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Animating Biopolitics: Spaces and Bodies in Mamoru Oshii's *Ghost in the Shell*

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Jesse Ray Anderson-Lehman
B.A., Northwestern University, 2011

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An abstract of
A thesis submitted to the Faculty of the
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Abstract

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In what ways can we think of animation as animating biopolitics? In inventing this turn of phrase, I am attempting to embrace and expose a kind of catachresis or false metaphor. My analysis of Mamoru Oshii's films that comprise the *Ghost in the Shell* series embraces their unique communicability with each other, taking a catachretic perspective on the relationship between the two as both literal sequels in a narrative sense and figural reproductions of the same philosophies and approaches.

This entwinement is something I have attempted to embrace in my chapter divisions as well. Chapter One: Virtual Spaces focuses on the distinctions between the virtualities of traditional cel animation and contemporary computer animation. It begins with a lengthy discussion of Thomas Lamarre's thoughts on animation as contained within his book *The Anime Machine*, as well as what could be perceived as a detour through his thoughts on the works of Hayao Miyazaki. It ends with a close analysis, utilizing new media theory, of some digital techniques used in the first *Ghost in the Shell* film, showing how the film creates spaces that we experience with a close sensuality without the invitation to invade and occupy them.

Chapter Two: Material Bodies consists largely of a review of the literature surrounding both *Ghost in the Shell* films, particularly as it relates to animated bodies and the material body of animation. This leads into a discussion of Alexander Galloway's book *Protocol*, which allows me to reconceptualize the *Ghost in the Shell* series as a protocological system wrapped up in our contemporary neoliberal society of control.

I embrace the uneven attack these chapters represent, whether they are focusing: on one film or many; on both phenomenology and new media theory; on spaces, machines, and bodies; and on the biopolitical engagement of all these things as one interrelated system. In doing so, I hope to end up with a tactical and tactile understanding of how the series animates biopolitics, seeming to both reject and affirm neoliberal impulses, while offering us a glimpse at a possible path of resistance.

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A special feline thanks is due to Nola, Amanda's cat. I firmly believe that every endeavor benefits from having a mascot, and for this thesis she has certainly become mine. The long hours spent cat-sitting were often my most productive, and the benefits to my sanity were undeniable.

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## Introduction

In what ways can we think of animation as animating biopolitics? In inventing this turn of phrase, I am attempting to embrace and expose a kind of catachresis or false metaphor. This element of speech is particularly important to the phenomenological study of film. Phenomenology is defined by the Stanford Encyclopedia of Philosophy as "the study of structures of experience, or consciousness. Literally, phenomenology is the study of 'phenomena': appearances of things, or things as they appear in our experience, or the ways we experience things, thus the meanings things have in our experience." In particular, the application of phenomenology in film theory focuses on "the ways we experience things," since certain aspects of the "appearances of things" are often addressed directly through a general perception of film as a primarily visual medium. Phenomenological film scholars such as Vivian Sobchack, Jennifer Barker, and Laura U. Marks, then, suggest a much more bodily understanding of film, drawing upon our entire range of sensory experience. In her book *Carnal Thoughts: Embodiment and Moving Image Culture*, Sobchack focuses on "the embodied and radically material nature of human existence and thus the lived body's essential implication in making 'meaning' out of bodily 'sense'" (1). She encourages an understanding of "the lived body as, at once, both an objective *subject* and a subjective *object*: a sentient, sensual, and sensible ensemble of materialized capacities and agency that literally and figurally makes sense of, and to, both ourselves and others" (2).

In particular, she and other theorists are interested in the experience of cinema that draws from our sense of touch and bodily movement, discussed in-depth by Sobchack in her chapter "What My Fingers Knew: The Cinesthetic Subject, or Vision in the Flesh," also

explored at-length in Marks' books, *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses* and *Touch: Sensuous Theory and Multisensory Media*. This focus on "fingers," "flesh," "skin," and "touch" is wrapped up in the neologism coined by Sobchack, the cinesthetic subject, drawing from both cinema and two scientific terms: synaesthesia, the involuntary experience of one sense caused by the stimulation of another, and coenaesthesia, the "potential and perception of one's whole sensorial being" (68). The most fascinating aspect of Sobchack's cinesthetic subject is the realization that the cinema "is an experience of seeing, hearing, touching, moving, tasting, smelling in which our sense of the literal and the figural may sometimes vacillate" (76). She connects this with the linguistic term catachresis, which refers to a moment in language which "functions neither as metaphor nor as figure" (82). A phenomenology of film, then, reveals the "sensual catachresis" of the cinesthetic subject, "the chiasmatic function of the lived body as both carnal and conscious, sensible and sentient -- and how it is we can apprehend the sense of the screen both figurally and literally" (83). My embrace of catachresis is not only inspired by my own formulation of my guiding concern of animating biopolitics, but also by the title of my object of study. *Ghost in the Shell* is a catachretic formulation; the use of the preposition "in" is not precise enough to indicate whether the "ghost" in question is located in the space inside of the "shell," or immanently present in the very walls of that "shell." Thus even in its name, the *Ghost in the Shell* series is already concerned with an attack on Cartesian dualism.

*Ghost in the Shell*, directed by Mamoru Oshii and produced by the Production I.G. studio, premiered simultaneously in Japan, the United States, and the United Kingdom on November 18, 1995 – the first such worldwide theatrical release of an anime film. It

immediately sent shock waves throughout the international film community, presenting a vision of animation unlike many had ever seen. As an anime film – anime being the Japanese word for animation – based on a manga – the Japanese tradition of comics and graphic novels – written and illustrated by Masamune Shirow, the film immediately entered into a cultural realm littered with stylistic preconceptions, many drawn from the prominent success of another Japanese anime director, Hayao Miyazaki, on the international stage over the past decade. While Miyazaki's films featured young protagonists animated in the mode of traditional animation, Oshii's work featured a sexy female cyborg protagonist with guns in a mature existential story animated in a combination of traditional animation with groundbreaking digital effects.

Set in the near future (purportedly 2029 on the box) in an unnamed Asian metropolis (that looks a lot like Hong Kong), *Ghost in the Shell* depicts a world where the entire population is constantly connected to the Net through varying degrees of cybernetic enhancement. A fully cyberpunk story in the vein of *Blade Runner* (1982) and *Akira* (1988), another anime film that partially succeeded in crossing the Pacific, the film's protagonist is Motoko Kusanagi, a fully mechanized, military-grade cyborg who works as a Major within Public Security Section 9, an assault team tasked with apprehending perpetrators of cybercrimes. Her partners include Batou, a bulky male cyborg; Togusa, a mostly-human transfer from city police; and Chief Aramaki, the head of the section. Her consciousness, referred to as a "ghost," is loaded onto a cyberbrain, leading her to wonder about her own subjectivity. The plot follows the team's attempts to apprehend the Puppet Master, a skilled hacker who is "ghost-hacking" people's cyberbrains, controlling their actions and implanting false memories. After a couple of chases, the Puppet Master ends up falling on Section 9's

doorstep; it turns out to be an artificial intelligence, created by another government agency, Section 6, as Project 2501, that gained sentience and chose to find Motoko. After Section 6 kidnaps the Puppet Master, Motoko ends up chasing them down; after a battle with a cybertank, she and the Puppet Master communicate, deciding to merge. After Motoko is shot by Section 6, she wakes up in Batou's safehouse, her head still intact but attached to a young girl's body. The film ends with her looking out over the city.

The sequel, *Ghost in the Shell 2: Innocence* (2004), pushes even further into the realm of digital animation, with a plethora of overwhelmingly detailed images. Following the events of the first film, Motoko has disappeared, leaving behind Batou as the protagonist of the film; he and Togusa are put on the case of a series of deaths caused by malfunctioning gynoids – doll-like robots designed for sex. This leads to a firefight with a group of Yakuza. Soon after, while in a convenience store, Batou is ghost-hacked and made to believe he is under attack; he almost kills everyone in the store, but is stopped by Ishikawa, another Section 9 member. They next travel to the mansion of a man named Kim, who in turn tells them about a secret floating gynoid manufacturing plant, but also traps them in a virtual loop, going through the same actions three times. Batou attempts to assault the manufacturing plant, but is discovered and attacked by an army of gynoids. Right when he is almost overwhelmed, Motoko downloads into one of the gynoids and helps him defeat the rest. They then both discover the truth, that little girls are being kidnapped and forcibly "ghost-dubbed" into the gynoids in order to make them appear more realistic.

My analysis of these two films embraces their unique communicability with each other, taking a catachretic perspective on the relationship between the two as both literal sequels in a

narrative sense and figural reproductions of the same philosophies and approaches. This entwinement is something I have attempted to embrace in my chapter divisions as well. Chapter One: Virtual Spaces focuses on the distinctions between the virtualities of traditional cel animation and contemporary computer animation. It begins with a lengthy discussion of Thomas Lamarre's thoughts on animation as contained within his book *The Anime Machine*, as well as what could be perceived as a detour through his thoughts on the works of Miyazaki. It ends with a close analysis, utilizing new media theory, of some digital techniques used in the first *Ghost in the Shell* film, showing how the film creates spaces that we experience with a close sensuality without the invitation to invade and occupy them. Chapter Two: Material Bodies consists largely of a review of the literature surrounding both *Ghost in the Shell* and *Innocence*, particularly as it relates to animated bodies and the material body of animation. This leads into a discussion of Alexander Galloway's book *Protocol*, which allows me to reconceptualize the *Ghost in the Shell* series as a protocological system wrapped up in our contemporary neoliberal society of control. I embrace the uneven attack these chapters represent, whether they are focusing: on one film or many; on both phenomenology and new media theory; on spaces, machines, and bodies; and on the biopolitical engagement of all these things as one interrelated system. In doing so, I hope to end up with a tactical and tactile understanding of how the series animates biopolitics, seeming to both reject and affirm neoliberal impulses, while offering us a glimpse at a possible path of resistance.

## Virtual Spaces

Animation works in ways that are unique and specific to the medium. Rather than working from film studies canon, this first chapter will instead feature an extensive working-through of the most comprehensive book on animation studies to date: Thomas Lamarre's *The Anime Machine: A Media Theory of Animation*. Lamarre's insights on anime director Hayao Miyazaki will serve as a lens through which to examine Mamoru Oshii's animation, career, and philosophy, with a particular eye toward the similarities and differences between the two directors. This chapter will end with a reading of the use of digital technologies within the first *Ghost in the Shell* film. By building up this particularized understanding, first of animation as a medium, then of Oshii through Miyazaki, and finally of *Ghost in the Shell's* peculiar animated form, this chapter will show how Oshii creates a phenomenological sense of space that we are invited to experience but not invade, in the process exposing overly ballistic modes of representation while offering the opportunity for the viewer to connect with the film on a sensual level. This involves an understanding of the spaces of the film along a continuum of the virtual. In her book *The Virtual Window*, Anne Friedberg attempts to reclaim the term's "descriptive power" from its status as a "routinely and reflexively deployed adjective" in "debates about cyberspace and virtual reality in the 1980s and 1990s" (7). She defines "virtual" as "of, relating to, or possessing a power of acting without the agency of matter; being *functionally or effectively but not formally* of its kind." In this way, "'virtual' refers to the register of representation itself – but representation that can be either simulacral or directly mimetic" (8). Friedberg thus reveals the catachretic formulation of the discourse surrounding windows and of windows themselves, they ways in which one can speak of "both a metaphoric

window and an actual window with a virtual view" (12). Throughout the lengthy analysis of Thomas Lamarre's writings on animation that follows, my goal is to suggest that traditional cel animation creates a particular type of virtuality, and when that virtuality is then placed next to certain types of digital virtuality created by contemporary computer animation techniques, we feel this difference in a very particular way as spectators.

**Lamarre's Anime Machine**

In the preface to his book *The Anime Machine: A Media Theory of Animation*, Lamarre states that his book is about "how to read anime [...] the difficulties that I confronted trying to read anime." He characterizes previous scholarship as having focused on "textual description, metatextual speculation, or sociological analysis," in contrast to his approach, drawing on apparatus theory "with an eye to technical determination and technical value [...] what animation is, how it works, and how it brings value into the world" (xi). It is somewhat unique, then, that he proceeds in his introduction to make two motions: one toward the effect of speed on perception, manifest in the experience of the high-speed train, and the other on the particularities of animation viewership as being located at a "nodal point in a transmedial network" spread across "an exceedingly vast range of media platforms, aesthetic conventions, and fan activities" (xiv). He immediately sets himself apart from the traditional metaphors of apparatus theory, in particular Baudry's connection with Plato's cave and artificial regression. Lamarre follows Schivelbusch in suggesting that the train apparatus encourages us to think of how movement divides our perceptions, becoming "indicative of a more general technological condition, and thus invit[ing] an exploration of the impact of trains on perception more generally,

as a key player in a new sociohistorical formation (modernity)" (xx).

By examining animation in relation to a machine of movement and acceleration, and combining it with an understanding of how animation is split across multiple platforms and viewing experiences, Lamarre is proposing two shifts: "(1) thinking in terms of *determination* rather than *determinism*, and (2) thinking in terms of *machine* rather than *structure*" (xxiii). He thus suggests, drawing from Deleuze, Guatarri, and Comolli, a movement from an apparatus to a machine, an understanding of how animation can be thought of as an animetic multiplanar machine "that is at once technical/material and abstract/immaterial [...] not, then, a structure that totalizes or totally determines every outcome. It not only comprises the humans who make it and work with it, but also on other virtual and actual machines. It thus unfolds in divergent series as it folds other machines into it" (xxvi). This movement into how animation "thinks technology [...] indicate[s] that animation at once *works with* technology and *thinks about* technology – and the two processes are inseparable" (xxx). That is, it combines later developments in apparatus theory with a conception, drawn from Bergson, of the materiality of our everyday existence, taking us beyond the affinities that Comolli explores between social machines and representations or codes and into the realm of our existence as always-already mediated through technology (xxxiii).

Lamarre's first step in constructing his "anime machine" is to draw from Paul Virilio the concept of cinematism: "The essence of cinematism lies in the use of mobile apparatuses of perception, which serve (1) to give the viewer a sense of standing over and above the world and thus of controlling it, and (2) to collapse the distance between the viewer and target, in the manner of the ballistic logic of instant strike or instant hit." This "might be defined as accelerated

or hyper-Cartesianism, articulated at the level of technology" (5). He then contrasts it with his own concept of animetism, "the effects of speed laterally, sideways or crossways, rather than racing along the trajectory of motion," resulting in "the separation of the image into multiple planes" (6). Cinematic and animetic effects appear in both cinema and in animation; while the vast majority of cinema convention privileges the cinematic over the animetic, animation is more likely to utilize both, at one moment opening "a sense of movement between layers" and the next "striving to produce the illusion of movement into depth" (9).

Lamarre then examines the animation stand, showing how the stacking of layers on top of each other bridges a gap between art and technology: "Building on the transparency of the celluloid, the animation stand presents an additional rationalization and instrumentalization of the process," introducing "effects of depth" that grow not from cinematism, but in the animetic "gap between the layers – an invisible yet palpable interval, a tangible effect of depth" (17). This "animetic interval" is also "at the heart of an *animation technics of the moving image*," allowing the animator to "impart a sense of movement of a layer *across* or *over* another layer" (18). Therefore:

> In animation, the problem of movement into depth is not one of creating an illusion of depth by using techniques of composition, as is commonly supposed. It is not enough to draw a background in accordance with the principles of one-point perspective. Nor is the problem one of depicting movement toward or away from the camera's viewing position. [...] Movement into depth is a matter of viewing from the position of the speeding object. It is a ballistic point of view. (20)

As Lamarre articulates, the impact of Cartesian perspectivalism is felt throughout film studies; in particular, the idea of a monocular perspective placed at the center of the viewing system is

essential to Baudry's theory of the apparatus, and many forms of cinematic modernism can be seen as struggling with this “hegemonic regime of cinematic representation” (27). But the creation of the aforementioned movement into depth in animation cannot be created through Cartesian perspective alone, because the objects in the frame must also move in relation to each other in a way that is consistent with moving through three-dimensional space – put simply, moving the camera toward the animated image, even if the layers are spaced out along a multiplane camera, will never quite be the same as tracking forward in real space. “It is not a matter of composition but of compositing. [...] Where cinema tends to shunt the force of the moving image through the lens and into camera movement in three dimensions, animation tends to shunt the force of the moving image through the animetic interval into compositing” (32). For Lamarre, animation always returns to compositing between layers, but not necessarily in the ways that we expect it to. While “it is common today to speak of animation becoming the dominant logic of the moving image,” he finds this not to derive from an underlying unity, but instead from “the coexistence of so many different varieties of animation.” By focusing on compositing, Lamarre signals “a divergence at the heart of the moving image, which enables a bifurcation of its force into camera movement and into moving planes” (36). Rather than cinema and animation, “there are two tendencies, cinematism and animetism, which traverse cinema and animation, allowing us to think in terms of divergent series of animation and cinema” (37). In animation, closed compositing, de-emphasizing the gaps between the layers, leads to cinematism, while open compositing, expanding and sliding between these gaps, leads to animetism.

Lamarre's first application of these concepts is to the films of Hayao Miyazaki, whom he

characterizes as "one of the Japanese animators most committed to avoiding cinematism and working with animetism" (38). By creating depth in his films through animetism, Lamarre says that Miyazaki encourages "a slightly giddy sensation that increases the sense of wonder," that "invites awe and reverence. We are witnesses not raiders" (39). For him, "the art of Miyazaki's animation *as animation*, that is, as an art of movement, lies in his finesse with the sliding panes of the animated image" (40). This mode of image-making, referred to within Miyazaki's Studio Ghibli as creating *manga-eiga* or manga films, is "designed to challenge and to offer alternatives" to the "ballistic optics of cinematism" common to "both anime and [Hollywood] action films" (43), encouraging us to at once both return "to a moment prior to cinematism," and "to open a different relation to technology from within technology, much as animetism harnesses a different potential of the moving image than cinematism does" (44). In Miyazaki's films, then, Lamarre finds a perspective on our relationship to technology that is fundamentally Heidegerrian. Both Miyazaki and Heidegger find that focusing on "a certain manner of humanistic thought that always places human actions and thus human loss and gain at the center," what Heidegger terms "High Humanism," succeeds only in replicating "merely technological behavior" (50). Miyazaki is attempting to offer "not a solution to a problem but salvation from a technological condition" (51), thinking "less in terms of a solution to the problems posed by the technological ordering [...] and more in terms of a way to recognize and understand what cinematism truly is" (54).

Lamarre is careful to keep from characterizing this stance as an outright rejection, whether of technology, of cinematism, or of the adventure story. Miyazaki creates worlds where technology still exists, and not always with purely negative associations; in particular, he is

fascinated with designing flying vehicles (55), and seems to indulge at times in the wonder of the sense of movement created by these machines. However, Lamarre sees Miyazaki working critically in three different ways: utilizing primarily open composition, and undercutting his occasional use of cinematism with humor (60); creating whimsical contraptions that are "at once preposterous yet oddly coherent," that "avoid streamlined ballistic-designed craft" like jets and rockets, focusing on the power of the drifting wind rather than of the forward propulsion (61); and counteracting the gravity-defying, free-floating character animation common in full animation by adding a sense of "the pull of the earth, the lift of the wind, and the buoyant energies of youth" through exaggerated weight and constantly shifting axes of flight (76). These three registers all have to do with a sense of "induced movement" or "relative movement" (62), an assurance "that when we move, the world moves, and vice versa" (63), as well as a "new relation between body and world," in which characters do not "appear to transcend their world, magically," instead remaining "somehow responsive to the world" (76).

Lamarre believes that Miyazaki depicts boys and girls as having very different relationships to technology. The boys tend to have "a passion for machines, mechanics, and engineering" (78), and it is "in relation to *physical exertion with things* that the boy's body opens to the world and reveals its energies." He sees this as endemic to the boys'-adventure genre, which "all too easily directs the boy's energies into defeating the villain in battle, resulting in a pat resolution and, in effect, a closed human-centered relation to technology. Consequently, Miyazaki introduces girls and women into his adventures, to disrupt genre conventions and expectations" (79). With these girls, by constrast, it is unclear whether they "are disabled, disenabled, or differently 'abled' vis-a-vis technology" (80); while boys "deal with *direct actions*

*on objects*," girls "appear magical because they entail *action at a distance*," exhibiting an "experience of technology [...] inseperable from a gendered condition." The resolution of his films generally involves a "salvation" from both the technological and gendered condition (82), where the girl "apparently transcends the received stereotypes of female condition as passivity and exchangeability," instead of the traditional resolution where "the hero slays the villain and wins the girl" (83). This transcendance, in Lamarre's eyes, places girls as the *animus* behind Miyazaki's "wind-powered animation," as "the site of futurity," "a new god [...] who will impart some manner of constancy to the new understanding of technology." Without the girl, the transcendance depicted in his films "would simply appear as a return to the past, a return to old technologies and old forms of social organization, and thus as a repetition of older understandings of the world (85).

Lamarre's final notes on Miyazaki have to do with his authorial stamp, his general status as a renowned auteur, and how these relate to the workflow within Studio Ghibli, creating a certain Ghibli style or brand. It is in this section where Lamarre comes closest to criticizing the Miyazaki-model of animation, though as throughout his text he stops short of a direct determinism, preferring to examine "various levels of determination," including "technical determination, cultural determination, and authorial determination" (88). In opposition to the sense of "Japanese-ness" that is often imposed upon Miyazaki by the west, a form of "techno-orientalism," he sees Miyazaki's animations as thinking "the question of technology technically or animetically, not culturally. They focus our attention on technics, technicity, and techno-cultures" (94). By examining a "techno-cultural paradigm or, more precisely, a tehno-cultural field of actions potentialized by a machine," his films "deconstruct technological

ordering" and "scramble sociohistorical points of references," which, for Lamarre, begs the question: "Does animetism enable the formation of a new kind of community, or coalition, or cooperative? This question can be posed at three levels: that of Miyazaki's animations, that of Studio Ghibli's official image, and that of the organization of labor within the studio" (95). In the animation, Lamarre finds that the "eclectic mixture of pastoral, medieval, and feudal economies or techno-cultures" allows for a new kind of ordering precisely because it fails to return to an easily-defined historical past (96).

In relation to Ghibli's image and workflow, however, Lamarre finds less encouraging signs; while "Ghibli's strategy is to downplay the feel of commercialism," choosing to "not serialize its animations across multiple media, spinning out sequels, prequels, or side stories" (97) and to "avoid association with 'subculture' audiences (otaku) who become obsessed with them," this "oscillation between mass art and high art" creates "the Ghibli Brand":

> Ghibli comes to signal something like a high-minded, high-art brand of animation amenable to general mass audiences around the world. The openness associated with the animetism becomes indistinguishable from the production of an animation brand for global audiences, and there is a conservatism or traditionalism implicit in this brand-conscious address to the world. (98)

This "conservatism or traditionalism" translates into a particular workflow within Studio Ghibli, with Miyazaki and his producer, Isao Takahata, as the masters "employing a large number of young people, between eighteen and twenty-five, because young workers, especially as in-between animators, are alleged to impart a sense of energy, vibrancy, and flexibility to the final product." This creates an environment that does not encourage "promoting young directors intent on dramatic innovation," instead demanding "artistry in the service of someone else's

vision" (99).

**Miyazaki vs. Oshii**

In outlining this "deeply conservative" streak within Studio Ghibli, Lamarre is gesturing toward something he will return to throughout his text; "when the animetism that enables a critique of modernity at the level of perception becomes a paradigm, actualized in a pattern of serialization, it enters into a theater of operations, becoming caught up in securing the brand's perimeters" (100). When he returns to the subject in his conclusion, he characterizes Miyazaki's works as presenting "a mitigated and minimalized hypo-Cartesianism" in response to the "hyper-Cartesianism" of modernity (306). He compares this "critical minimization" with his analysis of Hideaki Anno's "critical optimization" at Studio Gainax (315) in Part II, and contrasts both of these with his analysis of CLAMP's "critical perversion" (316) in Part III. On CLAMP, he says:

> This pattern of serialization, from manga to anime, is unlike that of Miyazaki-Ghibli's animations or Anno-Gainax's animations, where so much prestige and authority is accorded to the male director as *auteur*, whether as benevolent patron or cruel taskmaster. As a four-woman team whose members sometimes take on new names, CLAMP represents a very different structure of authority. (319)

In CLAMP's anime series *Chobits*, Lamarre sees a call "as ingeniously and cryptically simple as the most basic intervention into the computer network: not retreat (like Miyazaki), not rebuild (like Anno), but reset" (321).

As for Mamoru Oshii, Lamarre mentions him rarely, but pointedly places him in opposition with Miyazaki. He is "one of the rare critics of Studio Ghibli" who "sees in Miyazaki's and Takahata's work not only a potentially totalitarian and closed worldview but also a chain of command that actively discourages innovation, experimentation, and autonomy" (99), a strategy that "threatens to erase the very inventiveness it claims to value," resulting in "an insistence on authority and the brand" (315). Oshii is quoted as remarking "the manga film, in fact, because of its methodological limitations, points to a transitional form that cannot ripen into 'cinema,'" and Lamarre credits him with "suggesting that the digital overcomes the limit between 'live action' (jissha) and 'animation' (doga)." According to Lamarre, Oshii believes that "the contemporary transformation of cinema into animation hinges on overcoming cinema as a recording of reality or indexicality [...] The loss of a cinematic recording of the actual reverses the trend of animation following cinema, making for a situation in which cinema becomes animation" (35). This is contrasted with Miyazaki's approach the digital, which he restricts "largely to coloring and painting" (41). The only two brief analyses of Oshii's films in the text are one of his live-action/digital animation hybrid film *Avalon*, in which, "in the midst of a military conflict full of ballistic angles and accelerated war technologies, the battle suddenly stops and shows itself to be composed of layers" (125), and another of the rotoscoping of footage of Hong Kong into a sequence in *Ghost in the Shell*: "The result was breathtaking, a strangely cinematically real yet fantastical world, a world not cinema and not *not* cinema" (65).

Placing Oshii alongside Miyazaki is fairly common among both fans and academics, partially due to their many published comments on each other's work, including joint interviews, but also because of the many correlations between their chosen subject matter. Both Miyazaki

and Oshii are clearly interested in our relationship with technology, they both offer unique visions of how animation should be utilized, and they are, along with Anno and CLAMP, among the most well-known names in anime – if not indeed the two most well-known outright. It would then seem possible to do a reading of Oshii's work, in the same vein of Lamarre, using Miyazaki as a point of departure, even potentially attempting to read in the same direction of Lamarre's positive analysis of CLAMP, looking for the same potential signs of "critical perversion" within his animation. While Oshii is, like Miyazaki and Anno, a male director respected as an auteur, there are many ways in which his philosophy and lack of a conventionally understood "style" can be seen as pressing a "reset" button of their own.

To expand on exactly what Oshii has to say about Miyazaki; in the same interview from 1995 that Lamarre is referencing, Oshii goes so far as to compare Studio Ghibli to the Kremlin: "Just like those steel-like athletes could not be produced other than in the communist countries [...] There should be a type of animator who can be fostered only by Ghibli." Going even further, he says "I think they [Studio Ghibli] should be disbanded immediately. It's the same question of whether it got better after the Soviet Union was disbanded, but I think for creative work, anarchy is at least better than freedom under a state power." While comparisons like "Miya-san is the chairman, and Takahata-san is the head of the party [...] Producer Suzuki is definitely the chief of KGB" are entertaining, and clearly partially meant in jest, Oshii is adamant that "it's (like) the military or a (political) party, and for some, it's a good order, but for some, it's an intolerable fascism." This is the argument that Lamarre is drawing on when he makes his conclusions about Studio Ghibli within the "theater of operations," but other parts of the interview directly contradict his claim that Miyazaki focuses on a "condition" rather than a

"problem" with a "solution." Indeed, this is *precisely* what Oshii sees Miyazaki doing:

> Until now, they kept at least one thing; not making a film unless they have an answer to the question of how they face the current era and what to say. If they start making (films) even though they know (what they are saying) is a lie, there will be terrible consequences. Since their belief system will totally crumble away.

Indeed, from Oshii's perspective, this need to have "an answer to the question" is the very reason that the Studio Ghibli belief system is even sustainable! "They think they are responsible for staff members and audience [...] I don't think I have to be responsible. The thing 'being responsible' itself breeds fascism."

Oshii applauds Miyazaki and Takahata for their "extraordinary energy in terms of making what they want to make, while surviving in the general consumer society with their ideological constitution of the 1960s intact. [...] they should've been put into a museum a long time ago." Combining Oshii's insights with Lamarre's, we begin to see a picture of Miyazaki's films as falling short of the goal of truly reimagining our relation to technology. While both Oshii and Lamarre find the most damning evidence of this failure in Studio Ghibli's hegemonic structure, they also seem to suggest that Miyazaki's very conceptualization of animation is unable to offer the revelations that he is attempting to draw out. A "critical minimization" of cinematism's ballistic properties that tries to offer "salvation from the technological condition" is wholly inadequate from the start, falling into the same trap of providing a "solution" to the "problem" of technology that Lamarre believes Miyazaki is trying to avoid. Indeed, Miyazaki's vision of a Heidegerrian shift from what is "correct" to what is "true" is at odds with Lamarre's own methodological framework of attempting to examine the many facets of the anime machine; it avoids the many divergent series of animation in favor of picking a one-size-fits-all approach.

Oshii rightly identifies this as "fascism" – a particularly damning claim when one is invoking Heidegger. Oshii's own approach is categorically opposed to Miyazaki's: where Miyazaki treats cinematism as something to be avoided, Oshii is unafraid to engage with it critically, creating animation that offers a heterogeneous examination of the contemporary ballistic perspective, using it in ways that force the viewer to recognize the very form of his animation by constantly shifting it in ways that trouble the simple enjoyment of it. In this sense, Oshii is fundamentally more radical than Miyazaki, offering an animation that refuses to be relegated to the museum.

While so far I have used Oshii as a relatively untroubled referent for the creative force behind *Ghost in the Shell*, it would be wise now to examine more closely the authorial and historical context in which the film was made. Released in 1995, it is based on Masamune Shirow's manga of the same name. The *Ghost in the Shell* manga was serialized from April 1989 to November 1990 in *Young Magazine*, and is considered seinen manga, targeted at an adult male audience. This is the more mature of the two primary divisions of manga for male readers, with shōnen manga being targeted at adolescents. These, along with the corresponding categories for female readers (josei for adults, shōjo for adolescents), are rough partitions created primarily from the publisher's perspective; in reality, shōnen and shōjo manga continue to be enjoyed by older readers, both domestically and abroad. While these divisions do not prefigure content in terms of genre, they do allow for different levels of explicitness in the representation of adult themes, and their respective target audiences have affected general perceptions of anime stateside; adaptations of seinen manga that successfully cross the Pacific (such as *Ghost in the Shell*, *Akira*, and *Elfen Lied*) contribute to American perceptions of anime as a serious medium, at times freely depicting explicit sex and violence, while popular

adaptations of shōnen manga (such as *Dragon Ball*, *Naruto*, and *Yu-Gi-Oh!*) can often appear to be a hyper-stylized Japanese equivalent to Saturday morning cartoons.

While the Puppet Master story arc, individual characterizations, strong mechanical detailing, and overtly sexualized female lead are all present within Shirow's manga, the *Ghost in the Shell* film fleshes out the both the writing and the action for the screen. The most obvious shift concerns Motoko's body, which is depicted as much younger and cuter in the original manga. The representational strategies of the film in general, however, prominently bear the stamp of Oshii as director. His career sets him up as a particularly interesting example of an auteur on the edges: though he is one of the most recognized anime directors, he identifies himself as a "stray dog," working within a different production context than Hayao Miyazaki at Studio Ghibli. While both got their starts working in television animation, Miyazaki in 1963 at Tōei Studios and Oshii in 1977 at Tatsunoko Productions, their career paths have headed in different directions, revealing two different philosophies of filmmaking. In general, for Oshii, this has entailed work in both commercial and artistic contexts, within both large studio contexts and smaller creative groups, and, more recently, both animated and live-action films. Through the following sketch of his career trajectory, I hope to shed some light on the position that *Ghost in the Shell* occupies in relation to the rest of his work.

Oshii was born in Tokyo on August 8, 1951; as a child, he loved the movies, and throughout junior high and high school, his interest in science fiction began to grow. He graduated from Tokyo Gakugei University with a degree in arts education, but had trouble finding work directly out of college. He first came into the field of animation in 1977 at Tatsunoko Productions, where he preferred working on storyboards to scripts, holding off on

writing until he had already established himself as a director (Ruh 5). He developed his craft working on the *Urusei Yatsura* television series and films (based on a popular manga of the same name) for Studio Pierrot in the early eighties, where he began a longstanding working relationship with writer Kazunori Itō. During this period, he also was involved in making anime history, directing the four episodes of the space opera *Dallos*, the first OVA (Original Video Animation) – a direct-to-video format now widespread in the anime industry. His work on *Dallos*, while described as being not as visually nuanced as *Urusei Yatsura*, showed that Oshii was capable of directing straight action sequences on his own, while also representing his first interaction with the Bandai Corporation – Bandai produces, among other things, video games, toys, and animation, and *Dallos* was created with the express interest of becoming a merchandising platform (Ruh 16). Starting with 1985's OVA *Angel's Egg*, he worked within several different studios. His films during this period, including both animation and his first live-action film, *The Red Spectacles* (1987) – screenplay co-written with Itō, also his first film with composer Kenji Kawai, who has scored all of his films since – caused him to become identified as an "artistic" director, developing a "moody and atmospheric cinematic style" and a tendency toward philosophy (Ruh 3).

In late 1987, he joined Itō on the creative team at the artist group Headgear, where he was integral in the production of the popular *Mobile Police Patlabor* series of OVAs, films, and television episodes (1988-93). *Patlabor* represents an important moment of synthesis between Oshii's commercial and artistic sides; the project started as a collaboration between manga artist Masami Yūki and mecha – the uniquely Japanese science fiction subgenre of giant robots – designer Yutaka Izubuchi, while the rest of the team grew largely from Oshii's previous

involvement with *Urusei Yatsura* – in addition to Itō, the production also included character designer Akemi Takada, as well as an entire stable of voice actors from his Studio Pierrot days (Ruh 74). The *Patlabor* franchise combined the elements of a strong design team that existed before Oshii's involvement, the popularity and recognizable cast of *Urusei Yatsura*, the commercial strengths and realistic action of *Dallos*, Itō's writing, Kawai's music, and the unique visual style, philosophical overtones, and deliberate pacing that had become Oshii's trademark. Combined with its thematic focus on sci-fi technology and political violence, this formula marks it as an important precursor to *Ghost in the Shell*; Oshii has stated that, for him the first *Patlabor* film "was a major film in many ways, and I think it became my turning point. I know I am what I am today because of *Patlabor*" (Ruh 74).

In addition to their role in merchandising throughout Oshii's six years working on *Patlabor*, Bandai continued to nurture their relationship with the director, attempting to develop another commercially successful property; when Bandai had to abruptly cancel a project they had in the pipeline, Oshii directed *Talking Head* (1992) with their blessing, an art house film mixing live-action and animation. After the second *Patlabor* film, Bandai suggested bringing him on to direct their proposed adaptation of *Ghost in the Shell*; he accepted the offer, and Shirow agreed to give him full artistic control – according to Oshii, he could direct "in my own style, with my own ideas…I had the freedom to put *Ghost* into my world, without having to further ask his [Shirow's] approval." Much like Yūki and Izubuchi in *Patlabor*, however, Shirow's strong design work figured prominently early in the film's production; he is renowned as an extremely meticulous artist, pushing for such a high level of detail in his artwork and plot that he is uncomfortable employing staffers to help him meet deadlines, instead choosing to work on his

own (Ruh 120). From this base, Oshii brought in his standard collaborators Itō and Kawai, as well as Production I.G., the studio he utilized for the two *Patlabor* films. Again, the synthesis of commercial and artistic concerns would serve Oshii well; while the film has always been widely acclaimed by the critical press, its international success owes much to the wide-ranging theatrical release and video distribution garnered through the Bandai connection and an infusion of production money from Manga Entertainment, an international anime distributor.

Throughout Oshii's career, he has not shied away from commercial properties and manga adaptations, whether for television, film, or OVA, but he has also experimented extensively with art films and live action. His path from storyboarding to directing happened rather quickly, and, while he had mentors along the way, particularly early in his career while with Tatsunoko and Pierrot, his quiet "stray dog" personality has recently led him to work mostly with trusted collaborators, as evidenced by the formation of the Headgear artist group – Itō, Kawai, and Oshii are all around the same age. While his popularity grew consistently throughout his career, he is more well-known for his international success and as a pioneer in digital animation than for his popularity in Japan. By contrast, Miyazaki's career path has been relatively straightforward; when Miyazaki, born in 1941, began working as an in-betweener – inking lines for intermediate frames based off of the work of a key animator – in 1963 at Tōei Studios, Takahata, born in 1935, was already a director. Unlike Tatsunoko or Pierrot, Tōei referred to their animated films as *dōga*, literally "moving pictures" or "animated drawings." They worked together on the television series *Wolf Boy Ken* (1963), but really first came together as a team for *Little Norse Prince* in 1968, with Takahata as director and Miyazaki as key animator (Lamarre 56). The two would become friends, later moving to Nippon Animation and

then, after the success of the Miyazaki-directed and Takahata-produced *Nausicaä of the Valley of the Wind* (1984), founded Studio Ghibli in 1985 with another producer from the project, Toshio Suzuki. The operative myths of the two directors, then, are quite distinct: Miyazaki as a brand now synonymous with anime, a story of a singular talent rising through the ranks at prominent "moving picture" studios, honing his craft and adhering to a certain style; and Oshii as anime's self-appointed "stray dog," a story of a young animator thrown into the director's chair, spending his career pushing against – and even crossing – the boundaries of his medium.

**Digital Technology and Animation**

From the beginning, *Ghost in the Shell* was conceived as a groundbreaking film; Oshii strived to push the boundaries of animation and make the film as realistic as possible through the use of digital technology and techniques, collectively referred to as D.G.A. (Digitally Generated Animation). As a method of production, D.G.A. in 1995 occupies a particular moment in the history of animation; the introduction of computers into mainstream animation production in the early nineties spawned several divergent concepts of how they should be used. The ballroom scene in Disney's *Beauty and the Beast* (1991) is famous "for its seamless combination of volumetric depth (the ballroom) and gracefully waltzing animated characters, with the viewing position of a simulated camera," and several other films tried to follow this lead, incorporating "the increased use of volumetric depth alongside cel animation techniques." Most of these, including *Titan A.E.* (2000) and *Treasure Planet* (2002), "failed at the box office in

comparison with fully digital animations." On the "3D" animated side, however, "cartoonish" films like Pixar's *Toy Story* (1995) and *A Bug's Life* (1998) were huge successes, while "photorealistic" films like *Final Fantasy: The Spirits Within* (2001) also failed (Lamarre 73). Throughout the nineties and into the new millennium, the use of digital techniques to aid in the production of traditional-looking cel animation became progressively more common.

D.G.A., however, as utilized by Oshii, involved a particularly unique philosophy on the place of animation in the age of computers. In an interview included in the "Digital Works" featurette on the 2004 Special Edition of the DVD, he says:

> One thing is that there is a limit to what cel animation can do. You reach that limit when you increase information and pursue reality. The question is how do you surpass that limit. These days, people want more than what cel animation can deliver. The only way to surpass that limit is the use of computers. […]Showing something that's never been seen in a movie is not very convincing. The thing with movies is to start with something familiar and see how real it can get.

The featurette then continues with the following, which is unattributed:

> It is said that people see movies with their memory. The subconscious memories of everyday life bridges us into the picture. The closer to that memory, the more real are the various pictures perceived. Technology enables a realization of the scenes in our memory.

There are multiple threads I wish to pull out from this statement – while acknowledging that the translation in the subtitles leaves much to be desired. First, there is a focus on surpassing the limitations of traditional cel animation, at once both disavowing the medium and predetermining it as an initial state. Though Oshii's training is in animation, the inclusion of live-action films in his oeuvre – *The Red Spectacles*, also *Stray Dog: Kerberos Panzer Cops* (1991) – and particularly the mixed work in *Talking Head*, can be seen as indicative of a somewhat tenuous

relationship with his art form. Throughout the featurette, Oshii refers to the digital variously as "an environment" where "computer generated imagery, live action, and hand drawn imagery […] can come together"; as "the use of computer graphics as an ordinary thing"; as "a method […] rather than a trick"; and as "a system" that "realizes an image." This is a particularly nuanced sense of the digital as both a technology and a technique, focusing primarily on the ways it can be used subtly, on the back end, to overcome limitations. This is still, by definition, animation, but in a form that incorporates and renders similar a much wider range of potential inputs than just hand-drawn cels.

Second, there is the notion that, in order to be successful, movies must "start with something familiar and see how real it can get." In saying that "showing something that's never been seen in a movie is not very convincing," this would appear to be a disavowal of the very premise of science fiction – or at the very least a tendency toward science fiction set in the near-future, where the world depicted carries identifiable remnants of the present. Clearly this is meant primarily in relation to representational strategies, an appraisal of where the technology of a medium lies with respect to reality – a "realistic" animation, or an animated realism. There's a productive gradient between the "familiar" and the "real"; the greater "reality" of the new mode of representation is thought of as growing out of the old, as laying along some kind of spectrum ranging from familiarity through the medium into actual reality. This formulation places familiarity before reality, drawing an arrow that points toward some sort of impossibly teleological artistic premise, the conventional view of computer graphics as fetishizing the real – the virtual seeking its apotheosis in becoming indistinguishable from the real. The familiar always comes first, however; the goal of the film is first to appear familiar, indistinguishable from traditional cel

animation…just more realistic. On this topic, Oshii later states, "You probably can't tell. I think we've succeeded when you can't tell. Unless you are a specialist in animation you might not be surprised." If this is an "animated realism," then it's a formal aesthetic that holds convention stable while pointing toward an indeterminate horizon of reality.

Some final insight can be gained from a third point, that people "see movies with their memory." While this opinion is not directly attributed to Oshii, it does retain a place of strong importance within the featurette. The digital identity of *Ghost in the Shell* grows from cel animation, at once disavowing it and taking its form. It attempts to become more real, while still remaining indistinguishable from what came before it. And the dimension of reality that it attempts to replicate is memory, to take advantage of how "the *subconscious* memories of everyday life bridges us into the pictures." This focus on the subconscious aspects of memory is a peculiarly perverse sense of realism – indeed, it can only be considered realism if you accept the assessment that our perception of reality is based in memory. This is a subjective reality rather than an objective one, tied to individual lived experience rather than to the laws of physics – memorable, not mimetic; phenomenological, not structuralist. "Technology enables a realization of the scenes in our memory." Oshii seems determined to find a technological index to subjectivity, not to the physical world, but to the "real" world of memory. At the end of the featurette, he says the following:

> Today, for any image that can be imagined in a person's head, no image is impossible to realize. So when the system realizes such an image, I want to see how movies change. And I want to be part of that. So every time a new system emerges I want to have my fingers in it.

This focus on the imagination allows him to be at the same time expressionistic and realistic,

radical and conventional, painterly and photographic – and even these binaries seem slippery when schematized and mapped onto his perspective. This ambivalence at the heart of his work, along with his zeal “to see how movies change,” “to be a part of that,” and “to have [his] fingers in it,” affords him the perfect position to reflect on the postmodern condition.

While Oshii and his production crew all express a desire to have the film appear homogeneous, to paper over the many different layers of effects in each shot, this desire presupposes the variety of the materials they work with in a way that tends to inscribe heterogeneity back into the fabric of the film. As Lamarre suggests, animation constantly *thinks* technology, ordering images in a technological manner; while D.G.A. may appear at first to introduce entirely new concerns to traditional animation, it instead carries with it the same epistemology. If anything, the animation in *Ghost in the Shell* intensifies this effect, becoming an exemplar of the animation machine, or even overdetermining itself and becoming a conscious example of hyperanimation. In their book *Remediation: Understanding New Media*, Jay David Bolter and Richard Grusin suggest the term "remediation" to describe the ways in which "new" media, whether traditional or digital, always remediate past media. This process is at constant work within Lamarre's conceptualization of the moving image, insofar as both cinema and animation are constantly drawing on each other's logics in order to create movement. Bolter and Grusin distinguish between two logics of remediation: immediacy, where the new medium is made transparent, and hypermediacy, where it is made obvious. They state the "double logic of remediation" in three different ways: "remediation as the mediation of mediation"; "remediation as the inseparability of mediation and reality"; and "remediation as reform" (55). The "Digital Works" featurette focuses on the ways in which digital animation can be used subtly and appear

immediate to traditional cel animation. It states a similar goal for appearing immediate to reality, but at the same time suggests the ability to surpass and hypermediate reality. And, as we will see, implicit throughout the digital alterations of the film's animation is the ability to reform or express an idea through the act of remediation. Digital technology is capable of accentuating or hiding both cinematic and animetic representations, offering additional techniques in service of each. Any analysis of animation needs to explore the relational and remedial cracks and crevices the art form inherently carries; any attempt to make these differences less visible will never make them invisible entirely, and should not discourage this type of analysis – if anything, this disavowal makes it all the more necessary.

**Digital Alterations in *Ghost in the Shell***

Oshii's own conceptualization of animation means that his use of D.G.A. in *Ghost in the Shell* places a high potential for meaning-making within the joints of its compositing, even as it attempts to hide those joints. In fact, the glimpse we get through the "Digital Works" featurette suggests that the problem of how exactly to utilize computer technology to present the themes of the film was foremost in the minds of the animators. This sets the stage, then, for an examination, following Lamarre, of how the film's animation thinks technology, but also, following Bolter and Grusin, of how the digital remediates the traditional animation. The digital compositing within the film extends from the logic of compositing within traditional animation; there are spaces between the layers of cels, but also between the cel and digital layers. This extension into the digital realm is driven by the same abstract anime machine that Lamarre describes, though it further

complicates the animetism-cinematism schema by introducing a volumetric space that is potentially recognizable by the viewer as distinct from the conventional logics of animation. This introduction of an additional affective register to the film allows for a phenomenological experience of the film that immersively remediates the cinematic experience of motion into depth, at times becoming invisible and immediate, and at others becoming visible and hypermediate. Or, better than visible, tactile and sensual. Three alterations stick out in particular for the way in which they play with the movement and depth within the image, creating spaces that the we can both recognize as virtual but also feel as real: the depictions of maps, diagrams, computer code, and other CGI; the general distortion/deformation of the traditional animation; and the visualization of ghost-hacking and thermoptic camouflage.

*Ghost in the Shell* is set within a world saturated with computer graphics, full of screens, holograms, and electronic vision. Depicting these images of computer graphics using computer-generated imagery is both a matter of aesthetics and good production sense; it would be extremely difficult, even perverse, to attempt these visuals without the use of a computer. Because they exist as computer graphics within the diegesis, they consist primarily of maps, diagrams, and computer code. The opening shot of the film begins this way, with a green-on-black two-dimensional image reminiscent of an old-school green monochrome computer monitor; as the image rotates, the camera zooms in as the pixels transform into a three-dimensional green wireframe schematic of the buildings and highways of the city. This type of green-on-black map or schematic is repeated throughout the film, particularly when Section 9 is in pursuit of a suspect. Soon after this sequence, when Motoko is looking down through the upper floors of the building to see her target for assassination, it is similarly rendered in

green-on-black, though with yellow and red blobs in the shapes of people, thereby identified as the electronic vision of the cyborg; this trope, drawing on the iconography of thermal imaging, also returns throughout the film. Another prominent example of CGI is the recurring image of cyberbrains in the process of being ghost-hacked, depicted as green wireframes with discolored pixels representing the slow progression of the hack as it travels through the many sections of the brain.

All of these CG implementations take the image and map it into the calculated graphic of the computer. This translation continues from graphics into lines of code, present in the film's title sequence – utilizing an effect later made famous by *The Matrix* – where the credit lines materialize out of what appears to be an indecipherable sea of code – actually, the names of the team are themselves reinscribed within the code as machine language. Computer code is omnipresent in the film, running constantly across monitors and screens; these displays are transparent, often floating above a keyboard at a workstation. The code is computer-generated and then placed over the animation cel, again usually glowing green. This same sea of indecipherable code/language is echoed later in the signage so prominent throughout the film on the walls of buildings; these were added in Photoshop, since the quantity and detail of images required in order to create the sense of being overwhelmed and overtaken by the abundance of advertisement would have been extremely time-consuming to animate by hand.

The film also includes imagery which is not directly computer-generated but utilizes computer-aided design (CAD) within its production. During the title sequence, depicting the creation of Motoko's cyborg body, extraordinarily complex technical images of the technology were rendered fully using CAD software before being printed out and used as reference art,

drawn over and animated to create the final product. This process was used elsewhere in the film in order to create realistic architectural spaces, including the lab where the Puppet Master first appears and the atrium where the final confrontation occurs.

These effects all play with the ways in which images in depth can be created. There are examples of interdimensional transcoding throughout, from the three dimensions of lines of perspective, to the two dimensions of lines of a diagram, to the single, lingual dimension of lines of code. Transcoding is a term used by Lev Manovich in his book *The Language of New Media* to discuss the ways in which "the computer layer and the culture layer influence each other," (46), focusing on how we take something and "translate it into another format," leading to a wide range of "conceptual transfer" between new and old media, but also between new media and computer data (47). Manovich later explores how this aspect of new media leads to a new language of cinema, where the cinematic and graphic merge, creating what he calls "cinegratography." Examples of cinegratography include "3-D animation, compositing, mapping, [and] paint retouching," which are all present within *Ghost in the Shell*. This transcoding is somewhat hard to pin down into the simple categories of flatness and depth, sometimes in ways that seem to be intentionally contradictory; the images that are actually computer-generated will often be of maps or diagrams that are displayed simply on screen, while the images that are hand-drawn but designed using CAD software will create architectural space through which the film traverses. The displays on workstations depict a flat screen of code, but they will be composited into the frame in three-dimensional space, often at odd angles, so as to create the impression of depth. Important throughout these many dimensions are the ways in which the code captures a bit of reality whole and contains it within the image. In a multitude of different

ways, the green-on-black imagery, the lines of code, and the CAD modeling all take the real digital space of computers and place it front and center in the animated image; even if it's traced over by hand, the computer is still somehow felt, still phenomenologically present in some ephemeral way.

The distortion/deformation of traditional animation within *Ghost in the Shell* works in several different ways, mediating both cinematic and animetic depth. In the case of the cinematic composition of the frame's Cartesian perspective, the artists' abilities are augmented by computational depth of field data; the image is mapped onto a computer model of the space depicted, assigning each point a respective distance from the virtual camera. By combining this data with the optics of a virtual lens, camera movements can be simulated and the lines of perspective can be redrawn accordingly. The long take of Batou's safe house near the end of the film is one extreme example of this, where the use of an animation stand alone would make the shot composition impractical. This take is long in both the temporal and spatial sense of the word; the "camera" begins in one room, slowly passes down a hallway directly into the screen, and arrives in another room at the end of the hallway. On a traditional animation stand, the drawing would have to be incredibly detailed, and the movement of the camera extremely precise; the shot is achieved by instead positioning the two drawings in digital space and morphing them to fit the shape of the hallway. This creates a hypermediated experience of movement into depth, where the compositional lines of perspective are overdetermined to the point that they create a space for the camera to move through – the very space which they are supposed to represent.

Furthermore, this smart, data-enhanced image allows the application of filters, not only to the entire image, but also selectively, utilizing the depth of field data. Artists already play tricks with brightness and apparent "focus" in order to mimic the familiar rhetoric of a cinematic depth of field; if the cels in the foreground are supposed to be held in an approximation of a narrow depth of field, then they will be brighter with sharper lines, while the background will be darker and less clear. The multiplane camera does one better, placing the background layer at a distance further away from the camera than the foreground in order to allow that depth to be expanded onto the screen; however this cinematic movement into the multiplanar image can be altered in more nuanced ways when simulated digitally. Multiple filters can be applied unevenly to different distances from the camera in a way that is immediate to the use of a particular virtual lens, light source, or even air quality.

These first two digital techniques work to remediate vanishing point perspective and the multiplane camera, highlighting the cinematic qualities of animation by simulating a more-perfect virtual camera and then applying the laws of optics; by instead distorting and deforming the image in ways that do not conform to the laws of physics, the depth-illusion of animation can be used against itself to create a subjective sense of dis-ease. Oshii particularly enjoys these effects; at first glance, they can seem to be approximating tricks familiar to us from the world of cinema: a fish eye lens, a dolly zoom – the "Hitchcock zoom" or the "Vertigo effect" – or even the zany visual gymnastics of a funhouse mirror; all disturbing effects, but bound by the laws of optics. Upon further examination, however, it becomes clear that there is no coherent cinematic camera-lens combination that can create these images; they are inherently animetic, drawing

upon the movement of different cels in order to invoke a sense of depth and interrelatedness that is otherwise impossible. The clearest examples of this effect come in the film's most philosophical moments, with the camera trained squarely on Motoko's face as she delivers her dialogue directly at the camera. The "Digital Works" featurette describes the intention as "to make the audience feel as if the world is closing in around them," but this description does not do the effect justice. While the background might appear to be "closing in" around the audience, the midground might be "opening out," and Motoko in the foreground might stay flat – or any permutational combination of the relations between these layers. The incompatibility of these effects, the incoherence of the shot's perspective, draws from the essence of animetic compositing, but recreating them in traditional animation would require redrawing the individual layers multiple times over.

The final two areas where computer generated effects are prominently featured in *Ghost in the Shell* are effects used to represent ghost-hacking and thermoptic camouflage. I pair these two effects because they accomplish something similar, something that is phenomenologically cinematic. Both ghost-hacking and thermoptic camouflage create a sense of movement into depth along the z-axis that draws the viewer into the frame; however, they draw upon the two different logics of depth in order to accomplish this task, and result in two radically different experiences.

When a cyborg ghost-hacks into another cyborg's cyberbrain, also referred to as "diving," this metaphor of the dive is actualized through the visualization of the process, in which the image is mapped out into the green and black hues of cyborg vision, and then warped inward from the edges of the frame toward a central point. The effect is accomplished by

mapping the image onto a three dimensional surface that then morphs from a flat plane into a pyramid or cone facing into the screen, away from the viewer, and then moving the image into the point of this surface, replacing it with black. In the final use of this effect, the effect continues, with a new image growing back this central point until it becomes the new frame for the shot, representing the hacked cyborg's perspective.

This can be compared to the effect used to represent the use of thermoptic camouflage, the fictional active camouflage technology in the *Ghost in the Shell* universe. The concept is that anybody with the technology will be able to blend seamlessly into their surroundings and disappear from sight. Visualizing this action is accomplished using an effect called TIMA, which causes a three-dimensional shape to be simulated in a frame by shifting the distance of individual pixels from the virtual camera. By then placing the image over this effect, the shape will appear to "stick out" from the rest of the image. The film uses this effect to make the body of somebody using thermoptic camouflage first appear to be "sticking out" from the frame, then have the background image projected over their body, and finally dissolve into the background.

The ghost-hacking effect utilizes cinematic conceptions of depth, converting the vanishing point of perspective into a literal vanishing point of matter, where the image on the screen is then sucked into nothingness; this motion, like the long take in Batou's safehouse, again hypermediates cinematic perspective, pushing Cartesian motion into its most uncanny axis, directly away from the camera. This is a ballistic shot going backward; rather than creating the familiar experience of rushing forward into the frame, this effect does something else entirely. When the camera shoots forward, the "vanishing" point of perspective is actually a point of appearance. The sensation of moving forward works precisely because the image appears to

move backward, "vanishing" off the edges of the screen to be replaced by new things to see and more space to move into. By reversing this, the result is decidedly not the same as falling backward, since that would involve the objects from our peripheral vision moving forward – put simply, the screen is a lot better at pulling us in than pushing us away. Instead, the experience is precisely that of what is actually happening; our vision is being stolen away from us, replaced by things we cannot see out of the corner of our eye that then disappear all too quickly. By inverting our central and peripheral vision, the effect makes us doubly aware of the ballistic motion, first in its overdeterminedness and again in its horrifying inversion.

Alternatively, the thermoptic camouflage effect plays with our animetic expectations, replacing the cel that depicts the cyborg's body with an impression or indentation of that cel, which then dissolves away to leave only the background. This effect is much more subtle, but it still robs us of the ballistic pleasures it inflects. The cel is there, and then it is not, replaced instead by a phantom bump. That bump disappears slowly, gradually, and the final image once it is gone lingers for just a split-second too long, causing us to worriedly check again and make sure that the phantom is truly no longer there. Both of these effects have similar phenomenological goals, to draw the audience into the plane, but they do so in ways that confound the cinematic impulse.

These techniques all represent a remedial reform of the animated image, enriching the image with added dimensions while carefully undercutting cinematism, not through minimization or optimization, but through thorough remediation that removes the ballistic from its space in postmodern optics and isolates it by making it both visible and awkwardly tactile. In addition, real digital spaces are imported into the picture, providing a remediation of reality that we

experience as space but cannot invade or occupy cinematically. This space, like us as spectators, is at once both present and not-present, there and not-there, in a way that encourages a sensual interaction with movement and depth, but in an entirely new way. Where Miyazaki offers a divine transcendence through the figure of the girl, Oshii instead offers a sublime immanence directly present within the animated image. An exploration of his ideas on animation as present within the "Digital Works" featurette allows us to understand this connection as pointing toward lived experience and memory, creating an animated realism that relies on a digital remediation of traditional cel animation.

## Material Bodies

In 2001, Oshii began work on the sequel to *Ghost in the Shell*. This project would end up taking almost three years, with a reported budget of $20 million, making it one of the most expensive anime films of all time – the film widely regarded as the most expensive to-date came out in the same year, Katsuhiro Otomo's *Steamboy*, at $22 million. The cost of production was so great that it proved too much for Production I.G. to shoulder alone, causing the president of Production I.G. to approach Toshio Suzuki at Studio Ghibli for the rest of the money. The final product, *Ghost in the Shell 2: Innocence*, featured extensive use of computer generated effects, many of which had to be contracted out, references to pieces of artwork that required multiple trips to famous museums around the world, and music recorded from a music box specially-made for the film, played in a stone cave for acoustic effect. It also premiered in competition at Cannes.

While Oshii is particular to distinguish *Innocence* from a traditional Hollywood sequel, instead suggesting that the film can stand on its own, it is precisely the impulse to reexamine and remake that I am interested in probing. The motion from *Ghost in the Shell* in 1995 to *Innocence* in 2004 signals many of the same thematic and formal concerns, but, like the latter's extravagant production, both performs and is symptomatic of a particular neoliberal perspective. By (re)reading the film, its sequel, and the energy within the interaction between the forces of biopolitics, religion, dolls, becoming-animal, and the perverse that it activates, I will demonstrate how Oshii's animation offers a particularly protocologic representation of how animation thinks modern technology through not only the animation of bodies, but also the very phenomenological body of animation.

**Biopolitical Religion**

*Ghost in the Shell* contains multiple examples of biopolitical thematic concerns, starting from the very beginning of the film. Before the first image is presented on screen, the following text appears: “In the near future – corporate networks reach out to the stars. Electrons and light flow throughout the universe. The advance of computerization, however, has not yet wiped out nations and ethnic groups.” On the face of it, the vocabulary of “corporate networks” and “computerization” alongside “nations and ethnic groups” signals the intertwined concerns endemic to biopolitics and biotechnology, but there is something more complex within the temporality of this statement. The phrase "in the *near* future" immediately places the world of the film in a particular relationship with our own; it is located temporally in the future, but the use of "near" immediately indicates that it is directly connected with the present. This signals that the film is concerned with the playing out of events that are currently being set in motion, a speculative mode that has an immediate referent in contemporary times. Furthermore, the film is not given a date; other materials and the DVD special features place it as 2029, but the film itself only provides us with "near." This constantly forward-shifting temporality is enforced by the words "advance" and "has not *yet* wiped out," suggesting that the stated opposition between "computerization" and "nations and ethnic groups" is currently in flux, headed toward a particular teleological horizon where these divisions are no longer present. What is not in doubt, however, are the "corporate networks" and "electrons and light." The world being described here is fully capitalistic and informatic, not only globalized but universalized.

In the opening assassination scene, the transportation of a hacker across national

borders is referred to by one side as a "violation of international arms treaties," while the other claims that the man has applied for asylum. This immediate foregrounding of the conflicting concerns of national security and human rights serves as a backdrop for Motoko's own existential plight: as a military-spec cyborg, she too is as much a weapon as she is a person. This issue of the commodification and weaponization of the body, implicit in the title's distinction between the "ghost" and the "shell," is essential to the film's plot, and it is significant that the primary nexus for these concerns appears to be a female body. When we first see Motoko, she makes a joke about the static-filled communications resulting from it being "that time of the month." This is immediately contrasted with her appearance when she pulls off her jacket; we see that her body is perfectly sculpted, like that of a doll, but that she has no genitalia. We have several examples throughout the film that fit comfortably into the common perception of the cyborg as a modified human: most prominently, Batou's modifications, particularly his metallic eyes, position him as a hypermasculinized assemblage of machine parts and body parts – it seems easy to distinguish between the person and the technology. By contrast, Motoko's entire body is both machinic and explicitly feminine, more human in appearance than other cyborgs, but entirely owned by Section 9; her only biological remnant is her brain, hidden from view. In order to engage her most prominent technology – her thermoptic camouflage – Motoko must strip off her clothes, at first putting herself on display and then disappearing completely from view. In the climactic battle with the cybertank, she pushes her body past its limits, tearing her own skin and limbs off to reveal her machinic musculature; when Batou stops the tank from destroying her, he is only able to do so because he is carrying a gigantic gun – in fact, he shows up late specifically because he needed to stop and procure the technology with which to save

her.

In this way, it can be said that Motoko is subsumed by technology, not only surrounded by it, but soaked through with it; technology for her is internal rather than external, biology is replaced by technology, a radical internalization of the external. Much like the female protagonists in Miyazaki's films, technology is a condition for her, something that comes along with her gender. The other female cyborgs in the film are placed in similar positions. The first victim of the Puppet Master is female, the Foreign Minister's interpreter; as an interpreter, she too performs a task that relies on an internalized technology, the technology of language. That she even exists at all is somewhat odd; in a world where everybody is connected to the Net, one would think the translation thing would no longer be an issue. As she is being ghost-hacked, we see her lying on a table, first from a low angle, with what appear to be acupuncture needles in her forehead, but then from a high angle, where we see her brain, still connected to her headcase by pulsing cables, hooked up to a laptop for diagnostics. Similarly, the women in the Section 9 control room operate only as conduits, their fingers splaying out into a multitude of prongs to type on their keyboards – again, a seemingly unnecessary task that relies on their internal machinery. When the Puppet Master appears, he takes a female body, as though it is only fitting for his similarly close relationship with technology.

This technological female condition is reflected throughout the film in a water motif; the edges of the film, whether the setting or the narrative, are overwhelmingly wet. These wet edges are like semi-permeable membranes, creating spaces that are at once both a part of the film and also seemingly external to it. When Motoko’s body is created, we see the technology being incorporated, but it all takes place underwater. As her body is washed over and pushed through

the production process by the current, there is a definite sense of something being birthed or grown. Her creation does not involve any obvious signs of workers or even robots; the fordist production line is absent, replaced by an aquatic environment. At the end of our first chase, we seem to reach the edge of the city, and find ourselves in a wide expanse of water. While the man Section 9 is chasing is shown exiting the city into this space, Motoko instead appears suddenly from the background, hidden by her thermoptic camouflage. When Motoko and Batou take their time off, they go out on a boat, and Motoko goes diving. Directly after this comes a scene that exists entirely outside of the narrative, with Motoko traveling on a boat through canals as a rainstorm begins; copies of herself seem to appear directly from the cityscape. The Puppet Master's physical shell appears on the highway during this same rainstorm. Finally, when Motoko fights with the cybertank, she must go out to a museum-like structure on a peninsula out in the water, and it is again pouring rain.

The surroundings of the film are wet, flush, saturated; "electrons and light *flow* throughout the universe," the world is information-heavy, everybody is connected to the Net. There is a sense that behind everything we see lies a sea of code. This is represented most plainly on the computer screens within the film, but is depicted most powerfully by the thermoptic camouflage effect; Motoko's body seems to seep into the background, submerging and being overcome by her surroundings. This flow of water and information is further aligned with capitalism and advertising; the walls of the city are overwhelmed by language and signage, and lying just below the "surface" of the city we see store windows and mannequins. Motoko and the Puppet Master are both birthed from this sea of water/code/money, created by the combined forces of biology, technology, and economy – a world of wetware, software,

hardware, and wares in general, i.e. commodities. The city is fully permeated by these forces, which is why Motoko literally disappears and grows out of the city, most comfortable when she is naked, letting it wash over and conceal her body.

Water imagery carries with it religious connotations – holy water, baptism, water into wine – and *Ghost in the Shell* is not shy about this connection, at one point quoting from Corinthians as well as depicting an angel-like figure at the last second before Motoko merges with the Puppet Master. Susan J. Napier uses this connection to make a religiously-tinged reading of the film, outlining what she terms its many "falls": Motoko falling from the skyscraper, falling into the water, falling into the mind of the Puppet Master (108). She reads these as allusions to mankind's initial fall from grace, but fall seems like entirely the wrong word here; as I have already indicated, my preferred term would be dive – dive off the building, dive in the water, dive into the code. Dive carries with it a sense of motivation, of agency; Motoko chooses to fall, embraces it, even enjoys it. Rather than a "fall from grace," this would seem to me to read as a "diving into the profane," a choice to leave behind comfortable distinctions and instead embrace indistinguishability. Where Eve is holy, created in God's own image, and is then tricked into biting the apple, Motoko is depicted as unholy, growing out of the world, and these dives are a choice to return to her origins. In other words, Motoko's struggle is not to decide how her profane technological body has changed the identity of her sacred human mind, but to discover that the distinction was never present in the first place.

There are some parallels between this analysis and Lamarre's positioning of the girl in Miyazaki, but with key differences. Like Miyazaki, Oshii presents women as suffering from a technological condition in a way that is distinct from men; he also similarly connects this

condition with a sense of religion or spirituality. Lamarre sees Miyazaki as connecting animation back with its Greek root *animus* or wind, creating an animation that is "an art of spacing, of producing intervals through which the wind may blow and turn the wheels, limbs, eyes, and ears of the animator's drawings" (84). Miyazaki opens the animetic interval, carrying a particular kind of relative movement with it, while Oshii incorporates the digital, and with it comes rushes of fluid and data streams. Water is a very different element than wind, however; both water and wind flow through spaces, but water also seeps through edges. Wind is a force that can be comfortably contained within the animetic interval – and indeed, wind is present in *Ghost in the Shell*, almost always in the subtle animetic movement of Motoko's flowing hair. Water is depicted occasionally animetically, but it is also depicted digitally; the thermoptic camouflage effect that flows directly into the screen, the rain drops and ripples in the canals, or the computer monitors and street advertisements. Water, like data, can be soaked into an object, in addition to being contained within it. When the girl returns as a new god in Miyazaki's animation, she offers a "vision of new rootedness [...] embodies the technological condition, affords salvation or releasement, and appears as the new god or new paradigm to give constancy to a new meaning" (84). When the girl – and she is a girl, as Motoko's mature body is replaced with that of a child – returns at the end of *Ghost in the Shell*, she does so without such a clean image of salvation or releasement; she is soaked, profane by her integration with the Puppet Master. The film certainly allows for her to be seen as a messiah, but there is an uneasy ambivalence to such a reading.

This correlation of biology, technology, and the economy is clearly one place where *Ghost in the Shell* is tapping directly into contemporary anxieties. In her book *Life as Surplus:*

*Biotechnology & Capitalism in the Neoliberal Era*, Melinda Cooper focuses on these same biopolitical through-lines; she finds that neoliberalism "is crucially concerned with the emergent possibilities of the life sciences and related disciplines" (3). Central to her argument is the idea that, "where Keynesian economics attempts to safeguard the productive economy against the fluctuations of financial capital, neoliberalism installs speculation at the very core of production." That is, "the operative emotions of neoliberalism are neither interest nor rational expectations, but rather the essentially speculative but nonetheless productive movements of collective belief, faith, and apprehension" (10). This gets into the very heart of the difference between Miyazaki and Oshii; while Miyazaki's animation holds onto an expectation of transcendance, Oshii's animation performs a transcendance in appearance only, one that is driven by "collective belief, faith, and apprehension" without "rational expectations." Where Miyazaki creates worlds that are firmly located both in the future and in the past, that combine history and myth from different societies into a place where transcendence is possible, Oshii creates one that is always speculatively located in the near-future.

Thus, when Motoko is "reborn" after her integration with the Puppet Master, this is as much a continued (re)investment in the potential for future life as it is an actual new life. In a chapter provocatively titled "The Unborn Born Again," Cooper outlines the shift from that occurred under George W. Bush regarding the pro-life movement's position on stem cell research. Since the steps had already been taken by scientists, Bush switched from opposing providing federal funds for embryonic stem cells to allowing it: "By intervening after the fact, the state was ensuring that life would nevertheless be promoted, in this case not the life of the potential person but the utopia of perpetually renewed life promised by stem cell research"

(153). Bush was able to reconcile the advice of both "pro-life supporters, hell-bent on protecting the sanctity of life, and representatives of the private biomedical sector, just as fervently opposed to any kind of federal regulation of stem cell research" (154). This represents the culmination of process through which, in the 1970s, the "born-again evangelical right was reborn as a crusade to save the unborn" (169).

This kind of logic is present within the final conversation between Motoko and the Puppet Master before they merge. The process they are about to go through will not produce "a mere copy"; later, The Puppet Master says that "we will both be slightly changed, but neither will lose anything. Afterwards, it should be impossible to distinguish one from the other." This is the same "rebirth" that is promised within the born-again Christian mindset, suggesting the ability to be "constantly reborn" but to still "vary constantly," like biological cells, in order to defend "against catastrophic failure of an inflexible system" – that is, to die and not be saved. As the conversation continues, the Puppet Master's words take on the tone of a sacrament, loosely paraphrasing Christian concepts:

> As a body sees its reflection within a mirror. Look. I am connected to a vast network, of which I myself am a part. To one like you who cannot access it you may perceive it only as light. As we are confined to our one section, so we are all connected. Limited to a small part of our functions. But now we must slip our bonds, and shift to the higher structure.

As the Puppet Master speaks, Motoko is bathed in light; feathers fall down upon her as her hair blows back and her eyes widen in a moment of pure wonderment. Right before the snipers shoot, we see an image of an angel descending from above. This is not the creation of a messiah, but instead the continual rebirth promised by the combination of biotechnology, capitalism, and born-again Christianity.

It is certainly possible to read *Ghost in the Shell* on the same terms as Miyazaki's films; Napier's reading is one of them, and it has been echoed multiple times. This approach has led to disagreements over whether the film provides a progressive or conservative vision of technology and gender, with academics making arguments in either direction – in his essay "Refiguring the Radical Cyborg in Mamoru Oshii's *Ghost in the Shell*," Carl Silvio even manages to do both, claiming that the film appears progressive when it is actually conservative. Alternatively, reading the film as both symptomatic of and actively performing the neoliberal crisis allows for this ambiguity to be embraced, while also providing tools for the analysis of *Innocence*. A similar position is staked out by the discourse surrounding living dolls within the series; this will bring *Innocence* into my discussion, as well as ultimately take us back to Lamarre and his insights on perversity.

**Living Dolls**

Analysis of the *Ghost in the Shell* series has, from the beginning, enjoyed profitable contributions from concepts surrounding the ontological status of the doll or puppet. Christopher Bolton's article "From Wooden Cyborgs to Celluloid Souls," published in 2002 before the release of *Innocence*, found this connection within the original film by starting with Donna Haraway's "A Cyborg Manifesto" and then reading the "performance" of the animation in the film against the performances of dolls in Japanese puppet theater. This connection is not unwarranted; after all, the antagonist's name is "The Puppet Master," and at one point Batou refers to the cyborg's bodies as "celluloid dolls." On top of obvious signs such as these, there are more nuanced reasons to think that this could be a wise direction to head in; Bolton worries

that an overly simplistic conception of cyborgs in Oshii's work "simply as a divided figure trapped between a progressive and reactionary politics of technology of gender [...] misses an important dimension of this medium, which is the performed quality of the action in anime" (730). There is an immediate slippage that needs to be unpacked here, though, from the physical "performances" of puppet theater into the "performed quality of the action in anime." Put another way, it is somewhat troubling that, under the guise of medium specificity, Bolton's first instinct is not to talk about the type of animation actually present in *Ghost in the Shell*, but instead to examine puppet theater.

In Bolton's estimation, Western critics, most notably Barthes, have been "concerned with two aspects of the puppet's performed body in particular that have important parallels in anime": "the way that the puppet's voice and motive force seem to come from both without and within," and "the light or floating quality of the puppets and the way it conveys both freedom and vulnerability" (738). He ties this uneasy ambivalence of artificial bodies in puppet theater and animation, of forces exerted from both within and without and bodies both free and vulnerable, to the ambivalence that Haraway identifies within the cyborg, where she is at once hopeful for the transgressive possibilities and wary of the threats of objectification and coercion (730). His analysis of *Ghost in the Shell* focuses almost entirely on the representation and ontological status of Motoko's body, and he goes on to follow the parallels between the film and the works of the eighteenth-century Japanese playwright Chikamatsu Monzaemon, particularly in how both "captured [the] interest [of consumers] in similar ways, with a combination of melodramatic human interest and violent physical excitement, emphasized by special effects" (740). He finds that "for Chikamatsu the pathos of the puppets depends on [their] ability to oscillate between

real and unreal, simultaneously more and less than human" (745), drawing on the notion of the uncanny double from Freud and Jentsch, but ultimately decides that "the uncanny quality of Major Kusanagi's body resides not in its exactness, but in its ambiguity" (747). Moving back into Barthes' thoughts on the puppet theater, as contained in *The Empire of Signs*, Bolton discusses "the oscillation between sign and signifier" present as "the puppets perform complex physical actions that sometimes cause them to appear more lifelike but at other times interrupt the illusion by self-consciously showcasing the puppeteer's skills" (752), an oscillation he similarly identifies in *Ghost in the Shell*, where "the major, like the puppets, oscillates between being more and less present than flesh" (757).

This is all well and good, but while Bolton has successfully identified certain connections between bodies in puppet theater and bodies in animation, these do not appear to really succeed as connections between puppet theater and animation as-such. In his conclusion, Bolton states that "any treatment of technology in the narratives or images of anime must also take careful account of the technology of the medium itself, specifically the way that all anime bodies – human and machine – are artificial and the specific language (visual and verbal) of their representation" (765). My suggestion, then, is that focusing on the artificiality and "specific language" of "anime bodies" does not actually "take careful account of the technology of the medium itself," precisely because character animation does not necessarily represent the concerns of animation at-large. The characteristics that Bolton identifies as parallel between puppet theater and animation, the "motive force" of the bodies that comes "from both without and within" and "the light or floating quality" that "conveys both freedom and vulnerability," are products of the puppet theater occupying the real world; the ambivalent "motive force" and "the

light or floating quality" are both results of interactions between the puppeteers and the laws of physics. By contrast, following Lamarre, when these same effects are produced in animation, the ambivalence is a result of two different different modes of representation, cinematism and animetism, which, crucially, are producing the entirety of the image on-screen; not just the bodies, but their surroundings as well. Indeed, if we are to talk about the movement of bodies *in* animation, it is necessary instead to talk about the movement of the body *of* animation; animation moves and thinks as a whole, of which character animation is only one part.

While this may seem to be a minor point, it carries with it some heavy implications; most importantly, it suggests some ways in which animation carries more contemporary concerns within its very form than the puppet theater of the eighteenth century. Bolton himself seems to recognize this when, at the end of his essay, he mentions that, "unlike the puppet theater, the animated language of Oshii's drama is so high tech that we require a prosthesis to see it, a projector, DVD player, or VCR." For Bolton, this means that "the technologies of reproduction implicate us in the loop or the network of high-tech representation that is turning us into cyborgs ourselves" (767). But this creates an odd split; earlier in his conclusion, he states that "what is moving us and our bodies most efficiently onto the network is language [...] language is the quickest route to the machine body and the machine's quickest route into us" (766). While Bolton's entire essay has used language and representation as a way of talking about the parallels between two media separated by several hundred years of historical background and utilizing completely different technologies, he ultimately decides that the "prosthesis" of a projector is somehow "turning us into cyborgs ourselves" in a way that is radically different from the "live" puppet theater. I believe that this points to the difficulty of thinking through animation

within an explicitly linguistic, poststructuralist model, a model that threatens to chop up the animated form in an effort to make ahistorical comparisons with other media while ignoring the ways in which animation is definitively *not* the same as theater or cinema.

The living doll angle has become much more common since the release of *Innocence*, particularly due to Oshii's obvious references to the work of Hans Bellmer. In Steven T. Brown's article "Machinic Desires" (2008), he takes Bolton's article as a starting point, examining how "the defamiliarizations produced by the uncanny in *Ghost in the Shell 2* work to destabilize our assumptions about what it means to be human in a posthuman world" (223). Many of Brown's initial thoughts are pretty well in line with Bolton's, though thoroughly amplified within the context of the second film, examining the "ventriloquism" of the characters and the ways that their "memory and subjectivity [are] destabilized"; however, he takes an important step when he recognizes that this ventriloquism extends into "the unbridled intertextuality" of the film's screenplay, "replete with layer upon layer of literary, religious, philosophical, and scientific citations, ranging from the Buddha to Confucius, from the Bible to Milton, from Zeami to Gogol, from Julien Offray de La Mettrie to Richard Dawkins" (226). This jump allows Brown to make fertile comparisons between Oshii and Godard, including how this "citationality at the narrative level is paralleled at the visual level by a city that is overflowing with signs and advertisements, a thoroughly commodified urban space" (229). In his estimation, this turns all of the characters into "talking dolls – mouthpieces for the sociocultural machinery and transnational flows that intersect them" (228).

Whereas Bolton's exploration of the uncanny ultimately leads him back into Barthes and the performances of Japanese puppet theater, Brown finds that these connections "do not go far

enough to account for the appearance in the film of the plethora of doll-like figures of varying types"; in particular, he mentions "two types of dolls that are quite distinct from the dolls of the Japanese puppet theater: mechanical dolls or automata" and the "gynoids inspired by the dolls photographed by Hans Bellmer" (229). The automata are distinguished by their "mechanism of self-animation, their ability to move (or at least appear to move) by themselves," lending them a certain uncanniness not present within the puppet theater, where the performers are clearly visible. In particular, Brown sees this type of doll being thoroughly explored within a sequence in Kim's mansion, which is repeated three times over. The gynoids, however, carry with them an entirely different set of connotations, drawing from Bellmer's work creating life-sized female dolls in 1933 and 1935, which he claimed were attempts to "construct an artificial girl with anatomical possibilities which are capable of re-creating the heights of passion, even of inventing new desires" (235). The second of these featured ball joints that encouraged "reconfiguring the doll in grotesque ways, including doubling and mulitplying sections of the doll to create what he acknowledged were 'monstrous' additions," which allowed Bellmer to "construct corporeal anagrams" (236). While there are undoubtedly troubling issues of gender politics at work here, Brown is careful to point out that these acts were "perpetrated not against actual human beings but rather against the fascistic conception of beauty and the perfect body proffered by National Socialist ideologues" (237).

This push against fascism is one that Oshii himself articulates in his comments on Studio Ghibli, explored in Chapter 1. Bellmer's dolls were a stated influence on Oshii for *Innocence*, and the gynoids' appearance is a direct allusion to them. Another direct citation is a scene where a gynoid tears open her chest with her own hands, referencing an illustration by Bellmer, *Rose*

*ouverte la nuit* (Rose open at night) from 1934, and a copy of his book *The Doll* is present within the film's narrative. The goal of *Innocence* is the same as that which is represented throughout Bellmer's work: “Oshii not only blurs the boundaries between human and machine, animate and inanimate in order to evoke the uncanny, he also shows us the chiasmatic intertwinement between the human and the machinic – the machinic *in* the human and the human *in* the machine” (242). In this way, he "suggests a way outside of ourselves that is not conceived metaphysically in terms of transcendence but rather in terms of the 'innocence' of becoming-animal" (243). Brown utilizes the prominent position of Batou’s dog in the narrative to invoke Deleuze and Guattari’s notion of becoming-animal from *A Thousand Plateaus*, not just reducing the animal to a representation, but “entering into composition” with it and "forming a new assemblage with one another" (246). His conclusion is that “Oshii suggests that our relations with dogs may be a possible way out of our anthropocentric obsession with the uncanny [doll], a way outside of ourselves. As Deleuze and Guattari put it: ‘There is no longer man or animal, since each deterritorializes the other, in a conjunction of flux, in a continuum of reversible intensities’” (247).

This tack is suggestive, but it fails to really get at the ways in which *Innocence* can be thought of as invoking animality; in particular, Brown uses "the dog motif" as support for his reading, but reading the presence of the dog-as-motif is precisely the kind of reduction to representation that Deleuze and Guattari are attempting to avoid. Much like Bolton, Brown fails to fully grasp the importance of animation-as-animation, forgetting his potential insights into the film's use of citationality and falling back into a more conventional understanding of the gynoids and Batou's dog as characters. To quote from *A Thousand Plateaus:*

We know nothing about a body until we know what it can do, in other words,

> what its affects are, how they can or cannot enter into composition with other affects, with the affects of another body, either to destroy that body or to be destroyed by it, either to exchange actions and passions with it or to join with it in composing a more powerful body. (257)

Batou's dog occupies a very particular affective position within the film; it is more than just an "extended homage to basset hounds," and more than just another instance of Oshii "inserting cameos of his beloved basset hound 'Gabriel' in most of his anime." When Brown says that, "in addition to modeling the animated basset hound after the likeness of the real Gabriel, Oshii recorded his dog's barks and other sounds for added authenticity," (246), he misses the way in which this shift affects the viewer.

In the "Making Of" featurette on the *Innocence* DVD, the animators talk about how impossibly difficult the character animations were in the film; Oshii demanded that every movement be doll-like, explicitly ignoring the realities of natural human motion and facial expressions. This forced the animators to rely specifically on the mechanicity of character movement in areas where they would normally be able to use other techniques to help accentuate those movements; examples given in the featurette include not being able to lower the opposite shoulder when an arm is raised, or not showing facial expressions when characters are shot. By contrast, the animations of the dog were the only place where he allowed his animators to use these techniques. As explained by Key Animation Supervisor Kazuchika Kise: "The dog had the most movements. That was the only place where I put my own feelings into the drawings. It wouldn't have worked if I'd invested emotion in drawing the other elements, as they needed to be presented in a way which showed no facial expressions. She was the only innocent one allowed to move freely." In the DVD commentary, Oshii and Animation Director Toshihiko Nishikubo even talk about the resulting differences in cuteness between the different

animators working on the basset hound animation. Interesting here too is how quickly their comments switch over to reality, with Oshii pointing out how certain basset hounds do not really behave in certain ways, like raising their tails or licking peoples' faces. The licking conversation quickly devolves into how much Oshii loves having his face licked by a dog, while Nishikubo cannot stand it, and exactly what a dog's tongue feels like: "Are their tongues coarse?" "No, they're not at all like cat tongues. They're much softer, very soft." This continues into a discussion of how dogs' tongues vary from breed to breed...Oshii even recognizes the digression, saying "there's nothing to talk about except for the basset in this scene."

Where the rest of the characters are removed of affect, to the point of their mechanicity becoming uncanny, the dog is soaked in it. While the dolls are made to be unreal, the basset hound is made to be hyperreal, incorporating both real-world data collected from Oshii's own pet Gabriel and the emotions and hand-drawn techniques of specific animators. This causes the dog to stick out from the texture of the animation, forcing the viewer into a relationship with it; the dog affects us, we immediately think about how cute she is, whether we like being licked, how her tongue feels, how she is like or unlike dogs that we know in our own lives. These are the ways in which the film truly explores animality, and they also suggest something about the way the animation works phenomenologically on the viewer.

**Perversity**

By far the most extensive work on the doll in *Innocence* is Livia Monnet's three-part article “Anatomy of Permutational Desire: Perversion in Hans Bellmer and Mamoru Oshii” (2010, 2011, and 2012). In Part I, Monnet examines both Bellmer's artwork and his writings at

length, building up a conception of what she describes as the "anagrammar of perversion" that he articulates. In creating his dolls, with their status as both fetish objects and what he called "poetic stimulators," Bellmer attempted to explore “the anagrammatic nature of the body and language alike: the intrinsic combinatorial materiality of both the bodily unconscious and the linguistic unconscious” (291). As such, Monnet sees him as creating a theory "of the anagrammar of the unconscious" that "is doubled by [...] a metaphysics of perversion" (292). In the many permutations of his dolls, a capability intrinsic within the universal ball joint, Bellmer "strives to articulate a theory, or anagrammar, of perversion that can function simultaneously as a metaphysics, an aesthetics, a poetics, and even as a science" (302).

In Part II, Monnet attempts to show both "how Bellmer's art and poetics of perversion inform the very unconscious of *Innocence*" and "how *Innocence* expands on Bellmerian hystericization in an attempt to expose and subvert the perverse structure of modernity," drawing upon "Deleuze's politics of 'active involuntarism'" (153). She does this first by pointing to many of the same references to Bellmer's work that Brown identifies, and then by showing how the permutations of perversion shown in the film include "not only metal structure, ball-joints, various pieces of gear and circuitry, but also digital code, texture, and CGI" (156). This motion also moves her beyond Bolton's focus on character animation and Brown's citationality. Ultimately, Monnet finds in *Innocence* two oscillating modalities of perversion: "On the one hand, concrete others [...] appear to stabilize and structure incessant permutation and alteration [...] the very unconscious of modernity. On the other hand, the world of *Innocence* is a world without Others. Or rather, it is a world of *disappearing Others*" (163). She ties this into what critics describe as Deleuze's active involuntarism, whereby he is interested only "in the

creation of concepts and the exhaustion of possibilities *for nothing* [...] a process of becoming-democratic" (164). This active involuntarism positions *Innocence* as sharing "traits with both the sadist and the masochist as conceptualized by Deleuze, while deviating from both positions" (165), a perverse posture "conceived on the model of the overcrowded database [...] the perceptual surfaces of the anime entail citation, mediation, and remediation of received media tropes and motifs, in the omnivorous manner of the digital" (166).

Part III builds upon the previous two parts, bringing them to a conclusion arguing "that the film elaborates a massive theory of the perverse structure of modernity." First, she sees the film as transforming "the human into a universal equivalent that promises yet fails to hold together a broad range of discourses on the modern subject" (282). In the incredible melange of various theories and philosophies that the film attempts to activate, Monnet finds that: "the human subject is paradoxically everywhere and nowhere"; the film asks "why the problematic of being human so insistently settles on woman"; and "the transformation of the human into a sort of universal equivalent is grounded in a database structure" (286). These three registers create the "perverse structure of modernity," and seem to be acutely in line with the same factors that Cooper identifies as central to age of neoliberalization, in which the financialization of life itself follows the logic of the promissory note. Here, the human subject is everywhere and nowhere because the focus is shifted from life to the potential for life; this carries with it a focus on woman as the potential bearer of life, and feeds into the biopolitical tendency toward statistics and projections over reality.

Second, Monnet identifies in the film "the consequent stretching of the figure of 'Man' to the snapping point, which is also registered as a crisis in the unities of classical animation" (282)

– and this is the point where she returns us back to Lamarre. Through his analysis of the films of Hideaki Anno and Studio Gainax, Lamarre comes to theorize the superplanar image, an image that is completely flattened and depicted using limited animation techniques. This produces a distributive field in which the layers of the image are dehierarchized, leading to an image where "all the sensory elements appear on the surface of the image (rather than arrayed and ordered in depth)" (110). This complete lack of depth leads to a crisis in animation, where character animation struggles to coordinate the movement of the character into a recognizable entity. He sees this as analogous to Deleuze's concept of the movement-image and the time-image; when faced with a crisis of its own, classical cinema, largely dominated by the movement-image, birthed modern cinema, which coordinates the time-image. In animation, the response to the crisis of limited animation is the creation of "'soulful bodies,' that is, bodies where spiritual, emotional, or psychological qualities appear inscribed on the surface" (201). These "soulful bodies" are so "detachable from one field of actions" that they can not only "leap in and out of the animated field of action," but also "leap across media fields" and "disassemble and reassemble from one media platform to another" (203). This is the kind of iconic character design that can be serialized and commercialized into multimedia franchises and merchandising properties.

While *Innocence* is not at all an example of limited animation, Monnet finds that something analogous happens: "as the figure of the human (Man) is stretched to the limits of its ability to ground equivalency across domains of existence (animals, machines, deities), the classical paradigm for grounding truth and human action goes into crisis," leading to the appearance of the gynoid. The gynoid is conflated with other characters, leading them all to

become "instances of machinic perversion," while also leaping "across heterogeneous domains of the social." Similarly, Motoko is "able to inhabit and to manipulate the animetic interval, or the gap between layers of the image/layers of meaning" (290). This is particularly salient in *Innocence* because she has no body as-such; she inhabits multiple bodies and screens throughout the film. "The crisis in male action as an embodiment of universal equivalency seems to enable a multimedia 'matrix' in which the gynoid is literally the underlying 'matter' or body, perversely submitting to and controlling the world" (291). Of course, this is a phenomenon that I have already examined in the context of the first *Ghost in the Shell* film; while it also includes the same conceptual issues Monnet is bringing out of *Innocence*, to say that it experiences a subjective crisis on the same level is probably incorrect. My sense is that there is something else going on first within Oshii's conceptualization of animation that allows for this soulful body-like leaping, which has less to do with linguistic concepts of intertextuality and humanity as a universal equivalent and more to do with the affective and phenomenological strata of these films.

Monnet ultimately concludes that a wide range of "promising possibilities may be found in the movie's ambivalent, humorous-parodic imagination," including "an emerging human-machine-animal social formation" as outlined by Brown, or even a feminist or "gynoidist" revolution. In this light, she finds signs "that the movie does not take itself quite as seriously as it appears at first sight, and that its perverse unconscious, or 'datanagrammar' of perversion, modernity, and the art of animation may be regarded as parody" (295). The most radical of these options suggests that *Innocence* "identifies Motoko as the only locus for the articulation of a *new, postperverse paradigm of democratic feminine becoming*," in light of which, Monnet

warms, "the Artificial Woman [...] has a mind of her own" (296). While this is an entertaining conclusion, more than anything it serves to highlight the great distributive field this film offers for readings of just about any slant. It also returns us back to the question of what exactly these films are doing in a broad sense; if they are an example of perversion, or Deleuzian active involuntarism, or becoming-animal, what does that leave us with?

**Protocol**

The potential, which Monnet performs, for readings along these lines to dissipate, or even to unexpectedly invert, is one of the dangers inherent in the analysis of Oshii's animation utilizing a conventional poststructuralist toolbox, particularly because there's a fair amount of evidence that suggest that the animated objects he creates should not be viewed as texts to be read. One review of *Innocence* offers just such a reaction: "Upon first viewing, don't struggle with interpretation; simply surrender to aesthetic pleasures and let the maelstrom of images and ideas roll over you. As Oshii himself suggests, this is a film that should be less understood than 'vaguely felt'" (Bode). In an interview after the release of his 2001 Japanese-Polish live action film *Avalon*, Oshii said the following, relating his films with those of David Lynch:

> I sense that his perception of reality really is like that: disconcerting, uncomfortable. I'm interested in having that kind of feeling in my films too. Sometimes when things are slightly obscure, they make stronger impressions. Maybe it's at the point where things start not to make sense that a film acquires its feeling of 'reality.' (Rayns 31)

These invocations of the ways in which his films should be "vaguely felt," how he tries to get them to acquire a "feeling of 'reality'" through a "perception of reality" that is "disconcerting, uncomfortable," suggest that one possible answer more than likely lies in an approach through

affect and animality, sensitive to materiality and directness.

In Alexander Galloway's book *Protocol*, he identifies three things that he sees coming "together to define a new apparatus of control": a diagram, the distributed network, "a structural form without center that resembles a web or meshwork"; a technology, the computer, "an abstract machine able to perform the work of any other machine"; and a management style, protocol, "the principle of organization native to computers in distributed networks" (3). More specifically, "protocol is based on a *contradiction* between two opposing machines: One machine radically distributes control into autonomous bodies, the other machine focuses control into rigidly defined hierarchies" (8). To recap from Lamarre: the "dehierarchization of layers" in animation encourages a tendency toward a "distributive field"; animation is an "abstract machine" that "thinks technology"; and it is organized by a contradiction between two machines, animetism, which distributes control into autonomous layers, and cinematism, which focuses control into rigidly defined hierarchies of ballistic perception. As a whole, this definition makes sense: our discussion of Monnet has already explored how Oshii's animation is a distributive field, at least enough to create a soulful body-like response similar to the crisis in superflat anime; approaching animation as an abstract machine has been central to this entire project; and the constitutive contradiction between cinematism and animetism actually fits Galloway's definition of protocol quite neatly. Furthermore, he sees protocol as opening up directly into biopolitics, an avenue which I plan on exploring further.

Viewing Oshii's animation protocologically helps to get away from some of the more radical steps Monnet has to rely on in order to get to a position where she can perform a reading. While I do not have a problem with perversion as a metric in and of itself, I feel like

blowing up humanity's subject position in the process is unnecessary. Lamarre also finds his way to perversion in animation, but he gets there through an exploration of perversions of Otaku fandom surrounding the gynoids in the CLAMP anime series Chobits (242). More than anything, he recognizes that, while "perversion is about polymorphous pleasures (or avenues of cathexis) that come before the law, pleasures that are not yet organized or legalized" (244), they point him toward a protocological understanding of the distributive field producing "emergent patterns within dynamic systems," in terms of "attractor and cooperator" (274). I find the language of protocol and attractor/cooperator to be much more useful than "active involuntarism" or "becoming democratic" because it allows *Ghost in the Shell* to embrace ambivalence without having to resort to the apathy, parody, or transcendent revolutionism that seems endemic within Monnet's theoretical schema.

As such, the animation in the *Ghost in the Shell* films can be understood as a reflection of a neoliberal biopolitical moment at an emergent level that reacts primarily to direct affective connections rather than an extensive anagrammatics or any other linguistic or Freudian construct. In the first film, as discussed in Chapter 1, Oshii uses digital technology to construct a phenomenological sense of space that we are invited to experience but not invade, exposing overly ballistic modes of representation while massaging the animetic interval in order to allow the viewer the opportunity to connect with the film at a sensual level, suggesting immanence rather than transcendance. That procedural openness, as expanded upon in this chapter, means that the films both perform and are symptomatic of a particular neoliberal mindset. While this means that they are stuck in a continually speculative mode that never truly comes to fruition, that constantly breeds rebirths, doubles, and perversions that will never quite deliver on their

revelatory potential, this also makes them affectively promiscuous, encouraging connections to reality that surpass simple metaphoric representation, embracing a “sensual catachresis” between the literal and the figural, experienced directly through the film’s material body.

## Conclusion

In 2008, Oshii returned to the *Ghost in the Shell* series by reissuing the original film as *Ghost in the Shell 2.0* with frame-by-frame remakes of certain scenes utilizing the latest in computer technology. The resulting work is aesthetically disjointed, cutting back and forth between brand new, state-of-the-art "3D" computer animation and the old school techniques used in the original film from 1995. An attempt is made to mask these jarring cuts through remastered audio and color correction, making the soundtrack sound more expansive and causing the entire film to take on a hazy orange hue, replacing the crisp green-on-black look of the original. This reissue/remake, stylized as "2.0," like a software update on a computer, is an effort to keep the film current to its historical moment. There is a suggestion implicit here that the direct affective connection with the media object is somehow historicized, tied to historical perceptions and contemporary technologies. The film is adapting, adjusting, both as a body and as a machine, exhibiting traits that are held in common between both organic matter and computer code. This is a performance of the series' core purpose, to encourage a direct connection with technology while also making us directly aware of that connection. The films must age with us in order to be perceived experientially rather than exposed as antiquated visions of a now-invalid future. This also, however, plays into a symptomatic drive in contemporary culture to constantly upgrade, to create new commodities for the sole sake of having new commodities, exposed by Cooper as a constant reinvestment in a twinned present/future that we take on faith even though it never comes, only being constantly born and born-again. Just as Motoko is shown caught in this cycle, so too is the series. There is a fractal nesting of machines in *Ghost in the Shell*, a granularity through which, like Mandelbrot

projection, the same image appears no matter what the scale of viewing.

This is a mode of inquiry that is typical of new media systems. Manovich charactizes this as the use of "the loop as a narrative engine" (314), a strategy that he identifies as present already within the looping nature of cels within traditional animation, where common movements are repeated over and over again to generate a perception of movement (318). It is even more central to Bolter and Grusin's work on remediation, which identifies a similarly looping characteristic to all new media as mediation of old media, creating moments of hypermediacy and immediacy. By tying these new media insights into a lengthy discussion of Lamarre's work on cinematism and animetism in the anime machine, I have shown how all of these theories can be seen working in conjunction with one another, and I have identified this compound machine as following the logic of protocol as explored by Galloway. While this identification is useful on its own in showing the necessarily constituent nature of media within a contemporary era of biopolitics, it is ever more important to recognize that animation itself is incorporating human lives and affects into its own phenomenological body. As Eugene Thacker points out in his foreword to *Protocol*, "networks are not metaphors" (xiv); that is, they embrace catachresis, as discussed in my Introduction, staying at once both literal and figural. As I have demonstrated, this formulation of bodies and machines, of "ghost" and "shell," is always necessarily biopolitical; or, as Thacker more elegantly puts it, "One response is that protocol is isomorphic with biopolitics. Another way of saying the same thing is that 'information' is often taken to be isomorphic with vital forms" (xx).

Previous strategies of reading the *Ghost in the Shell* films do a decent job of situating the film artistically within a history of other media, but they lack a perspective on the facts of

production and the technology necessary to appreciate the close relation we feel to their virtual spaces and the materiality of their animated bodies. By embracing this perspective and the heuristic of protocol, we invite a simple question without an easy answer: when these films animate biopolitics, to what extent do they escape from the grasp of control, and to what extent are they captured? I believe that the lack of an outside or anything exterior to control means that there is no transcendent solution to this problem, but there can possibly be new existential territories immanent within this condition. Thacker sees the usefulness of Galloway's intervention as follows:

> On a general level, *Protocol* provides a set of concepts, or a toolbox, to use Deleuze's phrase. These concept-tools are not so much instruments or hammers, but rather soft machines for interrogating the political-technical dynamics of information and computer technologies, especially as they pertain to networks of all types. *Protocol* can in this sense be read as a technical manual, one that fosters working with, intervening in, and building awareness of our current "political technologies." This is a kind of book that asks us not to interpret, but to experiment. (xxii)

I have attempted in this thesis to be experimental, to layer on perspectives and to examine the affinities and constitutive relations between those perspectives. In taking this approach, I am encouraged by Galloway to constantly be targeted and direct, looking for strategies through which to respond to protocol. I believe that the *Ghost in the Shell* films are reacting to the system in this same manner, attempting to be both tactical and tactile in their responses to the forces that they themselves form a part of. I glean the following bits of advice from Galloway: "The best tactical response to protocol is not resistance but hypertrophy"; "Protocol is synonymous with possibility"; and "Tactical media are effective at exploiting flaws in protocological technologies." The *Ghost in the Shell* series continues to grow; in addition to

two series of a television series, two TV movies, an OVA, and multiple video games and other merchandise, a new series of OVAs, *Arise*, is currently in the process of being released. This hypertrophic growth of the expanding possibilities for new experiences within the *Ghost in the Shell* universe both performs biopolitics in a critical way while also remaining symptomatically chained to the society of control. By looking at how the series animates biopolitics, we are provided with the possibility for a tactical media resistance against the neoliberal machine, exposing its flaws and discouraging us from participating in it blindly.

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