodies contending with one another. In the process Neo is overcome, reaching his nadir while lying nearly unconscious in an impact crater pooling with green water. To Smith's exasperation, however, he rises again.

"Why keep fighting?" Smith demands to know, and launches into a diatribe about the purposelessness and artificiality of human existence. Neo's reply, "Because I choose to," seems

well-situated within conventional affirmations of agency in Hollywood cinema, but the nature of this choice begs closer scrutiny within the contest of Neo's destiny and Smith's inevitability. The fight resumes, with Smith again gaining the upper hand, but at the decisive moment the premonitory sense he acquired from the Oracle kicks in, replacing Smith's typical pronouncements with an unsettling bit of déjà vu: "Wait, I've seen this," he begins, and then repeats something the Oracle had earlier told Neo: "Everything that has a beginning has an end, Neo." Smith the virus becomes aware that he himself has been momentarily hacked, but shirks it off and again lunges for Neo, who, struck by the Oracle's words, allows himself to be assimilated.

In this moment, it becomes unclear for the first time whether Smith has absorbed the Oracle, or whether the Oracle is playing Smith. Withdrawing his stiff-handed plug from Neo's torso, another iteration of Smith appears, a clean (digital) copy relative to the embattled Smith who, dirty, wet, and without his sunglasses, now appears more human and desperate than ever. But this iteration doesn't last long, and as the Neo in the Machine City is injected with energy, light bursts out of the eyes and mouths of both Neo and his Smith, tearing the Smith apart. The remaining Smiths follow suit until the last one disintegrates, and in the Machine City the Deus ex Machina proclaims "It is finished," after which Neo's lifeless body is carried away. The Oracle wakes in the crater from which Smith disappeared, released from his forcible subsumption, and in the final scene rests on a park bench on what seems like a pleasant summer morning in the Matrix. The Architect (Helmut Bakaitis) approaches and they share a testy exchange in which he asks how long she thinks the peace will last, letting her know that she has "made a very dangerous game," while the young Sati (Tanveer K. Atwal), a program 'born' in the Matrix, has made a beautiful sunrise for Neo.

The typically subtle, cryptic intervention of the Oracle into the destinies of the human rebels is in the final battle replaced by a more direct intercession as she works avatarially from the inside of Smith, who had already taken over the avatar bodies of everyone in the Matrix (Smith in this sense operates more like a biological virus that seeks host cells for replication rather than a digital virus that can copy itself indiscriminately). In turn, the illegitimate player, Smith, is played by the Oracle, so that Neo, who is at that moment fighting on behalf of the machines, sacrificing himself for the humans (in similitude of Christ, the avatar of God), and fulfilling his destiny as the One, can relinquish himself to assimilation by the Oracle-played Smith. Through the conduit of Neo's physical and virtual bodies, the ungovernable program Smith is deleted by the machines, and in the process Neo expires as well. In Zion the humans celebrate, but the triumph is not really theirs; they have only managed to survive, and in their better moments believed in something bigger than themselves that they hoped would save them. On the contrary, the final moments of the film belong to the real players: the Oracle, the Architect, Deus ex Machina, and, more abstractly, the intangible (virtual) force of the One. At this moment it becomes fully clear that the characters we have followed as protagonists have been pawns in a larger game, while the Matrix as the instrument of mass control through which people exist as avatars of themselves, remains in place.

In other words, the avatar Neo had was only ever a reflection of the avatar Neo was, even though his 'player', the One, is an abstraction. Neo's declaration of agency, "Because I choose to," is further complicated in light of what he and we learn earlier from the Architect, that Neo has been preceded by not one, but five Ones – that, like Smith, he is an iteration. It's not clear if there have been five Thomas Andersons, or if Thomas Anderson is simply the latest avatar for the One, but in either case Neo's choice to fight must be contextualized within his multiply

avatarial status, and relative to the contest between the meta-figures of the Oracle and the Architect as echoing the inter-Pantheon squabbles of an earlier epoch, which often made pawns of men. Who exactly is doing the choosing, and how is this choice enacted?

Interestingly, it is with the body that Neo (the machines, the One) finally defeats Smith – not by overpowering him, for Neo has failed at that, but through the sacrifice of the body. Having been freed from the Matrix mentally and the harvesting fields physically, his trajectory moves through self-fulfillment in his obtaining of a spectacular avatar body, finding love, and accepting his role of savior; in the end, however, he faces Deus ex Machina physically, having lost his love, and realizing that his fate will require his own destruction. The cinematic kung fu skirmishes by which hackers and programs do battle in the Matrix no longer proves effective for Neo as Smith becomes the firewall he can't hack. After offering himself to the machines, then, he finally uses a similar tactic in the Matrix, only defeating Smith by allowing himself to be taken over. His assertion of will in the crater actually becomes moments later an abnegation of agency, as he gives himself over bodily to the unstable aggregate of Smith-Oracle-Machine-One and then bursts apart. I suggest that at this moment Neo fully accepts his avatarial status and stops fighting, stops resisting – and that becomes his strength. The realization of his destiny, the fulfillment of his character, and the resolution of the main tension carrying across the trilogy are contingent precisely upon the disappearance of character and the destruction of the body. Having become fully avatar, he faces an avatar's fate: disconnection.

The meta-figures in the film are also avatarial in a sense: the Architect is the face of the machines, and the Oracle takes on different shells.[12] The One, however, sustained by belief,

[12] This was primarily the result of the death of Gloria Foster after the second film, but when asked about the switch the Wachowskis indicated they were already considering the possibility of her acquiring a new shell. Perplexingly, however, if a switch had been planned, it seems to make little sense to replace Foster with Alice, as they closely resemble each other and the change adds nothing new to the character.

manifest in various bodies or iterations, is the most metaphysical and abstract of the meta-characters, and the most difficult to distinguish from its instantiation in Neo. The One is also the anomalous (and absent) singularity in a film that is all about the dyadic. Neo becomes the One when he stops being two – or rather when the two (or more) become one in a multiplicity that problematizes Neo's individualistic destiny (is it his destiny to become the One, or his destiny to lose himself to the One? is there a difference?). The singular path he takes, if it ever was so, comes to an end when he is assimilated by Smith, whom the Oracle has informed Neo "is you, your opposite, your negative," his exact other. In the conjunction of Neo's self and his other, is the sum zero, or One? The other is that necessary alterity for the existence of self, the "mark of self-difference, opening up a space for the self to relate to itself as a self, a self that is perpetually other."[13] Smith is the zero to Neo's One, the off to his on, the multiplicity that will complement, diffuse, and ultimately complete Neo's/the One's singularity (by canceling out the binary).

As the anagrammatic prolepsis implies, and although it perhaps it does not fully occur until his death, Neo becomes One. In this he can be distinguished from the free-born Tank and Dozer who have never known what it is to be two and thus can never ascend to a multiplanar unity, and from Cypher's wish to escape into the false singularity of illusion. Neo is One in the way he is performed by one, as Keanu Reeves plays Neo's avatar and Neo *as* an avatar, the doubting Thomas Anderson and the One who makes a whole of recursivity. On a practical level, the One exists at the same time across different cinematic modalities, sliding between the digital and the analog, operating on multiple layers at once as is is both a body in cinema (an actor filmed) and a cinematic body (the body performed 'by' cinema, and digital cinema in particular), while at the same time produced offscreen as a virtuality, never appearing directly, but obliquely through various forms of doubling and a play of images and bodies. That this is transacted across

[13] Fuss, *Identification Papers*, 2.

an interface works as a demonstration of the fundamental multiplicity of the One, as Neo learns not only to navigate multiple planes of existence, but synergizes them so that ability in one (stopping bullets, seeing the Matrix) translates to the other (stopping sentinels, seeing the golden glow of the Source). Where Jobe's abilities in the physical world implied infection or corruption in *The Lawnmower Man*, Neo's suggest convergence; where Jobe chooses one bodily form over another, the death of Neo's physical body is not the result of divestiture, but the detritus of the fusion between user and avatar. The singularity of the One is then ultimately a myth; in this world of the dyad, to become one is not to become whole but to disappear.

Neo's transformation into a fully digital character during two brief moments in the trilogy serves as a visual counterpoint to his death. Both occur during battles with Smith (the 'Burly Brawl' in *Reloaded* and the 'Super Burly Brawl' in *Revolutions*), in which Keanu Reeves is replaced by a digital recreation, which Dan North refers to as his 'avatar'.[14] In my own viewing I found these moments initially bothersome, as the rendering was unconvincing and artificial. But the *transitions* into and out of this digital version are so smooth and seamless that, in the context of everything the One represents in the dyadic film, these moments seem to contribute an additional layer of connectivity. As both occurrences take place during moments of intense combat, it seems almost as if in cinematic climax this body operating in a digital, imaginal world takes on the digital image in an ephemeral transubstantiation, as the two modes are compressed into one – adding yet another dimension to the Reeves-Anderson-Neo-One complex. While the digital rendering, subject to the technological limitations of the time, is ultimately unconvincing, in the transitions one can find something of the virtual, another embodied correspondence

[14] Dan North, *Performing Illusions: Cinema, Special Effects, and the Virtual Actor* (London: Wallflower Press, 2008).

between the two states of analog and digital that are already mulitply connected and opposed within the series.

Incidentally, the digital body has a technological affiliation with the digital avatars of the three games ancillary to the films in the *Matrix* franchise. These games (*Enter the Matrix, The Matrix: Path of Neo*, and *The Matrix Online*), with material filmed or captured during the production of the latter two films and featuring movements and performances from several actors, make the characters, as well as the signature body movements of their actors, available for fans to play in another iterative manifestation of players and avatars. In *Path of Neo* (2005, Shiny Entertainment), in which the player controls Neo on his way to becoming the One, the sense of the 'true' One as an abstracted force controlling Neo's destiny echoes unambiguously through the game – the One as the Player, misperceiving him- or herself as 'one' within a dyadic world, 'creating' the game in the moment of conjunction with the machines (the game technology) that ultimately produce and control it (Fig. 25). The game in this sense becomes the final site for avatarial understanding, where unity can be understood as multiplicity – or, alternately, where the hidden insights of the films are lost to the logic of the game which 'redeems gamespace', recalling McKenzie Wark's juxtaposition of games to the postmodern world of gamespace as those constructs that impose an illusionary order (and, implicitly, an illusionary unity) on the chaos and fragmentation of real world subjectivity. That is, the site where we understand ourselves to be already avatarial, or where we once again turn off the game and return to our delusions of wholeness.

Figure 25. Neo the avatar in The Matrix: Path of Neo.

In its movement from avatar antitheses in Thomas Anderson and Neo to the avatarial synthesis of the multiple 'One', the *Matrix* trilogy demonstrates a further move into new media paradigms, from connectivity to *compositing*. In practice, compositing involves the digital combination of photographic elements either with each other (for instance, a photographed background with actors filmed in front of a green screen), or with CG elements which are blended into the photographic material in such a way that the shot seems to be all of a piece. Compositing also refers the layering process whereby CG imagery is rendered with more nuance and complexity or made to look photorealistic. "Throughout the production process, elements retain their separate identities," writes Lev Manovich, but "when the object is complete, it can be 'output' as a single 'stream' in which separate elements are no longer accessible."[15] Manovich understands compositing not only as a characteristic practice within digital media, but a key aesthetic component in the evolution of digital culture. In the eighties, he notes, postmodernist

[15] Manovich, *Language of New Media*, 139.

productions emphasized the boundaries between disparate elements, but in the nineties compositing "supports a different aesthetic characterized by smoothness and continuity. Elements are now blended together, and boundaries erased rather than emphasized."[16]

This doesn't necessarily mean that we take the composited image for a whole, however, even as we neither perceive it in pieces. With Photoshop and contemporary Hollywood techniques, we have grown accustomed to seeing composited images, but how do we receive them? North argues that rather than taking these images at face value, we find pleasure in locating the 'seam' between digital and analog components. While this is certainly possible, I argue that the greater experiential or even phenomenological impact of composited images is in the ambiguity of their boundaries, the semi-opacity of their layers. Thus while the pleasure of 'seeing' an object or creature we know to be impossible in the real world can be deflating (once it appears on the screen it becomes too visible, removed from registers of imagination and suggestion), the well-rendered image itself, in which digital impossibility integrates seamlessly with photographic indexicality, becomes the more potent enchantment. We perceive the layers not visually but experientially or even bodily, as images are framed according to our experience of the materiality of pictures and the world. We take pleasure in the confusion of boundaries, but at the same time in the smoothness and seamlessness of their integration; in the final product boundaries no longer exist except through our cognitive efforts to reproduce them (to make connections), even though we know we'll never be able to catch them all. Using a cinematic device as metaphor, one might think of this sort of production and reception in terms of *superimposition*, in which viewers are presented with a surface that is known to have greater 'depth', comprising not only various images but also very different imaging technologies in the formation of a unified 'picture'.

[16] Ibid., 142.

Two Wholes Don't Make a Half

In superimposition, one image is laid over another so that both are visible at the same time, in contrast with the implicit opacity of superposition, in which one element covers another. Superimposition, as I relate it here to the image bodies of avatars and CG characters, is as an imaging practice is counterposed to the ethic of the cyborg, for instance, which relies on a prosthetic hybridity of contiguous or juxtaposed human and machine parts, or superposed figures in which either the human or machine element covers the other, as in the Terminator's synthetic skin and human appearance concealing the robot underneath, or the seemingly human consciousness trapped in a robot body, as in Isaac Asimov's novelette *The Bicentennial Man* and film of the same name (Chris Columbus, 1999). Superimposition is a way of thinking about physical and virtual aspects, particularly as pertaining to the body, as coexisting and simultaneous, even if not quite always in view – the difference, perhaps, between seeing and perceiving when it comes to the human processing of digital images.

The *Matrix* trilogy, like *The Thirteenth Floor*, demands such a way of 'seeing' character, necessitating an active perception of multiple character instantiations in a single body. (I also address a more technological implication of superimpositional perception in the motion-capture CG character in Chapter 6.) As an illustration of this notion of superimposition, I have found in the music video for Björk's 1996 single "Hyperballad," directed by Michel Gondry, a short avatarial text that refracts hidden layers or 'selves' beneath the surface through the superimposition of contrasting image technologies. With this strategy, "Hyperballad" produces a dialectic of materiality and virtuality, splitting the representation of the body into different planes, media, and performances overlaid so that they are all present in a single 'picture' of the body (Fig. 26).

Figure 26. The videographic Björk superimposed on the filmic Björk in "Hyperballad".

In the video, Björk lies slumbering in a miniature, fabricated mountain range. As the camera moves around her she is enveloped in blue and green video static that appears on a plane that seems to be behind her, and for a moment in front of her as well, but is disconnected from the uneven ground on which she lays. A face is superimposed over hers, which in fact is her own face in a washed out, high-contrast video image that differs sharply from the warm skin tones of what might be referred to as her 'filmic' body, as the 'videogaphic' Björk begins singing the song.[17] The superimposition aligns the faces vertically, even as they are out of sync laterally and performatively – the videographic face is active and expressive while the filmic body remains in slumber. The ghostly effect fades in and out as the motion-controlled camera rocks from side to side, following a steady half-arc over the body that reveals the different planes in which the two bodies exist – the three-dimensional space of the filmic body (and the camera) contrasted with

[17] The filmic Björk, in a still repose for most of the video, takes on an additional measure of plasticity as a result of her lack of movement – a further contrast with the ethereal video body.

the two-dimensional plane of the video image, seemingly hovering just over the filmic body so that the image is foreshortened as the camera approaches a profile of the filmic body. These dimensions, however, are not so clear cut, as one bears in mind that the filmic image is also materially two-dimensional, while the video image is a flat projection of an image in three-dimensional space. The different planes, media, and actions of the two bodies bisect the 'Björk' in the picture into two bodies, while the motion-controlled camera keeps them unified in space.

It is not insignificant that the camera that shot this video was controlled by a computer, and equally pertinent to note that Gondry produced the superimposition in-camera, on a single 400' roll of film. The old-school technique of rolling back the film is simple enough, but the dimensional effect of the bodies in different planes could only be produced through a computer-facilitated practice of precise frame control and camera movement that is today commonly associated with digital production – particularly in the compositing of analog images and digital effects. The separate image planes can be thought of as a way to visualize embodiment as superimpositional and planar, existing in the different 'mediations' of biological flesh, visual media, digital culture, discursive formations, the experiential imaginary, etc. The computer allows the planes to be simultaneously separate and together, facilitating the coincidence and overlay of images. In avatar use it is the computer that links cinematic seeing, the informational avatar body, and the organic body of the user in an experience that produces the encounter with the virtual. In the video, the ethereal abstraction of the video image floats above the filmic body, which also stands in for the body of the film – a seemingly bodiless image superimposed on (and simultaneously captured in) the image body. One sleeps while the other cries out, one is naturalized while the other is obviously mediated, the filmic body is flesh to the videographed spirit.

Eventually escaping this bifurcation, Björk enters another. Morphing into a coarsely pixelated avatar who dodges transmission towers produced with vector graphics, she has been transformed into a digital avatar body and inserted into a videogame. The vulnerability of the avatar is on full view here, as she desperately runs before finally tumbling off a cliff and shattering at the bottom. Here we return to the filmic body – the real body, or real 'image', for which the avatar body was a digitized other (or is the filmic body other to it?). The sleeping Björk opens her eyes, and the video ends with increasing levels of superimposition applied to the now alert filmic body until it finally disappears under a cascade of video layers.

"Hyperballad" is a song about a double life, and the ritual performance of a virtual suicide each morning before the lover awakes in which she throws objects off a cliff and imagines her body in their place, so "I can be happier / To be safe up here with you." The video reinterprets this doubling as a contrast between mediating forms that are overlaid, producing tension between the half and double. Björk's later single "All is Full of Love" (1998), in comparison, is a song about disconnect and the inability to experience the love "all around you" because "your phone is off the hook." Chris Cunningham's video for the song takes a cyborg approach with a robot Björk being repaired or assembled when an identical robot joins in her melancholy tune. The two robots are then fixed in a mostly static but seemingly tender kiss, accompanied by gentle caresses while the robotic arms continue work on their bodies (Fig. 27). This attention to the body in the form of robot love attends a doubling that, even in a self-embrace, is disconnected still; the 'touches' of the robot arms doing the repairing are as sensuous and intimate (if not more so) as the cold kiss.

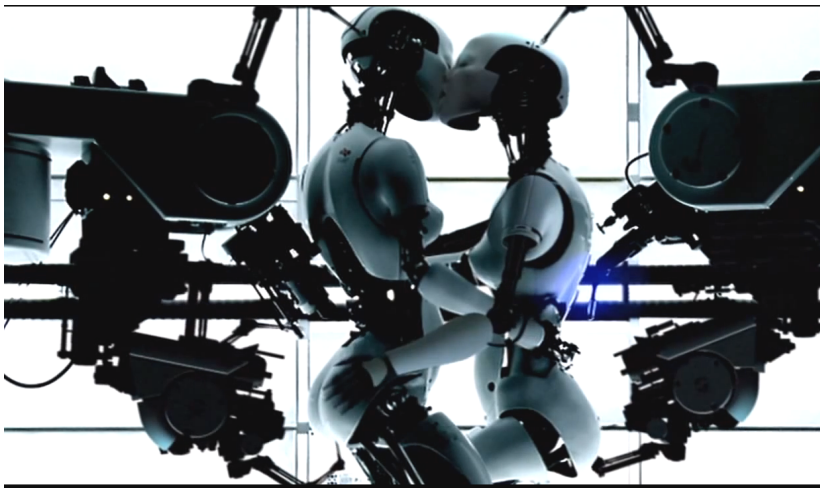

Figure 27. Clone embrace in "All is Full of Love".

Cyborg doubling here takes place in the form of replication, in the recursive production of multiple bodies; the demonstration of self-love through the kissing robot clones becomes an indication of the failure of the replicated bodies to reunite into a single entity, for there is no half in the equation. In contrast, the half-man, half-robot hybrid body in *RoboCop* represents an attempt at joining two incompatible halves into a whole, with no double for the singular amalgamation. Murphy/RoboCop (Peter Weller) is neither a fully functioning robot nor a fully functioning man, but an assemblage of halves into an uncomfortable, bifurcated entity – "a fragmented collection of disconnected parts that achieve the illusion of coherence only through their display as spectacle," as Nigel Clark notes.[18] The cyborg faces the problem of material difference and incompatibility, while the avatar reframes the difference of the virtual and material as two halves of the same thing, which is only destabilized when one is superposed over the other or they are understood as existing separately.[19]

[18] Clark, "Rear-View Mirrorshades," 126.

[19] Another interesting variation here is the sentient AI entity in Mamoru Oshii's *Ghost in the Shell* (1995), in which the entity, called the Puppetmaster, 'hacks' the brains of both humans and other intelligent androids, controlling them avatarially to do its bidding. Major Kusanagi (Atsuko Tanaka), a female cyborg, pursues the Puppetmaster, but when she finally confronts it (in the form of another female android), the Puppetmaster reveals that it has been

The tension of the cyborg with itself is thus partly attributable to its instantiations as doubles without halves, and halves without doubles; "Hyperballad" represents the conflation of the half and the double in a multi-plane whole. Katherine Hayles argues that "by adopting a double vision that looks *simultaneously* at the power of simulation and at the materialities that produce it, we can better understand the implications of articulating posthuman constructions together with embodied actualities."[20] Joining the virtual and material is largely a matter of perception, a way of seeing the the virtuality of the material and the materialization of the virtual, in order to see how halves and doubles interconnect. Hayles draws a lengthy comparison between the posthuman and the liberal humanist subject, that Cartesian figure long regarded as exemplary of human being. The Cartesian subject is a Platonic creature of halves – mind and body, spirit and flesh – in which one half is privileged over the other, and this 'immaterial' half conceptualized as an idealized whole. The posthuman for Hayles is a figure that embraces the disappearance of its own body into information, and thus it has a (relatively) 'immaterial' aspect which on the one hand offers the potential for the disruption of discourses of embodiment that emphasize the flesh, but on the other is subject to the idealization of the half; the posthuman "shares with its predecessor [the liberal humanist subject] an emphasis on cognition rather than embodiment," writes Hayles, and thus "to the extent that the posthuman constructs embodiment as the instantiation of thought/information, it continues the liberal tradition rather than disrupts it."[21] Hayles's image of the posthuman thus also faces the problem of halves without doubles.

Superimposition proposes an integration between the virtual and material selves to produce a kind of unity achieved not through disavowal, but by having multiple planes of

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seeking her, desiring to fuse with her in order to reproduce. When she asks why it doesn't simply replicate itself, the Puppetmaster indicates that while replication increases numbers, it doesn't advance the species; in order to evolve, it must breed in difference. Kusanagi agrees, and when she wakes up in a new body (her previous one having been mostly destroyed), her consciousness has also transformed.

[20] Hayles, *How We Became Posthuman*, 47.

[21] Ibid., 5.

existence 'in view' at once. "Hyperballad" lends itself to the conception of an avatarial 'embodiment' of the text, incorporating bodies, images, and the materiality of the medium into a representative form that is not only self-reflexive regarding its media, but this reflexivity is also tied to the image of the body. When the filmic Björk fades out under the superimposed layers that conclude the video, she seems to dissolve into the body of the film (the medium) itself. The filmic body is closest to the physical body by virtue of its celluloid materiality, photochemical inscription, and analogical images, and thus this ending corresponds with a tendency within avatarial texts to tie the representation of the human body to the body of the image in which it is instantiated, that each sustains the (disappearing) materiality of the other.

Superimposition as a device for seeing in multiple planes simultaneously not only has a long cinematic history, but is also a key component of contemporary mobile technologies that produce a layered view of the material world – what might be thought of as a sort of phenomenological informatics. Superimposition can be found in augmented reality (AR) applications available for smartphones and tablets, devices that bring together cameras, displays, and computers in single handheld units that can be positioned between the viewer and the world – that is, made part of the immediately perceivable world of the viewer – or even reflecting images of the viewer back to him or herself. The AR feature on the Blue Mars augmented reality app (Avatar Reality), for instance, allows the user to 'place' his or her avatar from the Blue Mars virtual environment into material space, as viewed through the tablet screen, where it might dance on the table or stand on a street corner. Another app, "Skinvaders" (Total Immersion), places cartoonish blotches on players' faces that become game elements; losing rounds result in the face marked with virtual features such as bulging eyes or big ears – features that stay

'connected' to the body as it is reproduced on the screen as the tablet follows the body movements of the user.

AR serves as an effective device, both visually and technologically, for conceptualizing the intersection between the physical and virtual aspects of space, and particularly in the way the program makes use of images that appear to be 'disembodied'. AR refers specifically to the overlay of images or information on physical space through a mobile device. In an article on AR, Manovich points out that architectural spaces have long been covered with information, from cave paintings to frescoes to contemporary signage, but AR gives the information fluidity, so that it might change for different users or be updated as needed. In this, AR superimposes rather than superposes, so that virtual content retains the phenomenological and technological quality of being virtual; that is, information on a storefront or cathedral could be considered virtual in that it is a cultural or linguistic signifier and thus more than its materials, but it is also part of the materiality of the space itself, whereas AR applications are not. Virtual content within the live image *seems* to be part of the space, however, and in this way graphics and information appear to be present within the space being viewed in a live image, rather than simply appearing on the screen.[22]

As the product of the camera view, the geospatial location of the device, networked information, computer processes, and the gyroscopic sensors and recognition software that 'attach' images and information to space, these graphical bits are divorced from any traditional medium and not containable in any one aspect of the technologies that produce them, and thus they seem to float interstitially, existing in the connections between material and virtual space,

[22] 'Augmented reality' is sometimes also used to refer to any application that combines real world data with digital information, such as a map program. Here I'm specifically referring to those applications that use a live camera view. Google is currently on the forefront of furthering the technology with its Google Glass project, an AR head-mounted display that operates as both a camera and a hands-free screen, worn by the user as a pair of glasses.

embodiment, and technology, rather than localizable within any one of these multiple elements. The mobile device becomes an informational interface to the physical world. An augmented reality tour guide program, for instance, makes use of existing structures and locations to which virtual information and images are attached, allowing tourists to see both at the same time and experience a vision of the history of a place (although a history made representational and informational). Users thus encounter at the same time the presence of the space or object, its image in the mobile device, the informational overlay, and the presence of the device itself. Manovich asks, "Do these layers add up to a single phenomenological gestalt or are they processed as separate layers?"[23] The answer is to a certain extent a matter of individual experience, but it is important to note that AR not only brings digital information and images to physical space but, perhaps more saliently, provides a way of seeing physical space with virtual elements that appear already to be there.

At the same time, the intermediary device imposes its own presence on the scene. In our example of the AR-facilitated tour, for example, one might be viewing historical information on a window in a century-old mansion; the space within view includes both the window and the smartphone, representing two very different ways of seeing the world that, at the same time, share a number of similarities. Anne Friedberg's work on windows as functional and architectural devices for light and vision, and metaphorical applications in the design of graphical user interfaces, traces the shift from the singular perspective in Alberti's window to the multiple-screen and virtual 'windows' through which "we now see the world in spatially and temporally fractured frames."[24] The functionality of windows moved from the simple facilitation of light and ventilation to the architectural window that served to construct subjectivity by

[23] Lev Manovich, "The Poetics of Augmented Space," unpublished article, manovich.net (2005), 1.
[24] Friedberg, *The Virtual Window*, 243.

framing the outside world, structuring perception not only through the delimited exterior but also through the juxtaposition of interior and exterior spaces. With AR the device is superposed over the view of the space the user wants to see virtually, obstructing it so that the superimposed image can be obtained through the screen; rather than multiple windows and a fractured viewing experience, virtuality is overlaid in a composite (non-)image that might be thought of as planar, with multiple planes of informational possibilities within a single view rather than multiple windows which separate photographic and virtual imagery. The device becomes a mobile window for seeing what is (presumably) 'already there' – just as the architectural window does not *produce* the external scene that is the object of the view, but only provides the frame. But what is already there is fluid and contingent, and indeed not inherent but projected – it is not the specific information of an object or space that coexists with it, but the informational derivatives and projections that produce, to recall Hayles, the notion that the material world is 'interpenetrated by information patterns'. The overlaid information is clearly recognizable as existing on a separate (visual) plane from the photographic image, and thus the closer encounter with virtuality might be effected when the user moves the mobile device out of view and looks at the object with a more specific conception of its informational possibilities.

While Hayles understands virtuality in terms of information, I have used AR and superimposition as a way of thinking about a virtuality encountered in images. These are not the representational images delineated by Friedberg, but rather conceptual images, the afterimages and oblique sensations generated in the phenomenological reception of pictures, media transmissions, and interfaces. Digital imagery becomes spiritual or ephemeral relative to the physicality of the film or photographic image; as they do not exist the same way in historical and material instantiations, digital images can, in a sense, never 'die'. A digital print becomes a

record of the image information at a particular moment within a history of modifications, rather than at the moment of capture, as digital images 'live' on screens – while their (quickly fading) prints become so many disposable corpses.

The complex layering of digital imagery, the activity under the surface, the electricity that powers it – the vivification of the digital stems in large part from its many interlinking processes and its presence on a display. Time is not embalmed, but preserved behind glass – dormant, perhaps, but stirred at a mouseclick. It is in fact the quality of these images not being 'one' (dependent on the device, with no body of their own) that at the same time brings them to life. Traditional images consolidate time and space within a single material instantiation, whereas our phenomenological experience of time and space is multiple, in present moments and memory of the past, and in subjective experience and objective views. The digital, while in a sense 'disembodied', lends itself to human experience in its multiplicity and superimpositional layering; while it must be 'framed', as Hansen argues, in these ways the digital is already nearer human experience, while the erstwhile, mortal 'body' of the photograph finds its analogue in the human body subject to increasing virtualization, smothered by images.

CHAPTER 5

DIGITAL ALTERITY

> Find a cultural-theoretical vocabulary specific to the body. Use it to express the unmediated participation of the flesh in the image (whether 'natural' or mass-mediated). Find a logic for the corporeal (body *and* image) that does not oppose it to the virtual. Find a logic for the virtual (imageless *and* potential) that does not remove it from the real; for example by equating it with the imaginary. Dis-sever, instead, the imageless from the Ideal.
>
> Brian Massumi[1]

"In cryo you don't dream," Jake says at the beginning of *Avatar* as he emerges from hypersleep in a coffin-like cylindrical pod. On Pandora – the verdant, digital biosphere created by James Cameron's creative team and Weta engineers – Jake will have different dreams. Lying in a different cylinder, his eyes closed but active as in REM sleep, Jake sleeps in one place and awakens in another – sleeps in one body, and 'drives' a different one, an avatar body designed for infiltration of the indigenous Na'vi population. Pandora itself becomes the dream, a fantasy of digital creation and inhabitation realized in 3D. While *The Lawnmower Man* took the camera 'inside' the computer, putting the otherness of computer space on display, and *The Matrix* shifted cyberspace to the world outside the computer, to the space of everyday life, albeit one with a green tint and a Baudrillardian uncanniness, *Avatar* inverts cyberspace completely – the electronic world is now the natural world, and the new cinematic bodies are not simply manipulated by visual effects techniques, they have *become* visual effects.

Digital effects cinema in general is highly liminal, often combining and compositing digital and photographic elements in a way that makes their distinction difficult or even impossible. When the effects are pronounced, the technological virtuosity involved in combining

[1] Massumi, *Parables for the Virtual*, 66.

them becomes part of the spectacle, and their liminality a source of spectatorial pleasure.[2] Live-action footage becomes just one component in the many elements of digital cinema, as Lev Manovich notes, and thus while the camera continues to exist 'virtually' within the dominant mode of photographic seeing, the presence of the physical camera becomes ambiguous.[3] The camera typically retains, however, a certain relation to the body, in that the human form, and particularly the face, have been the most difficult for digital technologies to reproduce accurately. This is not to say that human bodies are not digitally produced or altered in cinema, as in the highly realistic CG animation in films such as the videogame-inspired *Final Fantasy: The Spirits Within* (2001, Hironobu Sakaguchi), the digital retouching in *Surrogates*, which made actors more plastic for the surrogate bodies and added blemishes to the organic bodies, and digital suture that attaches a new face to a body, as in the young Jeff Bridges constructed and composited for *Tron: Legacy* (2010, Joseph Kosinsky). However, the difficulty and expense in producing CG bodies that are indiscernible from photographed ones has been prohibitive enough that the body of the actor has an added ontological connection to the physical presence of a camera. The face in particular becomes affective evidence: the poetry of the close-up, which Balázs described as the "most subjective and individual of human manifestations," becomes another manifestation of the objective device of the camera.[4] It is the digital faces, however, blue and therianthropic as they are, that drive the love story and provide the emotional anchor in *Avatar*.

What are these faces, exactly? Who, or what, do we see when we view a motion-capture CG character? They are not simply animated figures, which can be discerned in the bodily

[2] Of course, poorly or cheaply done effects can produce spectatorial frustration, often as a result of their failure to fully integrate or meaningfully interact with photographic elements.
[3] Lev Manovich, "What is Digital Cinema?" in *The Digital Dialectic: New Essays on New Media*, ed. Peter Lunenfeld (Cambridge: MIT Press, 1999).
[4] Béla Balázs, "From *Theory of the Film*," in *Film Theory and Criticism*, ed. Leo Braudy and Marshall Cohen (New York: Oxford University Press, 2004), 316.

movements and facial expressions that accord with our experience of real-world human activity, but they are also certainly images created rather than recorded. The semi-faithful resemblance of the avatar faces to their drivers/actors in *Avatar* further underscores the liminality of these bodies that are neither solely photographic or computer-generated. The film is structured around oppositions that emanate from the avatar bodies in the contests of nature and machine, alien and human, the digital and the photographic, following Jake in its oscillations between them. Avatars are not only a diegetic element in the film, but also functional devices for crossing thresholds of the body and the image. In *The Lawnmower Man* such oscillations proved untenable, with the anxiety of cyberspace threatening not only a loss of subjectivity, but also, as Paul Young argues, presented as a threat to cinematic form. *Avatar*, however, delights in lingering at the threshold, exchanging alterity for redemption and love in grand cinematic fashion. By the time Jake crosses over for the last time, the anxiety of the threshold has been nullified, the alterity of the digital rendered familiar, organic, beautiful. The troubling of the index is presented in this context as a source of pleasure in itself – both in its ambiguous but compelling relationship with the body, and in a 'liberation' of the image in its generative and visual potential to fully *display*, through the capacity of the digital. Cameron offers *Avatar* as the wellspring of a technological and visual modality in which film becomes other to the digital, and the digital presents itself as the fulfillment of the cinematic dream.

Contested Territories

Characters who are incomplete in some way are a cinematic staple, but in avatar texts the incompleteness of the characters tends to be tied to an encroaching sense of virtuality. Characters pass through an avatarial state, which they come to accept, manage to escape, or succeed in destroying as remedies for their self-alienation and attempts to find or regain wholeness. While

many of these characters are in one way or another trying to reconnect with themselves, the mentally disabled Jobe is, in comparison, already too close to himself (a generally feminine problem), incapable of abstract thought or dissimulation – a condition that has some interesting parallels with the Na'vi, who lack the objectivity of the human scientists and the emotional detachment of the soldiers. While Jobe is particularly susceptible within the avatarial state, however, failing to maintain a separation from his virtual self and thus 'becoming' his avatar, the Na'vi are framed as antidotal to the avatarial condition, helping Jake find his true or evolved self through avatarial fulfillment. In *Avatar*, Jake's alienation from himself is strongly rooted in the body, and particularly the disabled body – an external manifestation of the body set against the will, and one that, not coincidentally, lends itself to a resolution through images (of a capable body replacing the broken one). Disability for Jake is not only the outward sign of physical incapacity but also the root for his emotional ruin, and the film uses the contrast in images of the disabled and avatar bodies as the backbone of its affective allegorization of competing imaging technologies.

The disabled Jake, we might say, still has 'legs' in him, as the film works as a kind of visualization of phantom limb syndrome: through the avatar body he is able to 'realize' the missing part of his own body in a way that completes his character arc. In the beginning of the film, Jake is incomplete, a half, his former life as an able-bodied Marine at odds with his present crippled condition; the tension inherent in his disabled state in relation to what his body once was (and what it will be again) is summed up in the scornful reaction of one of the mercenary soldiers who, upon seeing Jake come off the transport in a wheelchair, remarks, "Now that's just wrong." As a particularly body-based occupation, the soldier's primary tool or weapon is the body, with

the goal of destroying other bodies while preserving one's own.[5] Jake's disability not only sets the stage for his new body, but it also carries some interesting implications within media theory, as the broken spine recalls McLuhan's writings on media relative to the body and nervous system, in which overstimulation in modern society impels the amputation of the 'disabled' sensorial capability so that it might be extended artificially. Jake's avatarial extension of himself allows him to incorporate a degree of mediation, in both the form of the avatar as well as the digital, and he meets his new body with exultant liberation, running out of the lab in his johnny to try out his new legs.[6] Legs on online and videogame avatars are also what Katherine Hayles might call 'skeuomorphs' – design features persisting even when no longer needed functionally – as walking and running through virtual space are phenomenologically-driven rather than technologically necessary. Jake's disability factors large in his assimilation into both a new culture and a new form of images.

Jake is brought to Pandora not for the training or intelligence his twin brother had attained, but because his bodily information, his DNA, is compatible with the avatar body; his biological code becomes the access key for his entry into the digital biology of Pandora. At the same time, Jake's avatar body and eventual transformation are counterposed by the prosthetic AMP suit (short for Amplified Mobility Platform) used by Colonel Quaritch (Stephen Lang) (Fig. 28). Visually and kinesthetically, the anthropomorphic exoskeleton driven by Quaritch

[5] Baudrillard and Paul Virilio have both explored the mediation of war, which becomes increasingly distanciated with video- and laser-guided bombs and the now-common aerial drones that routinely provide surveillance and bombing runs in hostile territory. However, Jake and the other mercenaries on Pandora are more representative of the bodily connections of the soldier to war and the use of the body as a weapon. Jean Baudrillard, *The Gulf War Did Not Take Place* (Bloomington: Indiana University Press, 1995); Paul Virilio, *War and Cinema: The Logistics of Perception*, trans. Patrick Camiller (London: Verso, 1989); Virilio*, Desert Screen: War at the Speed of Light*, trans. Michael Degener (New York: Continuum, 2005).

[6] McLuhan associates the extension of the human with the Narcissus myth, writing that "men at once become fascinated by any extension of themselves in any material other than themselves" (64); applied to the avatar, this association suggests that fascination with the digital body is not so much in seeing the self reflected back, but in experiencing the mediation of the self – seeing the medium through the self, rather than the self through the medium. Marshall McLuhan, *Understanding Media: The Extensions of Man* (Corte Madera, CA: Gingko Press, 2003).

corresponds to the body movements of its user through a mimetic master-slave interface, rather than the mental or oneiric interface used by the avatar drivers in repose, as demonstrated by a bit of shadow boxing Quaritch does when we see him first enter the suit. However, the AMP prosthesis remains distinct from the body, mimetic rather than integrated sensorially as the avatar body is, and thus can never produce the closeness to nature and the body that Jake experiences.[7]

Figure 28. Quaritch in the mimetic, anthropomorphic AMP suit.

Quaritch and his machine are alien to this world, not suited for it, as the AMP ultimately cannot protect him from Pandora, and his own status as a half remains unresolved by the machinic 'double' he inhabits. Jake's strength is ultimately that he is able to move beyond the cyborg relation and become unified with his new body rather than existing at odds with it. Not

[7] The AMP suit is however closer in form to the human body than the cargo-loader exosuit used by Sigourney Weaver's Ripley in Cameron's *Aliens* (1986), as seen for instance in its dexterous hands with which it wields weapons like knives and guns rather than the pre-CGI clamp tools produced with mechanical movement in *Aliens*. Yet the pronounced anthropomorphism of the AMP comes off as more indicative of machine design that has reached its creative limits, only able to more closely mimic the human body, rather than the evolution of an especially advanced technology.

only has his sense of embodiment aligned with the new body, but his 'virtual' side – the unrealized wholeness within him that found expression through the avatar – is incomplete without it, as implicit in the disabled Marine body. When Quaritch attacks the pod that holds Jake's dormant human body toward the end of the film, he endangers Jake specifically by violently projecting upon Jake his own weakness, the disjuncture of body and technology, which is manfiest as Jake tumbles out of his interface, gasping for breath. But by this point Jake has already transcended cyborg embodiment in every respect except the final physical transition, with which the film concludes. Abandoning the wheelchair and the promise of fixing his legs through medical technology, he returns to nature – a move away from the machine that is simultaneously regressive and forward-looking, anti-technology and fully embracing the digital image.

Even as their depiction is largely dependent on the same CG imagery that produces the exotic flora and fauna in the film, machines are framed as part of a different technological era, relics of a Machine Age past relative to an idealized future of both ecological harmony and pristine digital imagery. Machines are ominous and antagonistic in the film, as excavators, battle vehicles, and AMP suits become exaggerated displays of the machine as destructive element, opposed to nature – and, implicitly, the feminine, as can be seen in Neytiri (Zoë Saldanda) as the main Na'vi character and the feminization of Jake as avatarial, imaginal, and close to nature. Jake's wheelchair, in contrast, is a simple prosthetic machine minimized in form and function – a relatively primitive technology, and ultimately one easily detached and discarded. In addition to outsized machinery, the human interlopers also rely on virtual technologies in the command center, as seen in holographic displays of the Pandora terrain and Home Tree, and an image of Jake's brain that can be manually 'swiped' from a large glass display to a mobile one.

Representations of a softer machine technology are more the domain of Grace's (Sigourney Weaver) team, however, and the objects present in these images are those most closely associated with the virtual elements in the film: the natural landscape of Pandora and home of the Na'vi, and the organ with which Jake connects phenomenologically to the avatar body through the interface. His brain, along with the rest of his body, is eventually abandoned, while his 'virtual' body, his embodiment, is essentially downloaded; as Hayles points out, the body may disappear, but embodiment persists, and thus this image of Jake's brain early in the film comes to foreshadow the embodied mind (not just the consciousness, as it is his brain that is imaged) that will be transplanted into the new body already partly designed in his (that is, his twin brother's) image.

Machines and virtuality are parallel fascinations for Cameron, from his obsession with recreating the Titanic to his script for the Kathryn Bigelow-directed *Strange Days* (1995) in which virtual experiences are bought and sold on the black market, to the invasion of a hulking submarine base by a watery CG tendril that mimes the facial expression of a crew member in *The Abyss* (1989), and most notably in his juxtaposition of cyborgian hardware and fluid virtuality in *Terminator 2: Judgment Day* (1991). The liquid metal man in the latter, ostensibly an advanced machine, is perhaps better viewed as a progressive image form: his quicksilver machinic state is essentially a CG interstice between the performances of various actors, an amorphous image body through which one (photographic) body transitions into another. Although Schwarzenegger's hard cyborg eventually triumphs, he must also be terminated, and in this film Cameron prefigures the demise of the on-screen machine in favor of the production technologies that would produce spectacles of biological life, as exemplified in Spielberg's

Jurassic Park two years later.[8] In *Avatar* the coffin-like chambers in which the avatar drivers lie presage the death of the physical/photographic bodies of both Grace, who is unable to transition to the imaginal/digital body, and Jake, who is. Grace and Quaritch are casualties of the border war between analog machine and digital body, and only Jake, who as a half is able to fully integrate with his virtual double by embracing his own virtuality, comes through successfully.

Dana Fore, writing about representations of disability in *Avatar*, points out the way in which images of disability relate to fantasies of bodily control. Jake, through his courage and determination, fulfills the stereotype of what Jack A. Nelsen calls the 'Supercrip', in which disability is overcome by willpower and strength of character, and thus "what was once a prosthetic device [the avatar] is magically transformed into flesh and blood, leaving Jake unmarked and 'normal' in the larger society."[9] One can follow, as Fore does, the shift in emphasis from avatar as utility, with the avatar as an advanced biological tool for sociological integration and environmental adaptation (the latter sense actually somewhat analogous to Clynes and Kline's conception of the cyborg), to a change in Jake's sense of being, the body having become more than just a tool. Also, within Cameron's allegory of competing imaging technologies, Jake's disabled body is aligned with the photographic world of the humans, and his able avatar body with the digital world, and thus concerns about the physical body of the once strong marine coincide with unease about the disappearing materiality of film. What is 'normal' in Pandora is, at the level of the image, the all-encompassing digital, and thus the question can be posed: to what extent might the film itself be working to overcome its own photographic 'disability'?

[8] Although the Terminator's 'hardness' is emphasized in writings about the cyborg aspects of the film, the liquid metal man brings into stark relief the Terminator's pronounced fleshiness. His skin and organic matter are torn, burned, and penetrated throughout the film in what becomes a visual metaphor for his humanity, his 'softness' relative to the cold, fleshless metal of the new model.

[9] Dana Fore, "The Tracks of Sully's Tears: Disability in James Cameron's *Avatar*," *Jump Cut* no. 53, Summer 2011.

Part of the mystique that surrounded the production of *Avatar* was its long delay; slated to follow *Titanic* (1997), Cameron pushed the film back because he didn't feel the technology was available to tell the story. As has been demonstrated by fan-produced homages and parodies, along with several porn knockoffs, painting people blue and filming in a forest is certainly one way. What Cameron felt he couldn't do with make-up, prosthetics, matte paintings or digital backgrounds, not to mention the visual effects capabilities he had just used to recreate the Titanic, implies that the story, as he conceived it, was not simply one with high technological demands (ground which had been well-traversed in the analog era with *Star Wars* and *Blade Runner*) or requiring elaborate fantasy elements (Peter Jackson's *Lord of the Rings* trilogy would have been contemporary with *Avatar* had it not been delayed). Cameron seems to have had in mind a new era of filmmaking, which he indeed has helped usher in – an era that is to an extent opposed to the photographic image. As D. N. Rodowick observes, from *Jurassic Park* onward

> the major creative forces in the industry began to think of the photographic process as an obstacle to creativity, as something to be overcome, rather than as the very medium of cinematic creation. In a previous era of cinematic creation, the physical world both inspired and resisted the imagination; in the age of digital synthesis, physical reality has entirely yielded to the imagination.[10]

Avatar, perhaps more than any other recent film, embodies the logic Rodowick puts forward, creating antagonism between the photographic and digital on multiple levels. In what amounts to an allegory of competing imaging technologies, the conflict between the humans and the Na'vi pits one world against another: the photographic humans from a dying planet, who come with machines to plunder the resources of Pandora, and the proliferative abundance of the digital world, which offers unlimited possibilities – including the creation, it would seem, of life itself.

[10] Rodowick, *Virtual Life of Film*, 28.

Besides improving 3D technology, developing a virtual camera system, and advancing motion-capture and digital rendering techniques, Cameron and his many collaborators also meticulously developed a world of flora and fauna designed to be as biologically rich as their visual production – and indeed, the two seem to go hand in hand, as Cameron seems not so much focused on producing films about an imaginary world, but rather on creating an imaginary world in which films can then be made.

The technology that created Pandora and the Na'vi bodies is rooted in the digital processes Cameron helped develop for *Terminator 2*, but the results are quite the opposite of the lifeless future and mechanical men portrayed in that film, for in *Avatar* Cameron's project is the creation of life, and life in excess. The final vestiges of the photographic process, seen in the human desperation for Pandora's 'unobtanium', poses a symbolic threat to the imaginative possibilities and digital vibrancy of the CG world – and the very future of cinema, if we follow Cameron into his mythical floating mountains. Here the dying photographic world makes one last push, "as if cinema were fighting for its very aesthetic existence. . . . wherein cinema struggles to reassert or redefine its identity in the face of a new representational technology that threatens to overwhelm it." Rodowick is referring to films like *The Thirteenth Floor* and *The Matrix*, in which "the digital versus the analog was the heart of narrative conflict," but it is important to note that in these films it is the digital that is positioned antagonistically to the photographic, whereas *Avatar* reverses the tension, making photographic encroachment the menacing element.[11]

The final battle waged between the humans and the Na'vi, the photographic and the digital, collapses the geospatial and screen spaces that had for most of the film remained separate, producing the violent confrontation between the two worlds and imaging processes that

[11] Ibid., 4.

had formerly been bridged avatarially.[12] Films like *Jurassic Park* keep the digital contained, as a spectacle in a cage that will thrillingly threaten to escape, but, as we all know, will ultimately be kept in its place as something for the photographic humans in the film (and the real humans in the audience) to subject to a fascinated and curious gaze. The military establishment on Pandora is positioned as the conservative center to the digital otherness of the Na'vi, and while we have grown accustomed to seeing digital characters in animation, digital bodies and elements in live-action film are indexically destabilizing. Quaritch and his mercenaries fail to see what Cameron demonstrates for the audience – that the digital can be affective, sensuous, and vital.

The avatar becomes the bridge between the two worlds, Cameron's method for inducting us into a digital that is not simply ancillary to the photographic or an other to be destroyed, but an all-consuming digital that augurs the future of cinematic possibility. CG imagery is 'safe', as a fascination, when it is positioned as other, whether that be in its relation to photographic elements in a live-action film, or in animation, which as a genre has been typically assigned secondary status to live-action filmmaking. When it moves to the forefront, however, with CG characters as protagonists who not only defeat their photographic counterparts but also develop a sweeping romance, the digital becomes threatening; Cameron's task is not only to counter the otherness of the digital, but to make it an acceptable and even desirable form of cinematic pleasure relative to the photographic, which Cameron facilitates with the avatar interface and eventually avatarial transformation. In order to contextualize these moves and establish a theoretical and practical basis for CG characters, I will briefly examine their role in a few other films that situate CG and animated characters within live-action settings, to one extent or another

[12] The production of each space was also separate, almost a world apart, with the Pandora performances captured on an L.A. sound stage and the human base shot on sets in New Zealand.

opposed to live actors. The tensions between these different kinds of images expose the implicit hierarchy of images that posits animated and CG imagery as other to the photographic.

Native Images

Animated characters, in their origins within and ontological attachment to the filmic and digital media which construct them, might be thought of, in certain ways, as *native.* With their profilmic existence instantiated on paper, glass, and screen, they are formed in the media of their production but are not in the conventional sense mediated, for they come to life in the very process of mediation. Spatially, they are residents of screens, confined to its borders – always elsewhere, but in some sense always in their place; temporally, they are products of the movement of film in a way distinct from that of live action filmmaking, as cinematic motion produces their respiring *anima* – not captured images reinvigorated after the passing of the original moment, but each time a birth, a nativity.

In their location and movement, animated images are other to the photographic, and further removed from the real world. In that they are other, they are also often *othered* in ways that produce cultural difference in tandem with the difference in imaging practices. This othering can happen diegetically and in performance in the way that animation has historically drawn on caricatures of race, class, and gender, but this is a case of one otherness coinciding with another, the difference of race and gender superimposed on the difference of animation from the photographic.[13] Animated characters, these native bodies, are othered lest they encroach too far into the realm of the photographic. The 'looniness' typical of many cartoons becomes a sort of racial or classist quality in that it typifies the manner, appearance, and hierarchical place of

[13] For discussions of race, class, and sexuality in animation see Eric Loren Smoodin, *Animating Culture: Hollywood Cartoons from the Sound Era* (Chapel Hill: Rutgers University Press, 1993); and Karl F. Cohen, *Forbidden Animation: Censored Cartoons and Blacklisted Animators in America* (Jefferson, N.C.: McFarland, 2004).

bodies that fall into a certain category of images. The plastic cartoon body itself becomes a location for this otherness, and is compelled to accept and endure certain abuse as it is mashed, battered, and stretched to capacity – like the body in pornography, punished for being an image (or too much of one) in a playfully sadistic pseudo-iconoclasm. Even the 'illusion of life' aesthetic which came to dominate the Disney animated features almost invariably included elements of the monstrous, the grotesque, the gigantic and the miniature, in addition to inanimate objects, as embodiments of difference. Thus in looniness the othered image performs its otherness, often within the familiar discourses of racial, classist, and gendered difference, and is comically punished for being other.

Films that mix animation and live action underscore the way that the native figures of animation are generally contained in their own spaces, hermetically preserved within particular imaging techniques and the visual and narrative strategies that form their otherness. J.P Telotte shows how these films that combine cel animation and photographic cinema often reflect difference and separation diegetically. For instance, Disney's *The Three Caballeros* (1945), featuring Donald Duck and live actors in South American locales, and *The Song of the South* (1946), with Uncle Remus (James Baskett) and Br'er Rabbit, play with borders and fences, cultural difference and racial prejudice, in ways that draw from and problematize the difference and separation between humans and cartoons. Similarly, if rather innocuously, in Warner Bros.' *You Ought to Be in Pictures* (1940), Porky Pig, having had a difficult time on the Warners studio lot, "seems to find [its] reality a bit too much for him and rushes back to the relative safety – and visual simplicity – of his cartoon world."[14] The contrast between animation and photographic cinema brings the differences between classes of images into starker relief, and their juxtaposition in the same frame provides opportunities for an analysis of the tensions between

[14] J.P. Telotte, *Animating Space: From Mickey to WALL-E* (Lexington: University Press of Kentucky, 2010), 164.

them; when the screens that keep these worlds are breached, the defining differences between images are troubled.

W. J. T. Mitchell writes: "If pictures are persons, then, they are colored or marked persons" – and, I suggest, within the gradations of such stratification, animated images are hierarchically subordinate to the photographic.[15] In *Who Framed Roger Rabbit* (1988, Robert Zemeckis), the photographic and animated worlds are physically separated by brick and mortar. There exists an enduring tension between the two worlds and a certain amount of prejudice toward the Toons, who are rarely taken seriously and are often undone by their own looniness. Telotte notes that the Toons are cast as a racial underclass: ghettoized in the human-owned Toontown, performing in the segregated Ink and Paint Club, and subject to an unfair disciplinary system which grants them fewer rights than humans. Telotte connects the lower social position of the Toons to their animated status, borrowing Jessica Rabbit's line to suggest that they are 'drawn that way,' as they are created to serve and entertain humans – their *raison d'etre*. The film begins with a studio set and the amusing conceit that Toons 'act' in cartoons, playing roles instead of being themselves, but the humor here is drawn from the absurdity of the idea that 'character' can be abstracted from 'cartoon character'.[16] In animation, body and character are inextricable – another defining aspect of native figures which posits them as excessively close to themselves, unable to achieve an intellectual distance from their own embodiment and the loony world they inhabit (and a correlation with Mitchell's theory that pictures are also gendered female, in addition to being raced).

[15] Mitchell, *What Do Pictures Want?*, 35.
[16] Nick Park's *Creature Comforts* series, in which interviews with "the Great British Public" are animated as talking animals, relies on a similar kind of humor, in which animated figures seem to have lives outside of the characters they assume.

When animated figures breach the boundaries of their native spaces and enter the photographic world, they also often take monstrous form, and particularly as monsters existing to be slain by live actors. A cursory review of legendary visual effects creator Ray Harryhausen's filmography is illuminating: in his fairy tale works which are entirely animated, such as *The Story of King Midas* (1953), the sympathetic animated characters exhibit human qualities; in his work creating visual effects for live action films, such as *Jason and the Argonauts* (1963, Don Chaffey) or *Clash of the Titans* (1981, Desmond Davis), his creations are mostly monstrous creatures who threaten and are eventually destroyed by the humans. It is no coincidence that the voyage to mysterious lands and islands is a common trope in these films, diegetically preserving the sense of separate spaces for the photographic and the animated, and the place of native images beyond the vitreous boundaries of sea, air, space – and screen.

Darkness and the grotesque characterize the chaotic, semi-animated locales of *Cool World* (1992, Ralph Bakshi). The Cool World is presented as a sort of dismal underside of Las Vegas (as if it needed one), its apparent counterpart in the Real World, but it seems more a droll nightmare from someone's troubled unconscious. Where the Toons were preoccupied with their looniness, the grotesque 'Doodles' who inhabit the Cool World are consumed with relentless, senseless violence. An exaggerated parody of the already quite brutal antics of Wile E. Coyote and Tom and Jerry, the outright barbarism of the Doodles removes any sympathy for the characters and emphasizes the plasticity of the indestructible cartoon body through its continued abuse. The contempt for the Doodle body in general is countered by the fetishization of sexy Holli Would, voiced by Kim Basinger (Fig. 29). Her constant, sensual dancing draws the drooling, eye-popping gazes of everyone around her; she is clearly a Doodle of a different stripe, as her rotoscoped movement and realistic stylization set her apart from the other denizens of the

Cool World, in an "ill-fitting conglomeration of images that consistently proves both fascinating and puzzling, attractive and even repulsive," as Telotte writes.[17] Even within the animated Cool World, characters are othered differently, from Holli's smooth gyrations, to the pliable grotesque of the cast of secondary Doodle characters, to the crude charcoal 'ghosts' that float periodically across the screen, not fully rendered.

Figure 29. Holli Would and Frank (Brad Pitt) in Cool World.

Telotte notes that Holli's desire 'to be real' is an appropriate one, given her realistic styling. We might go further, though, and note that in the style of her animation she is uniquely positioned to 'pass' as human, should she make the transition into the other world. Her sense of her own body and her seeming ability to mimic the human form make her embodiment nearly compatible with the bodies of the Real World. With the exception of some curiosity from the similarly-styled Lonette, she is the only character who desires to enter the normative, photographic 'real'. She seems keenly aware of her otherness, of the social position Doodles inhabit relative to the Real World, and has aspirations for upward mobilization. This desire is

[17] Telotte, *Animating Space*, 195.

manifest in an interesting reversal of conventional spectatorship, as film footage of Marilyn Monroe is projected on the wall of her apartment – the native figure idealizing a photographic (and yet still largely constructed) 'reality'.

The 'oldest law of Cool World' – no sex between Doodles and Noids (humans) – is a prevention against miscegenation, enforced by noirish human detective Frank Harris (Brad Pitt). The unthinkable result of such an affair is a breakdown of the physical (that is, cultural) boundary that separates Doodles and Noids, allowing Doodles to enter the Real World and become human. (Although humans are somewhat out of place in the Cool World, there is no equivalent prohibition against their entry, which further establishes the lower class status of animated characters.) Holli seduces Jack (Gabriel Byrne), the artist whom she has summoned into the Cool World, into having sex with her, and she transforms into a human (that is, into Kim Basinger, already 'contained' in Holli). They travel back to the Real World, but soon find their transition to live-action to be false or incomplete – as if the photographic had been inadequately superposed on their animated forms – in a curse of bastardization that disallows them from entering the photographic 'real'. Jack's hands turn into puffy cartoon hands, causing him to nearly crash his car, and Holli flashes with increasing frequency into a buffoonish clown – a very different image from her original form which proves that while she may have been queen of the Doodles, she is a Doodle still, and among humans her Doodle-nature manifests in the grotesque body.

Holli seeks to obtain the Spike of Power in order to fully join the real world (placing her hope in a particularly clichéd fiction and overdetermined phallic image), but instead it releases the Doodles into the human world *en masse*, turning Holli, Jack, and a number of casino denizens into Doodles, and infecting the photographic world with baser behavior and bodies

(though hardly a step down for the barely sentient beings at the slot machines). Once the Spike is returned, forcing the Doodles back to the Cool World, forbidden desires that once crossed imaging technologies are resolved by downgrading the status of the Cool World humans (Frank and Jack both become Doodles), while returning the rest of the Doodles to their place.

That the denizens of the Cool World consider the human world the 'real' demonstrates their acceptance of their othered status in a hegemonic consciousness drawn directly into their character-bodies. Their abjection positions the animated Cool World as the other that the photographic Real World needs to constitute its place as subject and center of the imagistic universe. Characters and bodies of a certain disposition and plasticity are required to fulfill the call to bear the violence of images – that is, the violence directed toward images for being images. These whipping boys (or ducks, coyotes, dogs, cats, mice, bears, hunters, sailors, and park rangers – though almost always 'boys') of the golden age of cartoons, and their contemporary counterparts in SpongeBob, Ren and Stimpy, and the like, seem positioned as the dark shadow of photographic imagery. "The image is usually spoiled of its own existence as image, devoted to a shameful complicity with the real," writes Baudrillard in his essay "The Violence of the Image."[18] Animated characters, and cartoon characters in particular, can be seen as the scapegoats for this complicity which both too nearly touches the real and simultaneously threatens to replace it. Confined within the otherness of the screen, as ink-dipped ghosts with no earthly referent, they are available for this violence, and their bodies designed for the violence they are called to sustain. The second class status of animated images not only protects the privileged status of the photographic, but also masks or tempers anxieties surrounding the photographic replacement of the real by offering up living images less real and more imagistic –

[18] Jean Baudrillard, "The Violence of the Image," presented at the International Symposium attached to 'media-city', Seoul's 2002 Biennial. European Graduate School website, 2002 (accessed January 2011). http://www.egs.edu/faculty/jean-baudrillard/articles/the-violence-of-the-image/

a relation that helps preserve notions of the photographic as *part* of reality rather than its replacement, reinforcing the index through difference.

Bodies Colonized

CG images are not othered the same way that animated images are, as their otherness tends more toward the hyperreal and fantastic. The combination of cel animation and live action filmmaking, while not entirely unusual, is somewhat rare; CG imagery, however, has widely permeated live-action filmmaking as a visual effects component. Although CG effects are commonly used 'invisibly' to produce backgrounds, remove unwanted elements, and enhance visual style, it is the spectacle of their visible presence that sells tickets and most saliently pertains to issues of contemporary representation. Sympathetic CG characters, who can be differentiated from the digital monsters and creatures that fulfill roles of subjugation and difference, represent the new frontier of CG technology. Though often discussed primarily in terms of technological achievement, CG characters are intriguing and problematic in their fusion of imaging technology, character elements, actor contributions (such as voice and movement), and visual styling. These figures in many ways embody the anxiety and fantasy surrounding our fascination and identification with imageness, as they so neatly reproduce the human body as an image within the technological body *of* the image.

In Gollum can be found a figure of the other who also functions as a creature of fantasy. Multiple tensions and conflicts exist within his emaciated body: in addition to his troubled psyche and his existence on the margins, he is a hybrid figure existing between the photographic and non-photographic worlds, a body in which two spheres of production are restlessly joined, reflected in his strangely split personality. It is the One Ring that holds him together, that forms his identity within the structure of his single-minded desire for the Ring itself. The influence of

the Ring is strong – those upon whom it has exacted the greatest toll become digital figures, while those whom it begins to influence are implicitly threatened with the same fate. Frodo's (Elijah Wood) attempts to resist the power of the Ring are attempts to keep the digital at bay, lest the protagonist himself be infected (as Wikus is in *District 9*, discussed below), as have been Gollum, the Ringwraiths, and the evil Sauron. Tom Gunning, in his comparison of Gollum and the Golem, sees the runes on the Ring as analogous to the mythical combination of letters and numbers that bring the Golem into existence, and the equivalent of modern computer code in "an allegory for the ultimate in technological control . . . equating magic with previously unseen degrees of technological development."[19] It is the Ring that disembodied Sauron, and which he seeks for the formation of a new body; the flaming vaginal eye – all that is left of him – makes visually potent the look within his lack, the privileging of the eye relative to the absence of the body.

As CG imagery has become capable of producing photorealistic bodies, the 'presence of an absence' dichotomy that characterizes the film image is inverted. Gollum, a fantasy creature produced using motion-capture technology, marks the presence of something that never was, hung on an actual body we can't see. Rather than the conventional arrangement of a presence (an actor before the camera) which became an absence (in the image), Gollum is an absence (an unreal creature, a missing actor) manifest in a presence (the photorealistic body on the screen).[20] Presence and absence play out on the screen as a drama of images, and CG is used to visually create diegetic transformations of a drastic sort – not only from one appearance to a very different one, but from one image state to another. Ultimately these narratives are a

[19] Tom Gunning, "Gollum and Golem: Special Effects and the Technology of Artificial Bodies," in *From Hobbits to Hollywood: Essays on Peter Jackson's* Lord of the Rings, ed. Ernest Mathijs and Murray Pomerance (Amsterdam: Radopi, 2006), 340.

[20] Not so for traditional animated images, for their presence is of a different sort – they remain always in a separate sphere from the live actors, sharing space within the frame but not a similar imaginal ontology.

dramatization of the transformative capacity of digital effects, to not only transform bodies but also filmmaking or the film image as a whole.

Gollum's transformation from photographic to digital takes place in a flashback at the beginning of *The Return of the King* (2003). In an idyllic scene we find Andy Serkis (photographically) as Sméagol, who kills his cousin Déagol and retreats into seclusion, becoming increasingly malformed and greyish before finally turning into the figure of Gollum we have come to know. The short sequence of transformation is accomplished mostly with make-up effects, which are distinctly unimpressive relative to the striking visual image of the digital Gollum. The last stage in the transformation is accomplished with a morph effect, in a close-up of his face, that marks the final transition into his digital form. The close shot on the face makes the change personal and intimate – both for Gollum in his becoming, and for us in our experience of this transformation.[21]

The brevity of the transformation sequence (compared especially to the hundreds of years implied in the books) emphasizes visual alteration over character transformation, with the latter reduced to a minimum. The gap between make-up and digital effects is also notably bridged by a morph effect, which was one of the most visible early manifestations of CG imaging, and which itself visualized the transformative power of digital effects. For the few moments that Gollum is a product of latex and paint, he is part of a history of visual effects that echoes back through the annals of cinema, and which still constitutes the primary method for producing Orcs in the *Lord of the Rings* trilogy (at least in close and medium shots – in the large battle sequences they are

[21] Dan North discusses the authenticity associated with the close-up within digital cinema, which conveys 'real' information and emotion, in comparison with the long shot, which is more often the domain of special effects in a CG-driven film.

mostly digital). Gollum's body provides a stark point of contrast with actors in make-up, who appear in comparison as, well, actors in make-up. As Mark Wolf writes,

> when we see the orc characters, we know that they are just actors in costume; but when we see Gollum, or the Balrog, it is just the character we are seeing, not an actor playing a character. The digital character exists on a separate plane, but it exists wholly on that plane, rather than being one kind of being attempting to be another, as in the case of the costumed actor.[22]

The difference between Gollum's body and those of the Orcs engenders the threat of replacement in the particular way that Gollum's body is a point-for-point (or joint-for-joint) visual replacement of a human body, and the fantasy of replacement in the superiority of CG over traditional make-up effects in its transformation of the body, in merging body and character, and in representing the body digital.

Wolf's observation ties CG characters to traditional animation, situating them as screen natives. While the aesthetic lineage of the CG character has its roots in animation, there is perhaps more to 'see' than only the digital image on the surface. "Gollum is Gollum," as Cynthia Fuchs writes about his lack of place and self-awareness, but he is also Andy Serkis and Weta Digital.[23] The motion-captured movements and facial performances of Serkis that were converted to data, as well as the rotoscoped scenes from which Serkis was 'painted out', imply a referential relationship in which the 'trace' of Serkis's performance can be seen in Gollum's movements. An implicit indexicality informs this process, but it should be remembered that motion-capture is never purely or simply indexical. Dan North points out that motion-captured figures "are frequently pieced together from attributes gleaned from a variety of human referents – the

[22] Mark J.P. Wolf, "The Technological Construction of Performance," *Convergence* Vol. 9, No. 4 (Winter 2003), 56-7.
[23] Cynthia Fuchs, "Wicked, Tricksy, False: Race, Myth, and Gollum," in *From Hobbits to Hollywood: Essays on Peter Jackson's* Lord of the Rings, ed. Ernest Mathijs and Murray Pomerance (Amsterdam: Rodopi, 2006), 252.

motion capture data of one performer, the voice of another, facial features based on aggregates of beauty or anatomical studies, for example," in addition to the ways in which the original motion-capture data is manipulated by the animators in the final collaborative 'performance'.[24] The 'stick figure' produced by motion-capture becomes the skeleton for the animated figure, but this trace can be easily molded and reworked into altered performances, existing as it does as data no longer inextricably tied to the body that produced it or the datastreams in which it was captured. The trace is hidden, masked by layers of digital frameworks and textural skin, and often augmented with key frame animation (as Gollum's face was, drawing from facial reference material provided by Serkis).

Serkis's invisibility in a sense undermined the work of the studio to promote him as a performer, for Gollum was not only a hybrid of digital and performative techniques, but Serkis effectively disappears within Gollum through the ambiguity of the indexical connection – he is there somewhere, but where does he begin and end? North writes "What is more interesting [than how Serkis was taken out of the frame] is what remains of Serkis in the finished film, and the lengths taken to ensure that the horrors of a digital character are tempered by an injection of 'humanity.'" North identifies these remains in a list of Serkis's contributions, but, interestingly, in a way that disarticulates Serkis in terms of his 'input' into Gollum,"providing motion capture information, lending Gollum some of his motile inflections, leaving traces of some of his features."[25] Serkis himself becomes the input, the raw data then recombined into a new body, a new entity comprised partially of elements of Serkis. The 'humanity' which Serkis injects into Gollum is not simply a person or performance *per se*, but an abstract human element that is the product of the human as information.

[24] North, *Performing Illusions*, 156.
[25] Ibid., 175.

Animated and CG characters in live-action films are commonly relegated to the positions of either fantasy creatures (who often also serve as helpers to the human characters) or monstrous others to be destroyed, which make their existence permissible within the realm of the photographic.[26] Gollum moves at different points into both positions in his personas as the malformed Gollum and the erstwhile hobbit Sméagol. Gollum resists easy classification, and when he cannot be easily classified as either a fantastic or monstrous other, his ambiguity becomes further pronounced, shifting him toward the center, closer to the human protagonists that anchor the film. In the end, however, he is unable to complete the transformation, and, chasing the Ring, falls into a pit of CG lava – the final destruction of his monstrous form, dissolved in the molten digital sea from which the One Ring (the one technology) to 'rule them all' was formed.

The 'horrors' of the digital character are partly located in the consuming aspect of motion-capture, in the swallowing up of an actor into the character so that we get a hint that the actor was once there and might be vaguely discerned, but has been replaced to the extent that the actor disappears. We know that Serkis is the basis for Gollum, but this knowledge fails to fully account for either the body of Gollum or the character tied to this body (another way in which Gollum is Gollum). Gollum as a native figure is a body colonized, moved from the inside by a now invisible body and its ambiguous, even ghostly, trace. Motion-capture acutely typifies an anxiety of bodies replaced by images *because* of its closeness to the human body that animates it.

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[26] *Clash of the Titans* is a good example of a film containing both. The monstrous creatures include giant scorpions, the giant Kraken, and the serpentine Medusa, but Perseus (Harry Hamlin) is also assisted by fantasy creatures such as Pegasus and the mechanical owl Bubo. These latter figures are domesticated, however, which helps minimize their otherness as animated figures: the clockwork construction of Bubo renders it a tool that can be subject to human control, and the wild Pegasus is broken and tamed by Perseus.

The hooved Calibos (Neil McCarthy) is, like Gollum, somewhat of a hybrid character, shown in close-up as an actor in make-up and in long-shot through animation. This liminal status accords diegetically with his character, as the once handsome son of a goddess, punished with deformity and hideousness by Zeus, becomes partly relegated to animated status.

Whereas the traditional animator keeps the native body at a distance, the body in motion-capture is subsumed – not simply 'captured' after all (for only its motions and information are, its place on a grid, the expressions it can make), but extracted, processed, composited, manipulated, painted over, animated, degraded with film grain and blur, and finally presented as a photograph that isn't one.[27]

Fantasizing the Other

Transformation – both the horror of it, and the fantasy – is central to *District 9* (2009, Neill Blomkamp), as it is also to *Avatar*. The interspecies transformation depicted in *District 9* presents the horror of trans-image mutation couched in an alien invasion film which combines live-action with CG characters. Released four months before *Avatar*, Blomkamp's sci-fi allegory of xenophobia and racism depicts a refugee alien population confined to a shantytown in South Africa. Wikus van de Merwe (Sharlto Copley), an Afrikaner administrator, is charged with facilitating the relocation of the aliens to a government camp further from the city (Fig. 30). While serving eviction notices he becomes infected with an alien substance, which begins his transformation into an alien – or 'prawn', as the aliens are derisively called in the film. Blomkamp uses a documentary style for the film, underscoring its agenda as a thinly veiled allegory of apartheid South Africa, while at the same time increasing the tension between the realistic filming style and the CG aliens that populate the film.

[27] Gollum's troubling of the demarcation between the photographic and digital worlds can be contrasted with Jar Jar Binks, the CG character in the *Star Wars* prequels, who never really challenges the divide between imaging technologies. Jar Jar is more 'at home' in his raced and hybrid status, and instead of transformation or destruction he receives a superficial ending in obtaining the improbable position (because of his bumbling nature) of general and senator; subject to neither ostracism nor destruction, he notably fades into irrelevance and has all but disappeared by the last film.

Figure 30. Wikus and a prawn in District 9.

Wikus's transformation begins with illness and black fluid leaking from his nose, signaling the internal effects of the alien matter. Externally, the transformation is manifest in his hand, which had sustained a previous injury and is thus more vulnerable to being overtaken; the transformation is mostly limited to the hand until the final shot of the film, when we see that Wikus has become a prawn (or at least it is implied that the prawn we see is, or was, Wikus). The alien appendage acts as a metaphor of sorts for our interaction with other digital bodies that stand in for our own, in the form of avatars and videogame characters for which the hand is the point of connection at the keyboard or game controller. In the film the hand enables Wikus to operate alien technology that is only compatible with alien DNA, making him very valuable to both the corporation that has been exploiting the aliens and the Nigerian gang that operates a crime ring in District 9. Wikus's alien hand is thus both enabling and stigmatizing, though for most of the film he is focused on the latter aspect – the rejection by his wife, the corporeal transformation into the thing he hates, and his mulatto status (which, in a smear campaign, is attributed to infection from interspecies sex).

The isolation of the mutation to the hand allows Wikus, and the audience, to keep it at somewhat of a distance – literally at arm's length, as self but not self ("if thy hand offend thee, cut it off" is the Biblical advice, which Wikus attempts, but only manages to remove the tip of what seems to be his thumb). His mental faculties remain human; it is the body that threatens him, the otherness of both the alien and the visual effect, which has begun overtaking him. At the end of the film he is shown making small flowers for his wife out of junk as an indication of some lingering humanity, but it is not exactly clear what is left of Wikus. This final shot of him semi-hunched amidst the garbage and refuse, exhibiting the vaguely animalistic quality that characterizes the aliens, is ominous in its indeterminable association of the colonized body and the embodied consciousness that is produced in the body colonized – as if this chapter in the life of the organism formerly known as Wikus is too dark and inaccessible to show because he is now an alien, an other, and no longer a character.

Whereas Gollum is mostly presented post-transformation, with the character transition and CG morph shown only in brief flashback, Wikus's metamorphosis is diegetically central to *District 9*. The horror of the transformation is intensified by the fact that once his hand has changed, Wikus can only find refuge in the alien slum, emphasizing his place as an outsider even as the alterations to his body only affect a small percentage of it, and evoking historical formulas for determining the status of mixed-race individuals. However, the transformation is also tempered by Wikus's and the film's growing sympathy for a certain alien, Christopher Johnson (Jason Cope, who also plays one of the minor human characters), who is the rare parent of an alien child and is presented as smarter and more capable than the others. The irony of the name 'Christopher Johnson' applied to an inhuman creature clearly recalls colonial and slaveholder naming practices, which work to remove history and culture from the colonial subject in the

application of a name that itself becomes ahistorical and generic in the process. In a sense, the name brings to light the CG body's lack of history and culture, even perhaps an 'unconscious', as Barbara Creed argues, in contrast with the implied historical and cultural aspects of the character.[28]

When Wikus later risks his life to give Christopher Johnson a chance to get to the mother ship, he notably does so in a mechanical exo-suit designed in the form of an alien body. In an inversion of the (internalized) alien DNA that has become a part of his body system, and in a foreshadowing of his impending (external) transformation, Wikus becomes the internal mechanism that guides the external alien body. He takes on the image of the alien, but only superficially, and thus the problem of images remains. Confined to the hand, the exo-suit, and the unseen internal reconfiguration that has altered his DNA, Wikus's 'alienation' from himself is threatening but marginalized. His social alienation is portrayed as unfair as he is condemned despite the fact that his human psyche apparently remains intact – socially he gives off the wrong 'image', and hence is presented by the film as unjustly ostracized. The aliens, however, are not given this same consideration – their CG status is intrinsic to their characters. Christopher Johnson generates pathos in his plight and sympathy for his worthy objectives (to get his son to safety, to get back to his home planet, to rescue his people), but doesn't quite become a sympathetic character. Like Gollum, he approaches the racial boundary but can't cross it. James Zborowski notes that the aliens, while certainly mistreated, are more social problem than society, characterized as uneducated slum-dwellers of the xenophobic imagination for whom "progress and integration are rendered unimaginable."[29] They are not positioned as potentially

[28] Barbara Creed, "The Cyberstar: Digital Pleasures and the End of the Unconscious," *Screen* 41(1) (Spring 2000), 79-86. Creed cites the lack of an unconscious as the reason audiences fail to identify with digital characters.
[29] James Zborowski, "*District 9* and its World," *Jump Cut* 52 (Summer 2010), accessed December 2010.

transformable or even assimilable, but are contained within the fixity integral to the colonial construction of otherness.

Avatar is a text particularly intriguing for its superimposition of racial otherness and digital alterity within a narrative of ostensibly positive (rather than negative) transformation. At a time when digital effects have become commonplace in cinema and the spectacle has given way to the simulation, Cameron's film manages to impress and awe with its plenitude, as a sort of all-consuming digital effect that envelops the viewer, takes over the space of the film, and either consumes its photographic bodies or diegetically expels them. In a blog entry on the film, Jeffrey Sconce writes that *Avatar* is most interesting as an allegory of the cinema, "in the warring production paradigms the film so conveniently spatializes within its diegesis."[30] This conflict, as I have mentioned, is a salient aspect of the film's technological mythos, and one firmly rooted in racial discourse. *Avatar* positions the (photographic) humans as alien intruders within a pristine (digital) landscape and a population of natives in an anti-colonialist fantasy aligning Western hegemony with photographic realism, and (without any sense of irony from Cameron) digital image production with nature and a prelapsarian idyll. The conflict of imaging technologies is also a conflict of images in which one might say that native figures must endure the 'trespass' of the photographic, which has long claimed the space of the screen as its own. With the indigenous Na'vi, native images are cast as, and played by, native people, and the Na'vi bodies are integrated into the film in a way that reduces or eliminates the otherness often present in initial appearances of special effects creatures.

Vivian Sobchack writes that science fiction films "present us with a confrontation between and mixture of those images to which we respond as 'alien' and those we know to be

[30] "Avatard," *Ludic Despair,* January 2010. http://ludicdespair.blogspot.com/2010/01/avatard.html.

familiar" – a confrontation that is only partly dependent on content, as style and representational forms also construe visual objects as familiar or strange.[31] Cameron's use of alluring bodies instead of monstrous forms, along with the film's sympathetic positioning of the beleaguered and outgunned Na'vi, shift audience sympathy toward the digital figures. The Na'vi bodies were designed and modified to make them more available for audience identification, eliminating alien protuberances to create a humanoid form mixed with familiar animal elements, privileging the exotic over the alien. Also, by the time we first meet Neytiri, the lithe blue Na'vi bodies have already been introduced to us through the avatars that Jake, Grace, and Norm (Joel David Moore) drive – seen first in laboratories, then on a training ground that includes trainees playing basketball, and continuing in the mission to collect samples, during which Jake becomes separated from the others and ends up meeting Neytiri.[32] The contemporary clothing, trash talk on the court, and Jake's exuberant acclimation to his new body (and the capabilities it affords him in giving him legs) serve as a prelude to seeing the Na'vi; thus when we first see Neytiri, it is not her blue body or the effects processes behind it that stand out, and hence her character and her particular body are foregrounded.

These strategies make the CG aliens less alien to us, but it is still unusual for an animated character to be the protagonist in a live-action film. Cameron's use of the avatar as a device diegetically central to the film eases and facilitates Jake's gradual transition into the CG body. As Jake learns to use and accept his new body, the audience comes along for the ride, moving from the difference between Jake and his avatar, to Jake's enjoyment of and preference for the new body, to Jake *as* the new body, cemented by his permanent transition at the end of the film.

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[31] Vivian Sobchack, *Screening Space: The American Science Fiction Film* (New York: Ungar, 1987), 87.

[32] As with the villains, aliens, and monsters in many films, introductory scenes for CG creatures often emphasize the menace of the other, as in Gollum's spider-like descent toward Frodo and Sam in *The Two Towers*, and the alienating news footage of the prawns in *District 9*, clearly shot from a safe distance to emphasize danger and otherness.

The fictional Na'vi culture comes along with the body, and the film spends more and more time in the digital realm of Pandora, so that the world to which the CG body belongs becomes the world of the film. After the victory of the Na'vi over the humans, and just before Jake leaves his photographic body behind, Pandora reclaims the space of the screen for those native figures, characters, and images for whom screens are their sole territory, while the photographic invaders are driven out, off-screen. The motion-capture performer has in this respect 'gone native', given his or her body over to the animators and computers that will render it as an image indigenous to the screen.

Figure 31. Jake in ceremonial costume in Avatar.

The avatar device thus permits the colonization of the body to be positioned antithetically to the colonization of the planet, even as it evokes the colonial White Messiah. Jake's assimilation into Na'vi culture is facilitated by his avatar body, which affords him both a visual fit into their society and a functional compatibility in being able to form the 'bond' (Fig. 31). Although he is immediately perceived to be one of the 'sky people', he was marked by the digital

world (in the sign from Eywa) as different from the other humans, which allows his entry and enculturation. Unlike the others whom the Na'vi have tried to teach, he is pliable and teachable exactly because he has given up on the 'reality' of his own world and he seeks an escape into an alternate reality. Jake's inhabitation of the avatar is distinguished from the human presence in Pandora – the avatar works as an acceptable colonization, while the human invasion is presented as an atrocity. Avatar bodies are 'empty', and hence available for and even needing to be filled. The human colonizers had initially taken this approach to the Na'vi, trying to educate and build roads for them, but the film presents the Na'vi as comparatively 'full', receiving no benefit from human intervention. They do need Jake, however, and his military skills and rationalism to save them from the human invasion and fill the hole in their own society that makes them vulnerable. The White Messiah comes wearing blue skin, with the digital body inhabited by the photographic one which disappears in it, re-emerging periodically as a reminder of the consciousness that drives the digital body before the final transition into the paradoxical figure of the permanent avatar.

Ultimately, then, Cameron seems to attain the 'unobtanium' he seeks in pushing digital effects into a realm that allows them to be characters and bodies available for audience identification, and in this sense the widely seen *Avatar* represents a symbolic and technological victory for native images. In the conflict between 'warring production paradigms', the violent return of the index is put down not only by the motion-captured Na'vi and the avatarial Jake, but by the digital animals that populate Pandora as well. Initially constituting a monstrous threat, Jake learns to respect CG fauna, and with the bond joins them in communion with the digital stuff that embodies the future (and present) of images. The triumph of the digital over the photographic, framed within the libidinal rush of fantasy filmmaking, displaces fears of the

disappearance of the real manifest in the threat to the physical body, and its ally in the photograph, with digital plenitude and enviable 'imageness' – the fantasy of the transcendent, disembodied image qua image, no longer constrained by the camera nor contained in the picture. The existential implications of this contest are brought into relief at the end of the film, as the photographic humans are driven out of the cinematic space which has already become increasingly submerged in the proliferative digital overgrowth. The final shot of *Avatar* closely parallels that of *District 9* as each of the new image-bodies, the aliens we have come to know, look directly at the camera. In *District 9*, however, the look is one of fear and depersonalization in the face of a digital takeover; in *Avatar*, unabashed acceptance and irrefutable presence.

Like Neo, and Jobe before him, Jake makes a final avatarial transition. He has sloughed off the connection at a distance espoused by the avatar and made his connectivity permanent. Is he still avatarial, then? The avatar and CG character as two different image bodies each inform our reading of the other in this film. The avatar might be thought of as horizontal, a spatialized connection made across bodies, and the CG character as vertical, with layers of representative (the character) and actual (the actor) embodiment super(im)posed into a composited image body. I use the parenthetical here as a caveat regarding superimposition, for we may at times only see or notice the final image as a manifestation of character, especially once the action gets going and we have acclimated to Cameron's techniques with the Na'vi, and at other times become aware or consciously engage the imbricated layers incorporated in the CG body. Where body, technology, and images intersect, we find the virtual, encountered in the shifting and interpenetrating instantiations of each so that we are aware of all three but can't quite tell where one leaves off and the other begins. Thus what we 'see' when we view these bodies, I suggest, can be something much deeper than what lies on the surface – a composited emblem of

embodiment in digital culture, where disembodied film images seek a new materiality, and human embodiment, caught up in a world of images, seeks a livable body that can be enworlded in such an environment. The othered image, vis-à-vis the portentous demise of the photographic body (the body of the photograph, the body in photographs), sloughs off its ghostly attributes as a non-image and assumes the mantle of self-existence in its native status, as the pure image. In the avatarial switch, *we* become the ghosts – rather than understanding ourselves as the bodies that produce spectral images, we deign to inhabit and possess the images that constitute presence in our wired, image-driven world.

What is missing is Jake's distance from himself that the avatar provided. Cameron works to extinguish the alterity of the digital, and while he is successful in doing so to the extent that the increasingly digital Jake can occupy the role of protagonist rather than monster, as we see Jobe become, we have noted how this is carried out within discourses of otherness.[33] Jake joins the screen natives, and this indigenous body will inhabit the two sequels to *Avatar* already in production. Jake has become feminized as well, drawn into Neytiri's world and undergoing bodily changes that bring him closer to nature, to his new body, and ultimately to himself (the 'wrongness' of the disabled Marine sets this course early in the film, as his status as a male is already compromised). Jake also becomes situated as an image – a conspicuously feminine act

[33] Another way in which the CG body is avatarial is that it can be played by different bodies; however, in most CG productions, one actor plays a single body – an aspect due in large part to the Hollywood star system in which animated characters are attached to celebrities. In traditional animation, it was not uncommon for a single performer to voice several characters. Motion-capture need not be constricted the way it typically is (i.e. a stunt performer could easily fill in for action sequences, or a dancer could be used for musical sequences, as Jenine Jennings provided the rotoscoped dance moves for Holli Would in *Cool World*), but it typically is. The quasi-indexical 'proof' of the bodily connection between actor and character can often be found in DVD appendices, where bits of the capturing sections can be viewed.

Where voice was once the sole connection between the work of actor and animator, digital technologies have permitted the incorporation of the body into this relation; the index of the CG body is always indeterminate, however, as we have seen, and thus the voice, while 'invisible' and perhaps marginalized relative to the attractions of CG, still provides the strongest trace of the body. In virtual worlds as well, voice evokes the real, as it is "widely assumed to be irredeemably actual" – sometimes too powerfully actual, as the vocal index can break the fantasy the images supply (Boellstorff, *Coming of Age in Second Life*, 114).

which Jobe has to ward off with excessive masculinity and violence – and thus occupying the paradoxical state of being both image and body, it seems that Jake's final transformation was not a move toward transcendence, in the uncoupling of mind and body for the cognitive download, but rather one toward *immanence* and inhabiting one's body more fully through acclimating to the interimplication of materiality and the virtual that defines embodiment. In the next chapter I take up the contradictions of femininity relative to avatars and the potential for a medial embodiment that the figure of the female avatar suggests.

CHAPTER 6

PRECARIOUS LIMINALITY

> The magic and most powerful effect of women is, to speak the language of the philosophers, action at a distance, *actio in distans*: but that requires, first and foremost – *distance*!
>
> Nietzsche[1]

The female avatar is a duplicitous figure. In virtual environments, male users have traditionally outnumbered female users by significant numbers, and while 'gender-bending' goes both ways, the numerical disparity between the number of women playing in a virtual world or MMO and the number of female avatars means that, from the outset, a female avatar is more likely to be male than vice versa – according to one study, seven or eight times as likely, with roughly half of all female characters played by men.[2] This situation induced paranoiac behavior among some male players, inducing suspicion of any female avatar until it could be proven that the user was indeed female; Julian Dibbell argues, however, that "such outright paranoia was really just a deviation from a far more nuanced norm, in which players generally took for granted the marked fluidity of gender in VR, yet at the same time also tended to take at face value the virtual gender of whomever they were interacting with."[3] Reactions to female avatars thus tended to be either subject to investigation to discover their 'true' gender, or accepted only with a

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[1] Friedrich Nietzsche, *The Gay Science*, ed. Bernard Williams, trans. Josefine Nauckhoff (Cambridge: Cambridge University Press, 2001), 71.

[2] As part of his Deadalus Project, Nick Yee surveyed World of Warcraft players in 2005 and concluded that "1 out of every 2 female characters is played by a man," while "1 out of every 100 male characters is played by a woman." In a hypothetical pool of 1000 players, there would be 348 female characters of which 193 (55%) would be played by a male player, and 652 male characters of which 5 (< 1%) would be played by a female player. There are multiple reasons why players gender-bend, not all associated with sexuality, but Yee notes that female players have as many reasons and still do it much less frequently. http://www.nickyee.com/daedalus/archives/001369.php

[3] Dibbell, *My Tiny Life*, 130. The frequent refrain "If it's good, don't look under the hood" implied that the acceptability of manifest (female) gender was more dependent on whether the performance was convincing or satisfying than if the player was actually female.

compensatory investment in the 'face value' of their gender, relegating femininity to a taken-for-granted performance.

In a general sense, however, the argument could be made that all avatars are feminine to some extent, especially in contrast with the disembodied FPS non-avatar, represented onscreen by a hand or a gun. In the third-person perspective common in most virtual world interfaces, the avatar is a body 'to-be-looked-at' – to evoke Laura Mulvey's classic formulation – always in view. This view is triangulated between an avatar's user and other users in shared space. Women are often theorized as viewing themselves more externally than males do, seeing themselves from both the perspective of an outside (male) look and from their own embodied positions as objects of the look. The avatar facilitates this kind of dual gaze, as the user looks at his or her avatar from the outside while also identifying with the position of the avatar as the object of another's look.[4] Avatars have no look of their own, but indicate or mark the presence of the look of another, and no voice of their own, but are spoken through. Such a position, as the object at an intersection of gazes, evokes the place of the the woman in classical Hollywood film, particularly as theorized by Mulvey.

In their conflation of images and bodies, avatars are analogous with the feminine in that within the avatarial relationship they occupy the space of the screen and the technologies of the virtual, relative to the off-screen user; the crisis of the masculine in avatar texts is often the result of male characters finding themselves in the (feminine) avatar position rather than (masculine) user position. Avatars are also feminine in that their gender is a product of signifiers, not necessarily tied to actual embodiment but at the same time taken at face value. The site of simulation is feminine, as Sadie Plant writes: "The computer, like the woman, is both the

[4] There is a male-coded element here as well – since users are 'invisible' in the virtual environment, they are in some sense voyeurs. However, the voyeur's gaze is always preceded and announced by the presence of one's avatar, as one must first produce a body in order to look, and that self-representative body is always in view.

appearance and the possibility of simulation. [According to this logic], woman cannot *be* anything, but she can imitate anything valued by man: intelligence, autonomy, beauty. . . . Indeed, if woman is anything, she is the very possibility of mimesis."[5] In contrast with Donna Haraway's feminist appropriation of the cyborg's associations with machines and information technologies, the avatar exhibits a femininity coded as organic to the simulational (rather than computational) capability that emerged as computers became increasingly imbricated within a digital culture that has been moving toward the production of the image.

This is not to say, however, that the avatar as feminine is a wholly disempowered figure. While avatars are by definition subject to control, they are also enviable figures in the intercorporeality of their image bodies (they are not simply bodies subjected to a gaze within an image regime, but bodies already incorporating images into themselves, and images have power), and in the phenomenological immersion in the fantasy of virtual environments, while the user is at some remove from what the avatar seems to experience. Relative to Mulvey, the distinction between the empowered and disempowered feminine can be drawn out with one of her own examples, read through the lens of the avatar.

In the voyeuristic classic *Rear Window* (1954), Hitchcock, in a key moment of the film, sets the force of the look in opposition to an immersion in space. Jeff (James Stewart), trying to gather evidence for what he suspects to be a murder by the tenant across the courtyard, Thorwald (Raymond Burr), wonders what might be buried under a patch of flowers. Jeff's girlfriend Lisa (Grace Kelly) volunteers to find out, and while Jeff gets Thorwald out of the apartment with a phone call, Lisa, with Jeff's home-care nurse Stella (Thelma Ritter), enters the courtyard and digs up the flowers. In this moment, Jeff's relationship with Lisa becomes somewhat avatarial, as

[5] Sadie Plant, "The Future Looms: Weaving Women and Cybernetics," in *Cybersexualities: A Reader on Feminist Theory, Cyborgs and Cyberspace*, ed. Jenny Wolmark (Edinburgh: Edinburgh University Press, 1999), 112.

Lisa bodily carries out Jeff's wishes, his desire to find out what is buried (a desire she has come to share). An avatarial relation is implicit in Mulvey's understanding of cinema in general as well, in which "the power to subject another person to the will sadistically or to the gaze voyeuristically is turned on the woman as the object of both."[6] Lisa steps into the space of Jeff's gaze and the scene of his investigation, working almost as an extension of the apparatus – the camera – which he uses (along with the aural instrument of the telephone) to exercise his command over the investigation. This commanding position has its limits, however; finding nothing under the flowers, Lisa decides to sneak into Thorwald's apartment, and at this point Jeff's lack of control is manifest, evident not only in her independent action against his wishes, but as well in her bodily entry into the space of the apartment rather than through the 'portable keyhole', as Stella calls it, of the camera. As he gestures in vain and then watches helplessly, she subjects herself to risk and assault in order to locate the damning evidence of the missing woman's wedding ring.

Tania Modleski sees Lisa, juxtaposed against Jeff's passivity and confinement, as an empowered woman. In Jeff, the voyeuristic gaze is associated with his immobility in such a way that the gaze is itself disabled; when Lisa enters Thorwald's apartment, Jeff's helpless look is fully dissociated from the scopophilic objectification and control that earlier characterize his voyeuristic exploits, calling into question his position of power. Lisa takes over the investigation at this point, and while she still to some extent executes Jeff's will to see into the apartment, she does so on her own terms. As she does, we remain in the position of voyeur as Hitchcock plays the scene from Jeff's confined perspective, which only allows Lisa's bodily engagement of the space of the apartment to be viewed through the windows, as reiterative screens.

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[6] Laura Mulvey, "Visual Pleasure and Narrative Cinema," in *Feminist Film Theory: A Reader*, ed. Sue Thornham (New York: New York University Press, 1999), 66.

Even when Lisa does not submit to the controlling male gaze, however, she is avatarial in a different way: she sees what Jeff cannot, and goes where he cannot go – he does not share her view, only gaining a sense of the space secondhand through the information she gestures to him (Fig. 32). Also, she not only enters the screen space of the windows he previously gazed into, but the off-screen space between windows as well. Her presence there, including what she sees and finds, dominates the scene even as it is withheld from us or kept at a distance, while Jeff's helpless gaze produces only paralysis and frustration – we want to go with Lisa, but must remain with Jeff. In a sense, this is not so different from immersion in a virtual environment, in which only the avatar is 'immersed', while immersion is vicarious for the user.

Figure 32. Lisa's 'hands-on' approach, through Jeff's lens.

Female characters in avatar films occupy various roles that mostly adhere to the conventional positions of women in Hollywood cinema, but are interesting and problematic for their associations with the virtual.[7] These characters are aligned at various times and in various

[7] For the sake of convenience I allude to the various allusions and representations of virtual space in these films simply as 'virtulized' or 'virtual'. This is not meant to imply that these are images of the virtual, but rather that those spaces posited as alternative or oppositional to the real are drawn from cultural notions of technological virtual

ways with both the imaginal body and virtual technologies, and in these conflations come to stand in for virtuality itself. Oliver Grau, in his study of immersive spaces in art history and new media, defines virtuality as "the relationship of humans to images" (which, for Anne Friedberg, are already themselves virtual); avatars, CG characters, and women in film all incorporate images into bodies, to one extent or another, or are the objects of perceptual modes that make of bodies images.[8] Female characters in avatar films thus epitomize the imaginal embodiment I have explored in this study, as it is characterized by the feminine.

Playing the Image

In their depictions of virtual environments and the rendering of virtualized existence, avatar texts commonly present male characters in transition: escaping or defeating the virtuality encroaching on their lives, harnessing it to become monstrous villains, or passing through it on their way to a transcendent virtuality. For male characters, the avatarial position is a problem to be resolved or overcome; for female characters, it is more likely to fix them ontologically. They do not find themselves as alien in the virtual as male characters do, and they are often depicted as having an intuitive or even intimate connection with it.

The Guild, for instance, begins with Codex being cut off by her therapist for failing to extract herself from the Game. While all of the characters can be seen as overinvolved, it is Codex and another woman, Clara (Robin Thorsen), a neglectful mother of several young children, who are presented as most vulnerable to the lure of the game, and Codex's problems

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space, even if the spaces depicted are not themselves technological (as in *Avatar*, where the 'virtual' is a natural space, albeit an alien one inhospitable to humans, accessed through interfaces and avatars, and produced through digital imagery). Thus my use of the term 'virtual' here is an extension of that in 'virtual technologies' or 'virtual worlds' rather than implying the virtual as the cultural and phenomenological aspects of the material world, although the latter certainly permeates this discussion, as noted.

[8] Oliver Grau, *Virtual Art: From Illusion to Immersion*, trans. Gloria Custance (Cambridge: MIT Press, 2003), 5.

begin when the virtual world permeates her real life – when she is unable to 'turn it off'.[9] Angie, in *Gamer*, is unable to extract herself from Society and must be rescued by Tillman, who has managed to overcome his avatarial status. Angie's avatarial functioning is different from Tillman's, in that while he must act as dictated by his player, he retains a conscious sense of his surroundings; when he notices an enemy attacker behind him that his player Simon doesn't see, for instance, he gruffly whispers "turn me around." Kable's success is dependent more on their collaboration than on him completely relinquishing control (as Tillman observes, "that don't work so good"), and eventually Tillman is able to communicate with Simon and persuade him to give up control. Angie, however, has no such rapport with her player (although, given his sadism, she may not want it), and she seems to be subject to a more complete mind control, as indicated by the blank stare that persists even when Tillman has come to her rescue. This is not a complete absence, however, as she remains conscious of the degraded experiences she undergoes, but rather a lack of agency that characterizes her participation in the virtual world. *The Lawnmower Man*'s Marnie is thrilled with the cybersex she has with Jobe in the virtual world, and entry into the virtual is for her a liberating and enjoyable experience. The virtual has been made deleterious for Jobe, however, and when he lashes out Marnie is victimized, never fully returning from the virtual world.

Classic feminist theory sheds some light on the particular way that these characters are aligned with the virtual. Joan Riviére's theorization of womanliness as masquerade posits that femininity is something worn as a mask, a behavior women are expected to display. This approach to femininity as alter ego implies a connection to the virtual, but Riviére complicates what might be thought of as the avatarial nature of femininity, for in the question of drawing the

[9] Felicia Day created the series after deciding to make something useful out of the actual two-year addiction to MMOs she experienced during off-time from acting roles, adding an additional associative layer to both the creation and reception of the show.

line between the masquerade and genuine womanliness she concludes that they are same thing. Where the avatar inheres distance and an oscillation between connection and disconnection, the woman wears a mask (an image) she can't remove. Mary Ann Doane reconfigures the masquerade as a mode of resistance, by which femininity is held at a distance, denying its production as "closeness, as presence-to-itself, as, precisely, imagistic," while simultaneously reproducing the signs of femininity.[10] In Doane's view, womanliness can be worn or removed, but she neglects to define a feminine identity outside of its relation to men, for the alternative to the masquerade is the transvestite, "in which the woman becomes a man in order to attain the necessary distance from the image."[11]

To assume or 'play' the image of femininity in the masquerade thus presents womanliness as a form of distanciation which nevertheless produces little distance, at least from the male perspective; the performances that are transparent to women, notes Riviére, work for men, who take the masquerade at face value even if they recognize its performative aspects. The woman is presumed unable to achieve an objective distance from herself (too close) and is at the same time abstracted from herself through her performance of femininity (but having no other clear identity to retreat to), and thus embodies a paradox – she is self-distance without separation, halved and doubled. Female characters are also often ensnared in a virtual which is presented cinematically in terms of images and performance, as in the duplicate bodies in *Surrogates* and the mind control of *Gamer*. The paradox of femininity comes to typify the paradox of the virtual as both real and not real, as an alluring and deceiving world. In the inequality of cinematic images, those nearer the index are privileged and those further away are marginalized, as I have discussed; female characters in avatar films have a strained relation to the

[10] Mary Ann Doane, "Film and the Masquerade: Theorising the Female Spectator," in *Feminist Film Theory: A Reader*, ed. Sue Thornham (New York: New York University Press, 1999), 138.
[11] Ibid., 139.

index, and as the virtual in cinema is most often represented as excessively imaginal, the feminine is associated with both. Women may be victims of the virtual in need of rescuing, as I explore in greater detail with Maggie below, or they may use their complicity with the virtual, as the femme fatale uses her sex, to manipulate male characters for their own benefit or pleasure.

Feminine duplicity is pronounced in the semi-animated films of *Cool World* and *Who Framed Roger Rabbit?*, as the liminality of Holli and Jessica motivate the action of the films' male characters to temper or discover their transgressive behavior. Jessica is a Toon who plays it both ways, as her supposed affair (and subsequent flirting) are at the center of the scandal that puts the Toon and human worlds at odds.[12] Holli Would's desire to become human inflicts near disaster on both the Cool and real worlds, yet she is always on the margins of her own story, as Bakshi hangs the film's sympathies on Jack and Frank. From Holli the drawing to Holli the Doodle, to Kim Basinger and back, she drives the fantasy for boundary transgression before being fully reinstated and contained as an 'image'.

In the French avatar film *Black Heaven*, Gaspard (Grégoire Leprince-Ringuet) is drawn into dangerous intrigue by femme fatale Audrey (Louise Bourgoin), who plays the sexy avatar Sam in the Black Hole, a virtual world. Audrey's real-world brokenness (Gaspard first finds her attempting a double suicide with one of her online flings) reinforces her seductiveness in the virtual environment, as her enigmatic duality is central to her enchantments. *Black Heaven* is one of the few avatar films to depict the virtual world with a videogame cutscene aesthetic, as it would be in the real world – another paradox, that realism should appear so blatantly digital.[13]

[12] Judge Doom is the far more duplicitous character in the film, as a Toon wearing a rubber suit to appear human, while Jessica is exonerated in the end. However, Doom's duplicity is the surprise reveal, whereas Jessica's coquettishness drives the story.

[13] The problem of the indexicality of voice is here dealt with in the casting of a second actress to do voice work for Sam, while Gaspard himself uses a modulator to disguise his own.

Other examples abound: in *Virtual Girl* (1998, Richard Gabai), a cybersex program becomes a sentient and possessive black widow, entrapping and killing the men who enter her cyberspace lair, while in *Ghost Machine* (2010, Chris Hartwill), the female victim of military rendition returns as a dark spirit, haunting the VR military simulation set up by brash young soldiers in an abandoned prison. And in the world-within-a-world-within-a-world enigma of *The Thirteenth floor*, in which Hall is involved in the production of a VR simulation before realizing that he is already an avatar in a larger one, it is a woman, Jane (Gretchen Mol), who manipulates the virtual world from both inside and outside, as an avatar and a user. Jane enters to shut down the simulation, while Hall tries desperately to figure out what's happening to him and whether he can trust her. However, Jane becomes a victim in the end, as her husband David (on whom Hall was based, also played by Bierko), attempts to rape and murder Jane while operating Hall's body. When David dies in the virtual world, Hall's consciousness fills the void in David's physical body; again it is the male character who transforms and transcends.

In representing the virtual cinematically, avatar films seek concrete ways not only to depict virtual technologies, but also to evoke the virtual as an embodied, enworlded existence in materiality, and the feminine is the frequent device for doing so. At one point in *Surrogates*, as Greer and his partner, Agent Peters, enter the headquarters for surrogate production they are engulfed in advertisements for surrogates that closely mirror the kinds of ads common in real world media culture. The ads feature no robotics or specific technological information, but rather focus on images of attractive bodies coupled with promises of better living, including the ultra-generic, all-encompassing "Life. Only Better." Most prominent among these is the all-too-familiar image of an eye-catching woman emerging from the water in a bikini, and by this point the message is clear: photogenic bodies are attainable, but only through the acquisition of a new

body – a synthetic body, or an image body that permits the operator/consumer entry into a world of images.[14] Interestingly, the ads in the film are directed at a populace that has already bought into surrogacy (ninety-eight percent live through surrogates), with detractors abstaining on ideological grounds, unlikely to be swayed by advertisements. The ads then work to uphold the consumerist (rather than utilitarian) rationale that surrogacy plays in the film, resulting when the functional robots became more photogenic (their original intention was to facilitate full-bodied experience for the disabled), and providing insights into the campaigns that apparently helped make surrogacy nearly ubiquitous.[15]

Greer's wife Maggie is presented as a woman caught up in the consumerist impulse that insists on the inherent inadequacy of the physical body and the need for a new one more in line with fashion imagery. Maggie refuses to be without her surrogate, even at home (reflecting the increasing commodification of domestic space), driving Greer to question the role of surrogacy in their lives. Maggie is unable or unwilling to accept his arguments for spending time together in their biological bodies, and seems much more content at the salon where she works than at home. Salon work on robots is an odd amalgamation, juxtaposing feminine primping with something like a computer repair shop. A face-peeling scene (or face-lift, perhaps) reveals the

[14] This point is uncannily reinforced through Mostow's creation of living photographs, or perhaps human statuary, in the surrogate models on display in a corner store; filmed using real actors that are digitally stabilized to appear perfectly still, the bodies exists as dimensional, embodied images somewhere between portrait photography and a wax museum.

[15] Three different advertising campaigns attended the *Surrogates* film and comic. The comics featured print advertisements on the back of each issue, each with muted images of men and women in rather generic poses and variations on a tagline, such as "Recharge Yourself" and "Share Yourself," much like the video campaign depicted in the film. The ads provide an insight into the diegetic world, but simultaneously make a direct, extra-diegetic appeal to the reader. The print campaign for the film included cyborg imagery, with male and female models in alluring poses or in the act of taking off a shirt, depicted with skeletal mechanical torsos. Again, the emphasis is on young, attractive bodies, with the tagline "Human Perfection. What Could Go Wrong?" The endoskeletons are clearly intended as the implicit answer to the question (as in, something here is not 'right'), but the shiny metal combined with traditional sex appeal and the allure of the digital compositing that produces the images results in a cyborg and digital sexiness. An accompanying website, ostensibly for Virtual Self Industries (the company that makes the surrogates) acts like a company site, again addressing viewers directly with promotional information about the bodies, downplaying simulacral aspects of surrogate living in favor of the features of new models.

metal skeleton underneath in a clear allusion to the iconic visage of the *Terminator* series, but with its impact and meaning shifted: rather than laying bare the "forceful masculine image of a technological human," as Claudia Springer refers to the Terminator android, the exposure of the metal underneath is contextualized within a situation of women tending to women, where appearances and the secret of what lies beneath the artificial flesh (the foundation, so to speak) can be exposed in the process of constructing themselves and each other as imagistic (Fig. 33).[16]

Figure 33. Peeling away the image in Surrogates.

The 'masculine' machinery underneath the feminine flesh evokes constructivist and cyborg perspectives of femininity as something manufactured and worn, producing gender

[16] Springer, *Electronic Eros*, 108.

difference on the surface through appearance and behavior while revealing a 'non-identity' underneath (or an implicitly masculine one), again recalling the masquerade. In the salon scene, the removal of the face produces feminine appearance quite literally as mask, or more precisely the *image* of a face, as the special effect in the shot uses not a rubber prosthetic, but a photographic image composited with a latex peel. It is this cinematic image that the surrogate operator seems to 'wear', while the vacuous, bulging robotic eyes underneath, framed by a blond bob, convey a blankness much different from the red glowing light of the Terminator – lost, rather than penetrating.

Faces are not the only masks, for the body itself becomes a front for the operator, as the woman "uses her own body as a disguise."[17] In one of the more interesting aspects of the film, Maggie, until the final scene, is shown only in her surrogate. While Bruce Willis oscillates between the two versions of Greer, we only get to know Maggie as a character through the body she wears, knowing that there is another body, a woman, behind a closed door, and so it seems "there is a certain over-presence of the image – she *is* the image."[18] She is always already doubled, yet unable to achieve a critical distance from herself. Further, the film makes a strong association between the pain pills Maggie keeps beside her bed and her dependence on her surrogate, with both situated at the level of addiction. The film half-heartedly connects her dependencies to grief over her dead son, a plot point that does lend itself to a psychoanalytical reading (her inability to possess the phallus in the male child fixes her in her lack), but the character motivation of the lost son is weak in the film (and absent in the comics by Robert Venditti upon which the film is based), and thus her motivation is more closely aligned with a desire to be young and attractive, and to ward off 'reality' in general.

[17] Michèle Montrelay, quoted in Doane, "Film and the Masquerade," 139.
[18] Ibid., 135.

Thus Maggie hides in plain sight, playing the image in the form of a body, and at the same time nowhere to be found, hollow underneath the surface. In the end, Greer is only able to unmask her by destroying surrogacy altogether. The surrogates fall, and gradually their operators stumble out into the world beyond their apartments and stim chairs, squinting in the sunlight. The final scene depicts Maggie's emergence from her room, standing at a window next to Greer, looking out on the brave new world of better living through plain old biology. Greer's arm around Maggie is a tender but ultimately feeble signifier of the return to the real, while the film spends much more time exploring the real as it is manifest in the reservation where the Dreads are sequestered, depicting it as decrepit and impoverished – a poverty, it seems, of the smooth bodies and Hollywood production that characterizes the rest of the film, a poverty of the image as defined in mainstream cinema. On the other side of the imaginal world, the film seems to say, one finds only non-image.

Enablers and Inamoratas

Female characters also act as facilitators for their male counterparts, with the implicit logic that the feminine position is already part of the virtual, and thus they are acquainted with its processes and able to guide and support the male protagonists into and through a virtuality that is more foreign to them, not so near a part of their 'nature'. When *Sleep Dealer*'s Memo is looking to become a node worker, he gets duped by a man in a back alley who promises him a good deal. His money gone, Memo is helpless in the big city, unable to make the bio-connections that will allow him to work. Luz feels sorry for him, and, in a tender, intimate scene, implants the nodes in his body herself. The process of helping the male character enter the virtualized realm also works to bring him closer to the feminine; the image of Luz penetrating Memo's body with a gun-like device, and the resulting sockets in his body, mark his removal from the cohesive sense

of embodiment emblemized by the *milpa* (a similar scene between Allegra and Pikul in *eXistenZ* inducts Pikul into the virtual). In the city Memo is no longer one with the land, but fluid like Luz, a point in a network, a body to be exploited.

In *The Matrix*, Trinity is the first character we encounter, and the last person the blind Neo 'sees' before his death. Her femininity, along with that of the Oracle, is aligned with the Matrix itself, in contrast with Morpheus, who is primarily connected with the predominantly black Zion, and even Smith who, by the end, wants out of the Matrix. (In *Avatar*, Neytiri, who in many ways parallels Trinity, is the first of the Na'vi we meet as well, and is next to Jake at the end of the film.) Trinity is also the one who makes the first face-to-face contact with Neo at the dance club, and her cool embrace there prefigures the relationship that develops between them. Her love for Neo becomes a subjective indicator for her, as foretold by the Oracle, in discerning the One, thus granting her an overtly emotional impetus distinct from Morpheus's quasi-religious belief. This aspect further feminizes Trinity, who, despite her dominatrix wardrobe and mostly affectless demeanor, becomes subject to her emotions, allowing her to become the 'heart' of the virtual, as well as to become further subject to it, as it is her inner femininity (despite the external masculinity of her short hair, cool comportment, and kung fu skills) that binds her to the virtual.

Trinity is positioned as Neo's double, or perhaps his shadow, as an inherently doubled character whose intuitive aspects do not permit her to become the One. Trinity and Morpheus instruct Neo on how to maximize his virtuality (in contrast with being unknowingly, passively virtual, as are most denizens of the Matrix), but only he meets the conditional subjectivity to be sufficiently inside and outside the virtual at the same time. They share with Neo their closeness to the virtual, but it is this same proximity to it that prevents either from becoming the transcendent One; while the One is iterative, as we have seen, its iterations move toward

abstraction, while those coded as closer to their bodies are unable to extract themselves. The double-consciousness here, that women are both abstracted from and too near their bodies, is one that is shared with raced characters, who also act as facilitators, and one that problematizes the situating of embodiment relative to the virtual. Rather than a simple dichotomy of real and virtual which a character cycles through (even though it is very much that way on the surface), sexual and racial difference in the *Matrix* trilogy point to a third space, an interstitial center between real and virtual which marginalizes both.

Lisa Nakamura notes that in *The Matrix* and other films involving computer interfacing, access to digital information is racialized in depictions of "white and male users experiencing 'direct' or immediate relations with computer interfaces, while users of color are relegated to the background," with access only through bulkier or more highly mediating interfaces. "These users are visible reminders of the necessity of human objects to support and underwrite others' sublime experience of 'transparent' and direct interactions with digital technology."[19] White male protagonists are assisted both by women and people of color whose particular gifts and perspectives help the protagonist achieve his goals. Morpheus locates, trains, challenges and protects Neo, supporting him with unflagging faith and willingly stepping aside to allow the Neo-phyte to battle for Zion, even though Morpheus has much more experience. As the One, Neo has the potential already in him (i.e. he is a white male in big-budget, Hollywood film), whereas Morpheus does not.[20]

[19] Lisa Nakamura, *Digitizing Race: Visual Cultures of the Internet* (Minneapolis: University of Minnesota Press, 2008), 96.

[20] Nakamura points out that the human conflict with the machines pits Morpheus's heterogeneous crew against the homogeneous, corporate Agents, and argues that Keanu Reeve's multiracial heritage (white and Hawaiian/Chinese) embodies the hybridity that the film envisions as the salvation of the future of humanity. However, we must recognize that audiences may be unfamiliar with Reeves's racial make-up, and that, juxtaposed against Trinity and Morpheus, Neo does fill the role of the white messiah.

The role of the black hacker/sage is perhaps epitomized in the Oracle, whose cryptic advice and homegrown wisdom guides characters obliquely in their quest to defeat the (logic of) the machines. Nakamura argues that "her authority and power as a black woman and a source of knowledge are undermined by her depiction as a woman baking cookies, wearing an apron, and living in a housing project;" however, it is her gender and working class status that give her pronouncements authenticity, and which, in the simulated world, are in some sense the source of her wisdom.[21] Indeed, "the presence of people of color in the film," writes Nakamura, "lets us know that we are in the realm of the *real*."[22] Nakamura also, as noted previously, contends that they are virtual, and here again the paradox is manifest. In this duality of being excessively 'real' and excessively 'virtual', women and people of color are granted an additional capacity for knowing their way through these worlds that are troubled by an influx of virtuality. In this they evoke the native guides on whom white explorers, colonists, and militias have traditionally relied, both for their closeness to the land (an ear to the ground) and their pronounced spiritualism, which gave them something of a second sense (when it wasn't being ridiculed as superstition). The natives, simultaneously earthy and mystical, were in their dualism never able to occupy the middle, never able to gain an objective distance. The white men profit from their connections to the earth and spirit realm, but themselves maintain such connections at a distance, through the mediation of the native body. Both Trinity and Morpheus oscillate between the real and virtual worlds as Neo does, but only Neo is positioned to successfully occupy the middle and manage the relation between the two. Subsequently, the antithesis of the real and the virtual is not resolved through eradication of the 'false' virtuality (which is allowed to continue at the end of the trilogy), but through a synthesis achieved in the white body.

[21] Nakamura, *Cybertypes*, 81.
[22] Ibid., 75.

The black hacker/sage appears in other avatar films as well, as in Humanz Brother, played by Chris 'Ludacris' Hodges, who hacks telecom systems in *Gamer* to inform the hapless citizenry about Castle's mind-control plan. Brother orients Tillman once he has escaped the Slayers game, and later deactivates the mind-control cells in Angie's brain. In *Surrogates*, Ving Rhames plays the Prophet, leader of the anti-surrogate Dreads, who in voice-over begins the film with a sermon lambasting listeners for "living a lie" and exhorting them to "wake up" (Fig. 34). It is as significant as it is obvious that neither of these characters have real names, but are given titles indicating their roles in the film as, essentially, Rastafarian seer and streetwise black man. While each has a certain vision regarding the virtualization of their respective societies, like Morpheus they are not permitted to fully act on their vision directly, but only indirectly through the white protagonist. Brother is eventually killed by Castle's henchmen, and the Prophet, it turns out, was himself a surrogate, puppeted by none other than an old white man, the 'father' of surrogacy who is attempting to undo his own work. Not only is the voice of the black man silenced after its utility has been extracted in *Surrogates*, but in the end it is revealed that it was never even his voice to begin with.

Figure 33. The Prophet (and secret surrogate) in Surrogates.

These sagacious characters comport with the wise black man or magical African-American friend that appear elsewhere in film and literature, but their inclusion in avatar films is notable for the compatibility of this trope with virtuality as the characters both caution against the deceptive dangers of an encroaching virtuality, and are expert at moving within it, as if it comes naturally to them.[23] In this, Neytiri is different. She only knows the world of Pandora and the Na'vi, and is willfully ignorant of human culture and technology except to acknowledge their clumsiness and deride their half-hearted attempts to educate the Na'vi; she has learned English well enough to make communication with Jake convenient, but otherwise her place is clearly away from the humans with whom she wants nothing to do, and she only begrudgingly takes on the assignment to teach Jake the ways of their culture.

As with Trinity and Neo, and Luz and Memo, an emotional bond between Neytiri and Jake develops and then grows into love. She becomes the connecting link between Jake and the Na'vi, or rather a key component in a chain of connecting links, including Jake's avatar body and its network-ready tendril with which bonds are formed, as well as the technological interface Jake uses to drive it. As Neytiri helps him 'bond' with his avatar body, teaching him what it means to truly inhabit the body he has inherited, she becomes part of the medial chain that results in his eventual transformation. She is perhaps part of what Bernadette Wegenstein refers to when she argues "that the notions of body and image have come together in what can be called an epistemological shift from a *body* emphasis to a *medium* emphasis."[24] Neytiri, Trinity, and Luz

[23] Examples of the wise black man abound, ranging from Sidney Poitier in *The Defiant Ones* (1958) and Scatman Crothers in *The Shining* (1980), to Morgan Freeman in *Robin Hood: Prince of Thieves* (1991) and Will Smith in *The Legend of Bagger Vance* (2000).
[24] Wegenstein, *Getting Under the Skin*, 119.

fulfill medial roles in their facilitation of male characters into and through the virtual (whether telepresent labor, all-encompassing simulation, or a digital planet accessed by avatars), but the technologies that produce Neytiri's CG body 'organically' channel the embodied actions that for Jake require a technological interface. Each of their Na'vi bodies convey the performance of an actor, but whereas Jake's is diegetic, Neytiri's is hidden and implicit; his doubling is on the surface, hers is intrinsic, her mediality doubled.

The mediative function of these facilitating women is integral to the interweaving of real and virtual in the worlds for which they are guides. In *Avatar*, the 'natural' world is also the world of digital imagery, and that which is presented as most 'real' is the same that is an almost total digital construction, while in *The Matrix*, the deceptive simulation is patterned after a U.S. city circa 1999 – a familiar scene – while the real world of 2199 is a dark dystopia plagued by machine overlords and CG sentinels. Even in the quasi-futuristic world of *Sleep Dealer*, the 'virtual environment' is a job site in San Diego. In *Avatar* and *The Matrix* especially, the virtual – and the feminine – are uncontained, even profuse or all-consuming. For the satirical *S1m0ne*, Hollywood cinema itself becomes the virtual world, sustained by practices of inflated self-representation and a celebrity frenzy that feeds on its own hype, while cinematic realism wanes. The insertion of a digital actress into this mix counterposes the irreality of the dream factory with a computer simulation in which the virtual woman remains contained on screens, while the screens proliferate. Rather than the digital contagion of *The Lawnmower Man* and the digital warfare and gritty game space of *Avalon*, Simone typifies digital purity in a corrupt world (of analog media), presented as feminine ideal.

Vestal Virtuality

In her influential essay, Mulvey points out the ways in which the female body is made to be more imagistic within a cinematic form in which all is image – the ways in which women have been made to play the image in addition to being imaged, by being styled for the look and subject to a cinematic gaze that lingers on the body or spies voyeuristically.[25] Ann Kibbey however argues that Mulvey contributed to the reified symbiosis of woman and image:

> Mulvey's filmic woman was, and meant, Cinematic Image. This was much more than an association between woman and image, much more than an analogy. The core idea might be expressed in this way: The substance of woman is image. Mulvey accepted the misogynist precepts of psychoanalysis about the nonexistence of women. The empty token, the bread of the sacrament, morphed into the 'structuring lack' of female sexuality, to be filled by a new kind of spiritual presence, image-ness itself. The compensation for the extinction of women – women as empty tokens – was the survival of Woman/Cinematic Image. What the camera recorded was the image-ness of women.[26]

Kibbey argues that Mulvey's theoretical approach empties the woman and leaves only her 'image-ness'. What, however, might this image-ness implicitly contain? Kibbey's language, even in its somewhat hyperbolic critique of Mulvey's theorization, suggests that there is more to the positioning of the woman in cinema than simply being styled and presented for the look – that is, she is situated not just photogenically, but consubstantial with the images in which she appears.

Mulvey described the three 'looks' of the cinema as the look of the camera, the look of the audience, and the look of "the characters at each other within the screen illusion. The conventions of narrative film deny the first two and subordinate them to the third," so that the intratextual look incorporates all three.[27] Facilitating the scopophilic desire Mulvey finds in narrative cinema, these looks synchronize a curious, controlling gaze, with male characters

[25] Some recent films have deliberately flipped this convention to a focus on the male body, as in shower scenes in *Sex and the City* (2008, Michael Patrick King) and *Australia* (2008, Baz Luhrman) in which the camera lingers and the body is presented for the look, while women watch from hidden vantages.
[26] Ann Kibbey, *Theory of the Image: Capitalism, Contemporary Film, and Women* (Bloomington: Indiana University Press, 2005), 40.
[27] Mulvey, "Visual Pleasure and Narrative Cinema," 68.

acting as surrogates for the presumably male viewer, and the woman the object of all three. At least she is so occasionally, when the three coincide, but of course cinema does much more than simply stare at women. Still, in Mulvey the cinema is generally defined by man's relation to women, as we are primed for the objectifying look before it actually settles on a female body. Male characters become surrogates for the audience in apprehending the shifty ontology of the image, and, one can extrapolate, the mystery of the virtual, the inscrutability of the digital; investigating the woman and mastering her enigmas become symbolic measures for preserving the index and the integrity of (male) embodiment.[28] *S1m0ne* paints a Mulvyesque picture in its characterization of Viktor's (Al Pacino) relationship with a simulated actress, Simone (Rachel Roberts), for whom body and image are literally of the same substance.

Viktor is a Hollywood producer whose latest film is stymied when his lead actress walks out on the production. Frustrated with having to rely on other people, Viktor's self-centeredness is serendipitously rewarded when a one-eyed man (evoking the camera's monocular gaze) slips a disk into his hand. Viktor runs the program and finds Simone (short for 'simulation one'), a digital actress who can be easily manipulated through a microphone and a camera by which she mimics Viktor's words and expressions, and who also comes packaged with a database of performance enhancements. Viktor replaces his erstwhile actress with Simone, completing his film and creating a new star, who quickly becomes the object of obsession by paparazzi and studio head Elaine (Catherine Keener), Viktor's ex-wife.

Viktor puts Simone in another production, and as media demand becomes frenzied he puts on more elaborate charades to perpetuate the ruse, including teleconferencing, body

[28] This implicit strategy seems particularly germane to avatar films. Cinematic representations of cyborgs have predominantly privileged the masculine, and in the symbiosis of man and machine, the cold steel, hard machine body, and straightforward algorithmic logic are all things that can be *known*, and thus the threat can be apprehended. Images are deceptive, however, and a virtuality displayed in images (in the 'image-ness' of women) produces epistemological uncertainty.

doubles, and lingerie left in a hotel room for a private investigator to find. As the demand for Simone becomes overwhelming he tries to temper her popularity with an art film credited to her, defacing her image by having her wallow in the mud with pigs and questioning her artistic sensibilities at the same time, but it only ends up adding to her credibility. Eventually he tries to kill her off by dumping the software in the ocean and holding a funeral for her, but when the coffin is opened under suspicion of foul play, only a life-sized cardboard picture is found. Under interrogation Viktor tries to convince the police that Simone was only ever a program, but they don't believe him. He is saved when Elaine and their daughter resurrect Simone from a disk he neglected to throw out, and the film ends with a scene in which she and Viktor appear together in a green screen composite – Simone apparently happy to be back, while Viktor, now positioned in the image world outside of his control (and in the hands of women), seems quite unhappy with her return.

Simone is a rather vaguely defined digital construct who appears as a woman but has no sentience or agency of her own (to the extent that the program is a 'she'). Simone is an avatar that can be composited into films or video feeds, and is also put to personal use in Viktor's relationship with her, or rather his relationship with himself through the woman and the image. Since Viktor works in secret to maintain the charade that Simone is real, he spends a lot of time alone with her, quickly becoming comfortable at the computer interface through which she is accessed and performed. "I can be myself around you," he sighs contentedly in one of several solipsistic exchanges in which he speaks simultaneously to and through her. She becomes not only his avatar in the films in which she stars, but in his ego-boosting relationship with himself as well, and with his self-serving ventriloquism he heaps praise on himself while avoiding his deep-seated issues with women and need for love. As an aspiring Hollywood producer, he is also

desperate to be seen and acknowledged, and the Pygmalion in him that produces the woman to be looked upon soon appropriates her look for his own vanity. As he has trouble pleasing the other women in his life, she becomes a means for him to love himself, which he can only accomplish through Simone's docility and avatarial interface.

A clear parallel here is another object of Mulvey's scrutiny, Hitchcock's *Vertigo* (1958), in which Scottie (James Stewart) "follows, watches and falls in love with a perfect image of female beauty and mystery."[29] Not only is Madeleine (Kim Novak) presented as such an image, she is also connected with a painting, another image (and another woman), with which she has a mysterious relationship. Scottie fails to solve this mystery (which ultimately conceals that there is none besides deception), but later encounters the subject of his investigation again when he runs into Judy. Scottie (mis)recognizes Madeleine in Judy (having failed to see the Judy in Madeleine), but she doesn't quite fit the image he has in mind, and he reconstructs the image of Madeleine in Judy as she is compelled to take up the performance, to again play the image. Mulvey argues that "her exhibitionism, her masochism, make her an ideal passive counterpart to Scottie's active sadistic voyeurism. She knows her part is to perform."[30] However, while Judy complies with his wishes, she does so reluctantly, and this reluctance is an important part of the drama between them. Having once been turned into a 'perfect image' in a process we don't see, Judy's subsequent liberation and hesitance to re-enact it demonstrate her displeasure, as a woman, to become image. Part of this is Hitchcock (briefly) allowing her to 'see' rather than simply be seen, as Modleski understands the flashback from Judy's point of view (dismissed by Mulvey) as a key visual element in Judy's active and resistant role. In Scottie's efforts to break her down and expose the image as false, Judy admits to the ruse, but in the chasm between the

[29] Ibid., 67.
[30] Ibid.

destruction of the image and the possible non-identity behind it, she presents herself to him as a woman – a Judy to take the place of the lost Madeleine. Scottie's iconoclasm breaks the spell of the image, but not his obsession; if the woman is punished in the end, as Mulvey argues, she at least dies as a woman rather than an image of one. Scottie, on the other hand, is left broken and hollow, having failed to gain either; occupying the voyeur's position, he becomes nothing when his gaze is emptied.

While Judy relinquishes but resists, Simone is fully docile as a preconstituted image of femininity and the avatar body; rather than a discursive and performative construct imposed on a body, Simone is a body made for the purpose of compliance and visuality, needing only to be vivified or enacted (Fig. 35). While Judy can never fully become the imagistic Madeleine, Simone is always and fully the image for which she is created. Even when control of Simone shifts to Elaine and her and Viktor's daughter, Simone is still Simone, an image body available for use. The influence of the digital is clear; Viktor changes Simone's wardrobe with a few mouse clicks, with none of the cajoling required of Scottie. Rachel Roberts plays the programmed image of a woman, or, in Simone's capacity as a digital body for cinematic productions, a visual effect that hides its programmed construction in the body of Rachel Roberts. With the exception of some stylistic pixelation at startup, Roberts's image undergoes no digital treatment, as the digital is expressed as feminine ideal, in the face and body of a model (which Roberts also is).

Figure 35. Viktor and the docile Simone.

As a story about the infiltration of the digital into Hollywood filmmaking, and more broadly addressing a general disconnect with reality, the film undermines its own intentions by resorting to conventional forms – photographic images, an actor playing a role – to represent that which it finds subversive. It is not strange to view Simone acting in a film, since Simone is only Roberts acting in a film. While this is partly due to Niccol's over-reliance on traditional filmmaking to explore new cinematic territory, it also demonstrates a failure to understand the fascination of difference. As Dan North points out in his work on 'synthespians', the thrill of the digital illusion is not just photorealism, as "visual illusions have always depended upon a kind of doublethink on the part of the spectator – we *need* to recognise the illusion as such before we can engage with it meaningfully at a semiological level."[31] While Simone passes for human in her films, she does not pass as digital for us, and unconvincingly plays the kind of image called for in the role, embodying none of its coded mysteries.

In one scene, Viktor dips into Simone's database to retrieve a performance by Audrey Hepburn in *Breakfast at Tiffany's*, attempting to integrate some essence of the film (Holly

[31] North, *Performing Illusions*, 12.

Golightly turning, saying demurely and with a hint of desperation, "How do I look?"), as well as Hepburn herself. The result – Roberts flatly mimicking the line – is unconvincing to say the least, though the allusion is to some extent apt. Audrey Hepburn stars in films in which she is constantly remade, replaying the construction of femininity in *My Fair Lady*, *Sabrina*, and *Funny Face*, among others. Simone, however, comes prepackaged; she doesn't need to be inducted into femininity because it programmed into her – it *is* her (her image-ness, constructedness, docility). But as a picture of femininity she is empty, a construct with no mystery. Viktor's possession stops short of Scottie's obsession, as Scottie attempted to possess what he could not have (a condition ultimately shared by the male spectator) – Viktor has too much control, and is thus a flaccid 'victor' over her, having demystified her when he turned her on.[32]

While Simone seems to 'appear' everywhere, she only inhabits screens – the computer display with which Viktor accesses her, and the television and cinema screens through which she appears to others. Contained as she is, the screen becomes her body – a restricted visuality that recalls Max Headroom, the corrupted and reconfigured digital copy of Edison Carter (both played by Matt Frewer). In the television film *Max Headroom: 20 Minutes into the Future* (1985, Annabel Jankel and Rocky Morton), Carter is knocked into a coma and his consciousness is downloaded, although it at first seems to malfunction. Carter survives, and with some tweaking the digital copy becomes operative as well, taking on a life of its own as television personality (literally) Max who alternately vexes and assists Carter. Whereas the mischievous Max travels through the network and resists control, Simone never gains agency or self-

[32] An interesting correlative to the digital construction of femininity is the lack of success experienced by media personality and model Tila Tequila and women from the alt-porn site Suicide Girls in Second Life, which, despite many followers and fans outside of Second Life, both performed dismally. One article on the topic asks, "in an online world already beset by sexy female avatars, is there a place for *actual* sexy women?" The instance seems to point to an overdetermination, as the constructed femininity of the avatars amounts only to an attempt to faithfully recreate the constructed femininity the women already exhibit; the oscillation of wondering who the avatar hides (its mystery, its femininity) and taking the avatar at face value is lost. Wagner James Au, "What Tequila and Suicide Teach Us," *New World Notes*, May 14, 2007. http://nwn.blogs.com/nwn/2007/05/what_tequila_te.html.

awareness, and thus never becomes a character. She is part of a computer system, but the technology is minimized and simplified (Viktor's custom keyboard makes control a single-touch effort). Max Headroom is essentially a program-based character without a body, while Simone is a program-based body disallowed from becoming a character – a non-character, who as an avatar is still performed. Max's appearance on screens is often invasive and unpredictable; Simone waits quietly for instructions, her head down slightly, her expression blank – perhaps even somewhat sad.[33] She exhibits none of the video noise or signal corruption of Max, who, while maximizing his televisual presence, seems never quite content with it. Rather than a video agitation, the imaginal and picturesque Simone is a digital star.

In *S1m0ne*, the digital is presented as virginal. She is unavailable to the paparazzi who seek a body from which to steal images, and from the private investigator who sniffs the lingerie and rolls in the rumpled bed sheets planted by Viktor in a hotel room. She is also unavailable to the (commercially) impotent Viktor, ever shielded behind the prophylactic screen. Her desexualization implies a promiscuity of the analog that 'touches' its object indexically. Allegra, on the other hand, as the game designer in *eXistenZ* exudes a strange sensuousness and tactility that permeates the game, through the pods that wriggle when stroked, the touch of the BioPort, and Jennifer Jason Leigh's languorous sexuality. The pristine Simone is fully manipulable but completely untouchable; divorced from the index, prevented from being a character, and played by a model, Simone's virtuality, despite Niccol's attempt to humanize her, is presented in idealized feminine terms as a play of attractive surfaces in which there is nothing to see, but it looks very nice.

[33] This pose seems drawn from the standing sleep state common among avatars, including those of Second Life, in which the avatar's head nods to indicate that it is inactive. In this state it is an avatar body waiting to become avatarial.

Afterimage

> I'm sure I'm going to look in the mirror and see no one, nothing. People are always calling me a mirror and if a mirror looks into a mirror, what is there to see?
> Steven Shaviro, as Andy Warhol[34]

In this dissertation I have attempted to trace a path from the fragmentation of the mirror to a body of connections, and from an alterity dividing bodies and images to an affinity between them. The avatar has served in multiple capacities as a digital body that represents an embodied user in a virtual environment; a type of 'image body' in which imaging and informational technologies meet in the form of the body; a metaphor for a body in connections through the 'avatar', linking two bodies (biological and digital) in a phenomenological circuit; a cultural figure appearing in popular films and other media texts, situated at the juncture between a slippery hold on material reality and the evolution of cinematic imagery within digital culture; and a model for navigating through a world of images, screens, computer technologies, the digitization of everyday life, the replication of bodies through images, and the difficulty or impossibility of encountering ourselves and our bodies outside of the images (or image-ness, the vague quality of the image outside of specific instantiations) of which the world in digital culture is increasingly comprised.

I have used the mirror less for its psychological implications (although these are implicit, as noted) than for the relational and technological aspects of being present to oneself through a sense of images and layers (the mirror's surface, the 'virtual' space of the reflection, the image body staring back at you, which you already inhabit across the distance to the mirror).

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[34] [34] Steven Shaviro, *Doom Patrols: A Theoretical Fiction about Postmodernism* (New York: Serpent's Tail, 1997), 167-8. In this book, Shaviro examines postmodernity through a number of well-known figures, from Walt Disney to William Burroughs, occasionally speaking in their (fictionalized) voices. The avatarial implications of this quote are intended.

Technologies of the virtual are new mirrors, and new media have made our connections to media and images more frequent, more interactive and hands-on, more immediate and tactile. Although in certain ways our media have lost their bodies, they have moved closer to our own through an increase in the framing function of the body, in the way we touch images and they respond, in the imaginal worlds and interactive interfaces that respond to our embodied interactions, in the abundance of functional image bodies in videogames and virtual environments, and the digital production of cinematic bodies that combine human data, image layers, and complex computational processes.

I have not intended to deny the materiality or the body – far from it, if my attempts have been successful – as I concur with media theorist Pierre Lévy when he states, "I am convinced that a major element of our morality consists simply in the acceptance of being in the world, not in fleeing it, in *being there* for others and for oneself. . . . For the actual is so precious that we must, and at once, attempt to recognize and acclimate to the virtualization that destabilizes it."[35] My project here is about acclimation, about recognizing and navigating the virtual that not only exists within the material world, but inevitably forms it. I have attempted to delineate various aspects of virtuality in order to demonstrate that to engage the virtual *is* to engage the material, the biological, the 'real' – in addition to recognizing the ways in which that 'real' world has shifted toward increased virtualization, in the evolving relationships and connections between materiality and immateriality, and especially bodies and images, which it necessitates.

Insights into these connections and the 'layers' of imbricated virtuality and materiality that constitute our world are increasingly presented in, and problematized by, the discourse of the digital, the interface, the videogame, as well as the cinema (in both its stories and its

[35] Pierre Lévy, *Becoming Virtual: Reality in the Digital Age*, trans. Robert Bononno (New York: Plenum Press, 1998), 183.

technologies – and perhaps especially in the ways these two converge). Bernadette Wegenstein's conception of a 'corporealization of the image', in which, "far from witnessing a gradual disembodiment of information and images, the age of new media constitutes the current moment in a process of embodiment or corporealization," suggests an embodiment outside the physical instantiations in which visual media have traditionally been embodied.[36] This corporealization coincides with her view that the body itself has become mediative:

> The body *constitutes* mediation and vice versa . . . [in] a body concept that oscillates between holism and fragmentation. . . . The body – 'the fabric into which all objects are woven' – is thus not a mere *intermediary*, in-between the subject and the world, but rather a unifier of a holistic subjectivity and a fragmented objectivity that effectively undermines the existence of these very categories.[37]

A holistic subjectivity is that which makes sense of a fragmented objectivity through the connections and mediation for which, I suggest, the avatar provides a multifaceted model. This is a holism that appears only in connections, and only through multiplicity can any sense of the 'body' exist. It is medial not simply in its function as intermediary, but in its capacity to frame, channel, and process images and information – to develop affinities, to engage with the body, to flow with the virtual.

In the media texts I have explored here, this particular ability falls within the sphere of the feminine. While women in avatar films are most often relegated to conventional female roles and often presented as ensnared by the virtual, they are also the ones who are best able to navigate it. The double-consciousness of the feminine position – simultaneously primitive and abstracted – becomes, in this view, not a paradox, but the dualism necessary for navigating a world in which unity and bodily integrity, and a 'real' apart from images, projections,

[36] Wegenstein, *Getting Under the Skin*, 147.
[37] Ibid., 33.

imagination, and information, in layered interweaving and imaginal composites, is a hollow fantasy pursued by white men.

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APPENDICES

APPENDIX 1

FILMOGRAPHY

Assault Girls (2009, Mamoru Oshii)
Avalon (2001, Mamoru Oshii)
Avatar (2009, James Cameron)
Black Heaven (2010, Gilles Marchand)
Caprica (2009)
Emmanuelle 7 (1992 or 1993, Francis Leroi)
eXistenZ (1999, David Cronenberg)
Gamer (2009, Mark Neveldine and Brian Taylor)
Ghost in the Shell (1995, Mamoru Oshii)
The Guild (2007-2011, Felicia Day)
The Lawnmower Man (1992, Brett Leonard)
The Lawnmower Man 2: Beyond Cyberspace (1996, Farhad Mann)
The Matrix (1999, Andy and Larry/Lana Wachowski)
The Matrix Reloaded (2003, Andy and Larry/Lana Wachowski)
The Matrix Revolutions (2003, Andy and Larry/Lana Wachowski)
Nirvana (1997, Gabriele Salvatores)
Paprika (2006, Satoshi Kon)
Sexual Matrix (1999, Udo Blass)
S1m0ne (2002, Andrew Niccol)
Sleep Dealer (2008/9, Alex Rivera)
Summer Wars (2009, Mamoru Hosada)
Surrogates (2009, Jonathan Mostow)
The Thirteenth Floor (1999, Josef Rusnak)
Tron (1982, Steven Lisberger)
Tron Legacy (2010, Joseph Kosinski)
Virtual Girl (1998, Richard Gabai)

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