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## Body Upload 2.0: Downloadable Cosmetic [Re]Birth

**Abstract:** Hans Moravec's *Robot: Mere Machine to Transcendent Mind* remarkably blueprints a future where rapid technological feats will grant humans the ability to upload/ download their consciousness into computer software and/ or computer chips, preserving their lifelong memories and identities. This blueprint is edified by Robert Mitchell's and Phillip Thurtle's book, *Data Made Flesh: Embodying Information*, further problematizing the im/material and immortalized information/terminal fleshy bodies. These dichotomies are shattered as bodies and information become innate scions, continually grafting onto the other's multilayered epidermis. Flesh is transfigured into information and information is transfigured into flesh. Bodies are edified by information; corporeality and dis/embodyment are further problematized while we live in the age of informatics. Interesting questions arise as a result: What does it mean to have – or occupy – a body when it becomes part of a downloadable network? *Advantageous*, directed by Jennifer Phang, depicts a future where female bodies are continually represented as easily replaceable vessels. It is my contention that *Advantageous* cinematically presents a future where digitized mechanical reproduction is possible. Bodies become updated, evolving into informatically-structured bodies. Following a similar cinematic line of vision, Oshii Mamoru's film *Ghost in the Shell 2: Innocence* depicts how human consciousness is artificially implanted onto sex dolls, reproducing them into sentient gynoids. Thus, the innate grafting between flesh and data becomes more prominent in these films: consciousness is downloadable, while the body updates itself. In this paper, I argue that the experimental bodies depicted in *Advantageous*

and to a lesser extent, *Innocence*, illustrate how downloading – or uploading – the consciousness/information from the organic brain to a new shell, a younger body, represents a form of mechanical reproduction. These films theoretically visualize how downloading the body signifies that while bodies are terminal, the mind – microchipped – is not. Life and death become more optically blurry.

**Keywords:** bodies, cosmetic procedures, downloading, information, new technologies, reproduction, science fiction narratives, technical objects, upgrades/updates.

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*"Objects made by humans could always be copied by humans. Replicas were made by pupils in practicing for their craft, by masters disseminating their works, and finally, by third parties in pursuit of profit."*

Walter Benjamin,  
*The Work of Art in the Age of Mechanical Reproduction*

*"Who knew that copies could still be produced despite the absence of the original? If you had to give a name to this phenomenon, what would you label it?"*

The Laughing Man,  
*Ghost in the Shell: Stand Alone Complex*

*"Do you believe that there's some place we can go even if we become unable to swap prosthetics and we can't go on living?"*

*Ghost in the Shell: The New Movie*

### Uploading Information: Upgrading the Body

Downloading is the future. With a touch or swipe of multiple buttons and/or a click of a mouse and/or controller, the way humans enter, process, and analyze information will change; in fact, humans have changed. Human technology users, for instance, often scroll on their phones, reading news and messages on the multifarious social media outlets they sign up for, which give them the synchronized ability to edit and share the exact information through a shared network. Azuma Hiroki, a Japanese cultural critic who examines the complex connection between individualism and democracy in the age of information, comments that people living in modern society "accumulate personal information" in the "real world" and in the Internet (59). Social media platforms such as Facebook, Instagram, and Twitter provide instant updates – via coded through their technology experts – for their users to download, presenting the constant and immediate changes that technology undergo. The sundry of apps such as the obligatory *newer* versions of iOS and Windows are made available in an instant tap [or click] only if users desire to *download* the update, ensuring that the device will function based on the changing technological waves to avoid an obsoleted *prior* version that neither enhances nor improves the device. The incalculability and advent of technologies and new medias have made it possible for humans to remain *updated* and in sync with the current accelerating digital culture. Wendy Hui Kyong Chun writes: "Through habits users become their machines: they stream, update, capture, upload, share, grind, link, verify, map, save, trash, and troll" (*Updating to Remain the Same* 1). These habitual technological usages demonstrate that there is an inherent relationship between humans and machines, rendering them rather similar to a connective tissue and/or limb. Machines are extensions of the body; humans, at times, are unable to remove themselves from these devices. Though Chun primarily discusses social media practices, they do make a point to assert that "habits" breed

“users [to] become their machines,” reestablishing the ongoing discourse on how the human-machine interface is not a thing of science fiction, but a future predicted and imagined by science and technology (1). Humans are updated by technologies; technologies are updated by humans.

Entering a partial download process, information is constantly being updated. Chun says it the best: “New media live and die by the update: the end of the update, the end of the object” (*Updating to Remain the Same* 2). At the same time, the process of downloading warrants information to be updated in a “new[er] form” to avoid rapid degeneration and distinction. Rather than discussing and expanding Chun’s analysis of “new media” and updates, I aim to explore these updates in a “different” direction, which I will later expand on; however, I wish to continue the discourse on the magnitude of updates. Chun, again, writes:

Things no longer updated are things no longer used, useable, or cared for, even though updates often ‘save’ things by literally destroying – that is, writing over – the things they resuscitate. (In order to remain, nothing remains, so now nothing remains even as everything does.) Things and people not updating are things and people lost or in distress, for users have become creatures of the update. To be is to be updated: to update and to be subjected to the update. (*Updating to Remain the Same* 2)

And here the advent of modern digital networks enters the *netscape*.<sup>1</sup> While Chun briefly addresses how both things and people update information in digital media, it is important to note that the human body is a regenerative site that regularly updates itself. With the rapid growth of human-machine marital assemblage and the re/birth of information in a digital culture, human bodies are literally always updating themselves to experience transmogrification. The aesthetics of the human body changes not only for preservation but to keep up with the progresses made available by humans and the tools they create. Prosthetic limbs are made possible through bioengineering and biomechanics, reconstructing what it means to be a human as past bodily limitations enforced by society and nature are disrupted. Present ideals of the human body are now *futuristic ideals* that once seem imaginatively lofty.

Science fiction integrates the imaginative and the impossible by integrating what Chu Seo-Young describes as “literal and figurative dimensions” (87). Science fiction employs these dimensions to underline the globalization of technology. In Chu’s view, “Science fiction activates the power of such figures by literalizing and substantiating them into narrative situations: teleportation, for example, is a science-fictional narrative situation that literalizes the metaphorical ‘collapse of distance’ often attributed to globalization” (87). In other words, science fiction, though metaphorical, offers theoretical frameworks used to analyze the forward progression of science and technological changes. Changes in progress imply the destruction and/or progression of humanity. Furthermore, globalization is linked with wires and digitalization, both of which affect the body. Films such as *Robocop*, *Ghost in the Shell* – both the origi-

nal and the recent Hollywood remake – *Total Recall* – also both versions – *The Matrix*, and *Ex Machina* each present cinematic universes where bodies experience recurrent states of technological alterations or updates by artificial intelligence. But, at the same time, these science fiction narratives are no longer mere fantastical confabulations, they are presently converted into *reality*. BBC recently reported on the “growing” *singularity* where humans use technology such as implanted brain chips, antennas, and artificial organs to enhance and improve their bodies. Yet, at the same time, Robert Mitchell and Phillip Thurtle ask: “Why do many popular entertainment forms image an extra-bodily existence in a ‘matrix’ of information?” (“Introduction: Fleishy Data” 1). The network is the potential answer. If bodies are connected to/by a technological system, then information is inherently produced and created by a network/ing body of sorts. Information and bodies are no longer on a separate spectrum because information “exists between elements; bodies are the elements themselves” (Mitchell and Thurtle, “Introduction: Fleishy Data” 1). This marks a future of science, or perhaps a science future – the *present-future* – where human bodies experience multiple transformations, rearranging themselves into a co-blending of the human, the machine[s], the organic and the inorganic.

Bodies are also fused with data. More specifically, data is made from flesh; flesh is made from data. Scholars such as Eugene Thacker, Robert Mitchell, and Phillip Thurtle often cite William Gibson’s cyberpunk novel, *Neuromancer*’s prophetic quote: “data made flesh,” predicting the advancing relationship between technologies, information, and bodies (16). Bodies, composed of genes and DNA, are vessels filled with information. But, can the amount of accumulated knowledge and data from bodies be downloadable? At this point, information is quite abstract because what does information actually look like? How does it appear to humans? In Hans Moravec’s 1999 book, *Robot: Mere Machine to Transcendent Mind*, Moravec predicts that there will be a rise in technological feats in a near possible future where humans will have the ability to upload/download their consciousness into either a computer software or some sort of computer chip/disc. This feature will grant humans access and ability to sustain their memories and identities, transferring them over to other vessels, that may not necessarily be organic and/or human. Furthermore, Robert Mitchell’s and Phillip Thurtle’s book, *Data Made Flesh: Embodying Information*, the authors advance this discussion by interrogating how “informational technologies” may possibly produce a newer, upgraded “forms” of flesh (“Introduction: Data Made Flesh” 3). Informatic bodies are now part of a network, which can be described as a space used for connectivity; a body is a network.

Humans are now entering the network where unimaginable potentials emerge. Information and bodies “function as ripples” that often “intersect” with each other, nearly shattering all the dichotomies between the abstract and the concrete and the corporeal and the incorporeal (“Introduction: Data Made Flesh” Mitchell and Thurtle 2). Flesh and information are like scions: information is implanted onto the flesh, cre-

ating, once again, an *upgraded* fleshy and bodily experience that Mitchell and Thurtle propose. Both flesh and information are *metamorphed* by and into each other. And here, information-flesh grafting can be described as a form of “cosmetic surgery,” or at the very least, an augmented implant of sorts. Thus, one of the few questions that I wish to interrogate is: What does it mean to occupy in a body when it is a part of a downloadable network?

Downloading information onto the continually updated networking/networked body becomes an interesting cinematic line of contemporary thought, especially when we are witnessing technological advancements in informatics and body amplifications. Continuing the line of thoughts concerning the possibilities of flesh-data/information grafting body uploading/upgrading, I will examine these very themes, which I believe have not yet been interrogated in Oshii Mamoru’s film, *Ghost in the Shell 2: Innocence* – which also serves as a sequel to his critically acclaimed film, *Ghost in the Shell* – and Jennifer Phang’s science fiction film, *Advantageous*. Both films are vastly different when considering the directors’ philosophical concepts, aesthetics, and cultural standpoints; however, each feature presents how advanced technologies change societies and human behaviors. The unlimited potential of technology serve as a starting point for upgraded bodies: once consciousness is downloadable and the body will update itself with both *new* and *old* information. Both films visually and dialogically present, I argue, a future where digitized mechanical reproductions are a possibility. The process of downloading and/or uploading of an aging and *older* body’s stored information into a *newer*, younger body vessel is indeed a form of a mechanized/digitized reproduction. Downloading the mind into a younger vessel implies that the procedure represents the future of cosmetic surgeries. I will also explore the science fictional trope/debate that, in many cases, has never quite reached a conclusive decision: what does it mean that something is replicated, especially if it has been copied, downloaded, and updated? In the end, the body may be terminal and expendable, the mind, a storage of information, may be eternal. Borrowing Azuma’s reference of Jean-Jacques Rousseau’s a “general will 2.0” and Chun’s idea a software and media-based “future 2.0,” I argue that updates performed by technology “documents” a body 2.0 (63; *Programmed Visions* xi).

### ***Dubbing the Living Ghost: Updating to Remain Alive***

The arbitrations between information and the non/human bodies within the “vastness of the network” are both focal and ocular narratives in Oshii’s *Ghost* films. The first *Ghost in the Shell* film, released in 1995, concludes with the film’s protagonist, Major Kusanagi Motoko. Her ghost – her stored consciousness – gets transferred and merged with the highly advanced AI entity, the Puppet Master, who is “a life-form that was born in the sea of information.” Kusanagi’s and the Puppet Master’s bodies are destroyed, except for Kusanagi’s head, which was saved by Batō, her former second in command, during the crucial moment. Kusanagi’s head, which presently

stores her ghost and the Puppet Master, is transferred to a *new* artificial body that resembles a little girl.

The sequel, *Ghost in the Shell 2: Innocence* (*Kōkaku Kidōtai Inosensu*. According to Steve T. Brown, *Inosensu* is the “Japanese phoneticization” for “innocence”), released in 2004, and is loosely based on one of the chapters of Shirō Masamune’s *Ghost in the Shell* manga, “Robot Rondo.” *Innocence* be described as a cyberpunk detective story and is set in 2032, three years after the inexplicable disappearance of Kusanagi. Similar to its film’s predecessor, *Innocence* is set in a “future time” where most forms of human consciousness “has been accelerated by artificial intelligence and external memory that can be shared on a universal matrix.” The story chronicles Batō, an agent of Section 9’s Security Force and the main protagonist in this story who now works with Togusa, who is mostly human, and their investigations of murderous sex gynoids, or female sex androids, who kill their owners.

The film’s opening scene presents lingering shots of architectural landscape, which Brown describes as an “unnamed multiethnic [metropolis],” presents a cross section between traditional Chinese buildings and futuristic landmarks (15), further illustrating the blending between the past and the future. Matthew Gandy compares contemporary cities to the figure of the cyborg. The cyborg is a shared “material interface” between bodies and cities, visually resembling a “physical infrastructure that links the human body to vast technological networks” (Gandy 28). The networking world illustrated in *Innocence* shows how cyborgs are connected to the cityscapes as they are able to plug themselves in and out of any wired sockets within the city. Brown claims that Oshii’s “incredible attention to visual detail and dynamic multilayeredness of the computer-generated environments in the world of [*Innocence*]” uses “sophisticated lighting techniques” and “multiple moving planes and advanced particle effects” to evoke a state of confusion for viewers (20). For instance, the scene that concurrently cuts between Batō’s and Togusa’s investigation and the festivities of the Taiwanese Dajia Mazu Festival alludes to the overall philosophical references of the film: spirits and souls are implanted in mechanical dolls. While the metropolis resembles a networking matrix, Buddhist parables are visually embedded within the film, making it difficult to stay focused in following the narrative and comprehend the overtly philosophical dialogue as Oshii overwhelms several single frames with quotes, detailed visual imageries, and multiple locational shots.

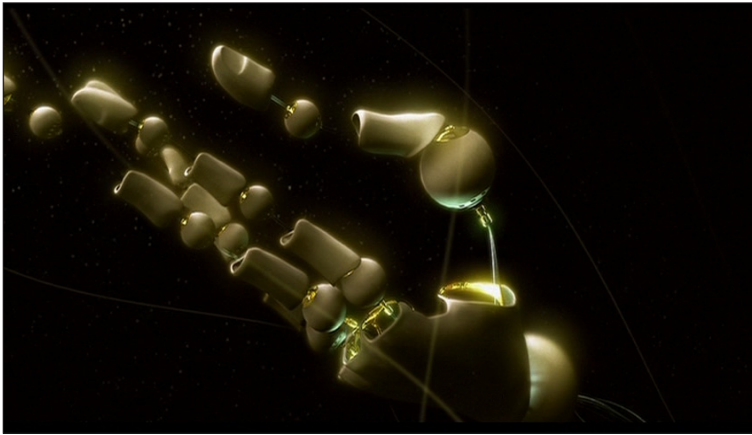
In a dark alley, Batō witnesses a gynoid murdering her owner and two other police officers. After fighting with the gynoid, Batō hears her repeatedly saying, “help me” before she directly faces the camera and the audience to perform a form of suicidal act by tearing open her chest, puzzling Batō, though he eventually shoots her, destroying her body. These gynoids are acquired as sex toys and are programmed for two basic functions: to love and perform sexually for their owners, presumably male humans; however, the model that Batō encountered, “Hadaly”, seems to have malfunctioned in a way that triggered her violent behavior. And because they have no

sense of agency, or their ghost, they should not be able to perform additional actions prior to their programming. Thus, Batō and Togusa investigate the explanations that could possibly answer the gynoids' faulty programming.

Oshii is particularly fascinated with the shape and movements of ningyō (literally translated as "human shaped figures") dolls and puppets. As Sharalyn Orbaugh notes, in *Innocence*, there is an optical emphasis on the "jerky and crude [and grotesque] automata that contain some element of human intelligence; huge mechanical figures of animals and demons" (153). The emphasis of the sex gynoids and a tea-serving *karakuri ningyō* created in Japan for entertainment during the 17th and 19th centuries, for instance, are clearly and intentionally seen moving in imbalanced movements and transitions. Oshii intercuts these scenes with the seemingly robotic and pragmatic movements of the cyborgs and humans of Section 9 such as them such as their "normal" walking and "perfect" aims when shooting their targets, showcasing the vast differences between highly advanced upgraded bodies with a ghost and mechanical automata that are soulless and merely resemble the uncanny, which once again, continuing the blurred boundaries between the in/animate (Brown 25). This is further magnified in a scene where Batō and Togusa visit Haraway, a police forensic coroner and an obvious reference to Donna Haraway, who wrote "A Manifesto for Cyborgs," – which may have served as an influential scheme for the first *Ghost* film – who coolly and almost robotically tells Togusa: "If you assume differences between humans and machines are obvious." Haraway's blunt statement sets the tone throughout the film as Batō comes to realize that dolls and humans are not disparate entities as they are part of an assemblage.

Brown further expands on the film's obsession with the visual imageries of inorganic, nonhuman bodies by discussing the opening credits of the film, where audiences observe the "manufacturing process" of creating gynoids. For Brown, "[t]his artificial birth of the gynoid is a reinscription of the opening credits of the first *Ghost in the Shell*," where Kusanagi's body was revealed to be manufactured by Megatech Company, contracted by the government (15). In *Innocence*, however, Oshii visually dissects the process of making a gynoid as he shows how the artificial cells are divided (see Figure 1) and the formation and re/assemblage of the limbs (see Figure 2). For Oshii, artificial limbs are more than replicative technical objects and monstrous mutations because nature itself is a combination of the synthetic and the material. Thus, what are the distinctions between an organic limb and an artificial limb if both are attached to the body and can function? Linda F. Hogle underlines the intricacies of prosthetics by addressing how a prosthetic arm "could be a little more than a stick to stand in for a missing arm, a grasping tool, or a sophisticated device with computerized sensory respond beyond-human strength or flexibility" (697). Like the manufactured gynoids, engineered tissues and organs are perceived as "normal" body parts comparable to organic body parts.

Brown further proposes that Kusanagi's body and other cyborgs and androids are born by a "biomechanical birth from an artificial womb, which blurs the boundaries between birth and manufacturing" (15). Of course, there are problematic undertones in this film due to the explicit – or imbedded – use of sex gynoids; however, I would argue that Oshii's decision to depict the sexualization of automata is to catechize the nature of reproduction and what it means to replicate entities. As the story unfolds, it is evident that Oshii echoes his technological philosophies of life, death, and re/birth from the first film and transported them into *Innocence* as he continues his interrogation and depiction of a [bio]mechanical birth with dolls.



**Figure 1:** *Ghost in the Shell 2: Innocence's* opening credits, revealing the process of assembling artificial, wiring limbs of gynoid bodies. *Ghost in the Shell 2: Innocence*. Dir. by Oshii Mamoru. Perf. by Ōtsuka Akio and Tanaka Atsuko, Production I.G, 2004. DVD.



**Figure 2:** *Ghost in the Shell 2: Innocence's* opening credits, showcasing the "final product" of the artificial hand. *Ghost in the Shell 2: Innocence*. Dir. by Oshii Mamoru. Perf. by Ōtsuka Akio and Tanaka Atsuko, Production I.G, 2004. DVD.



*Ghost* dubbing can be mediated as a form of replication, specifically because of the connection between sex gynoids/dolls and humans, resulting in the re/production of an imperfect replica of the original body. The Kōjinkai gang kidnaps adolescent girls and supplied them to Locus Solus to “ghost dub them, or the “transferring [of one’s] ghosts to gynoids to animate them, producing a more desirable gynoid” (Orbaugh 156), giving them an uncanny human-like quality. While ghost dubbing does “endow” androids with a “crude” soul, or ghost, “it eventually destroys the mind of the human original” (156). Though wired machines are the one engaging in the replication process, the film subtly, if not, unravels the prospects on mechanized reproduction that is not initiated through sexual engagements initiated by humans. In the preface of the play, *Sex in an Age of Technological Reproduction*, Carl Djerassi asks, “But must reproduction always be initiated by sexual intercourse?” (ix). Oshii never strays far away from Donna Haraway’s cyborg figure and its radical, perpetual transfigurations and uses the cyborg to delve into nonhuman and non-homogenous forms of sexual reproduction. In *Simians, Cyborgs, and Women*, Haraway writes: “[s]exual reproduction is one kind of reproductive strategy among many, with costs and benefits as a function of the system environment. Ideologies of sexual reproduction can no longer reasonably call on notions of sex and sex role as organic aspects of in natural organisms and families” (162). To think that reproduction involves sexual intercourse and is part of an organic process is outmoded.

Analyzing the discussions of female reproduction in Haraway’s “A Manifesto for Cyborgs” and Deryn-Rees Jones’ novel, *Quiver*, Zoë Brigley furthers this discussion of replication and suggests that Haraway’s cyborg redefines reproduction as non/humans coexist in an age of technology. Brigley argues that “[b]irth is mechanised and cyborg reproduction” is essentially a form of replication, a term that “denies the organic” birthing process (18). Here, Brigley’s analysis parallels with the idea of ghost dubbing. In *Innocence*, ghost dubbing is only made possible through the commingling of the in/organic; the integrated fusion of the consciousness re/produces the im/material world of information. Without them, replication is not conceivable. Though the replications of sexbots are problematic as they perpetuate outdated notions of gender subservience, David Levy’s book, *Love and Sex with Robots: The Evolution of Human-Robot Relationships* boldly claims that a central development of the future is an emotive software that mimics humans’ senses and perception. *Innocence*, for instance, explores not only the transformations of the body, but probabilities of “posthuman love,” or a “matter of affect” (Orbaugh 155). As such, what does it mean to be human if inorganic and coded flesh experiences sensation?

### *“Once Their Strings are Cut, They Easily Crumble”*

The ghost is always concealed in the machine, but for Oshii, the cyborg *is* the ghost. Haraway’s cyborg “maps the development of machines towards a new mode of being” because as technology continues to change and become updated, human

bodies “fail to remain intact, as modern machines pervade society in invisible forms” (Brigley 18). Only, these machines and mechanized entities are no longer invisible; they have become visible forms of being. Throughout the film, Batō’s investigations serve as a focal point of the blurred intersections between humans and mechanized entities. Although there are blatant violent interplays in the film, Oshii still manages to illustrate the compassion Batō has for nonhumans such as his basset hound and the self-destructive gynoids. For instance, after Kusanagi and Batō save the girl, they engage in a dialogue that quickly becomes intense:

Girl: “If the robots made trouble, someone would notice.”

Batō: “What about the dolls endowed with souls?”

Girl: I didn’t want to become a doll!”

Kusanagi: “We weep for the bird’s cry, but not for the blood of a fish. Blessed are those who have a voice. If the dolls could speak, no doubt they’d scream, ‘I didn’t want to become human.” (*Innocence*)

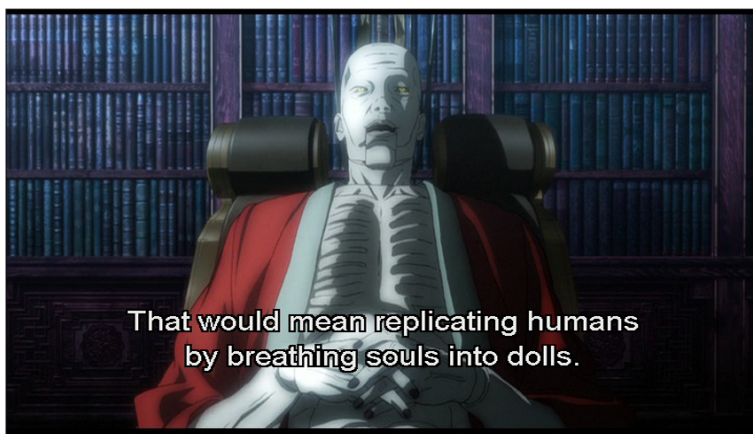
The conversation between the girl, Batō, and Kusanagi becomes philosophical and self-reflective – a noticeable motif in several of Oshii’s films. This conversation, I think, reflects on the title of the film, *Innocence*. Who is innocent? The girl? Humans? The gynoids? In their analysis of the and dialogue, Brown offers the following interpretation: “In other words, the girl-gynoid interface evokes the loss of innocence rather than its positive assertion. If innocence is to be found here, it is not in the adolescent girls but rather in the gynoids before they have been imprinted by the girls” (50). Kusanagi criticizes the girl’s loud avowal, pondering the fact whether the girl thought about the sacrifices she ordered to rescue her.

In fact, Oshii “undercuts” the innocence of young girls as Oshii underscores that humans (the girl) does not understand that mechanized entities are, too, part of humanity (Brown 50). *Innocence* depicts the ongoing fixation of the perfect, idealized body: the doll. In Kim Toffoletti’s analysis of the “plasticity” of Barbie, they assert that Barbie is a doll that symbolizes “endless transformations and eternal youth, manifested via the consumption of mechanisms of control such as cosmetic surgery” (61). For Toffoletti, Barbie is indicative of a *new* form of synthetic and technological flesh, capable of transforming themselves. Doll plasticity, in contemporary society, is the body ideal (Toffoletti 61). Going back to the conversation between Batō, Togusa, and Haraway, the three, once again, discuss the hazy distinctions between humans and dolls – a [leit]motif that Oshii refuses to provide a clear “answer” to:

Humans are different from robots. That’s an article of faith, like black and white. It’s no more helpful than the basic fact that humans aren’t machines. Unlike industrial robots, the androids and gynoids designed as ‘pets,’ weren’t designed along utilitarian or practical models. Instead, we model them on a human image, an idealized one at that. Why are humans so obsessed with recreating themselves? (*Innocence*)

Oshii's fascination of mechanical entities as a mode of being is evident in *Innocence*. Again, though humans perpetuate anthropocentric ideologies, they seem to have configured themselves to that of nonhumans – mechanical entities, really – as they produce a “technical version” of their bodies to seemingly “perfect” them. In this case, why is it difficult for humans to fathom the idea of coexisting with a future with mechanical/robotic/technical entities? In their study on raising awareness of the importance of “technical objects,” Nandita Biswas Mellamphy asserts that “culture fails to account that there is a human reality in technical reality;” however, Oshii is also aware that there is the “established opposition between culture and nature, human and machine” that are not easy to overcome destabilization, but he chooses to explore how, as Yuk Hui asserts, “humans have always lived in a hybrid environment surrounded by artificial and natural objects” because the synthetic and the natural “are not two separate realms (1). The artificial objects and limbs in the film represent how they change the human experience and existence. The film, according to Brown, enables Oshii to raise the exact question Haraway's character posed: “Why is it necessary to make robots in our own image? Is it possible to coexist with forms of artificial intelligence without forcing them into the human mold?” (48). Perhaps humans do have machinic desires.

During Batō's and Togusa's interrogation of Kim at his gothic-influenced yet surrealistic mansion, audience, again, witnesses Oshii's obsession with dolls and puppets. Audience later finds out that Kim downloaded his consciousness into a doll, who resembles an updated version of a *karakuri ningyō*. Like most of the cyborgs and gynoids in the film, Kim affects very little to no emotion and is *wired* like a Japanese puppet (see Figure 3). His movements are dependent on the wires placed in his sockets located at the back of his neck. Kim's dialogue to Batō and Togusa reveals the ob-



**Figure 3:** *Ghost in the Shell 2: Innocence's* opening credits, showcasing the “final product” of the artificial hand. *Ghost in the Shell 2: Innocence*. Dir. by Oshii Mamoru. Perf. by Ōtsuka Akio and Tanaka Atsuko, Production I.G, 2004. DVD.

session with replicating humans into soulless dolls, which may serve as a direct answer to Haraway's question:

Who'd want that? The definition of a truly beautiful doll is a living, breathing body, devoid of a soul. 'An unyielding corpse, tiptoeing on the brink of collapse.' The human is no match for a doll, in its form, its elegance, in motion, its very being. The inadequacies of life's reality. Perfection is possible only for those without consciousness, or perhaps endowed with infinite consciousness. In other words, for dolls and for gods. (*Innocence*)

Kim's dialogue posits the very idea of remaining undead by transferring one's entire information (the consciousness) into an empty vessel, forever preserving it. Orbaugh mentions that while the "emotions in the film are intense," they are not "show[n] on the surface of bodies; they are always outside any enclosed, autonomous subject, always moving, transferrable" (165). Audiences witness this when they find out that the girl transferred her voice and calls for help onto the Hadaly model gynoids and when Kusanagi downloaded a part of her ghost into the gynoid replicants when she assisted Batō.

The dolls, puppets, and gynoids in *Innocence* can be perceived as commodities that are used and easily discarded by humans. Going back to Toffoletti's discussion of the Barbie, they assert that Barbie is a "transformer" because Barbie is a liminal figure, "constantly circulating in the ambivalent space between the image and its referent, between the illusion and the real" (58). The dolls and puppets in the film are in-between the living and the dead as they are created by celluloids. In his analysis of *Ghost in the Shell* and Japanese puppet theater, Christopher Bolton notes that puppets oscillate between the real and the unreal (761). Puppets may look artificial yet Bolton asserts that puppets mirror the emotions and affect of the audience watching the stage. Like Barbie, puppets and dolls become *fragile* transformers as they occupy a space that offers modes of regeneration.

While dolls are fragile and may easily shatter, mechanization has made it possible to upgrade the doll's body. The downloading of one's ghost into a doll form can be described as an invasive circuitized form of surgical procedure. The body is replaceable but the ghost remains alive. Once the wires are strapped and plugged into the body, information resumes though the *flesh* has changed. In a similar scene sequence where Kim takes the automaton forms of both Togusa and Batō, later discloses:

The doubt is whether a creature that certainly appears to be alive, really is. Alternately, the doubt that a lifeless object might actually live. That's why dolls haunt us. They are modeled on humans. They are, in fact, nothing but human. They make us face the terror of being reduced to simple mechanisms and matter. In other words, the fear that fundamentally, all humans belong to the void. (*Innocence*)

The image of Kim sitting like a lifeless entity is haunting, but Kim's character – and the entire scene and dialogue – evokes the visual, hypothetical experience of living

in a highly technological world that acknowledges that there are entities beyond the human. The modern world is progressing beyond modernization; however, Kim also realizes that humans are “ultimately blind to the technical connectors that animate them” (Mellamphy). As such, there is a pivotal scene in the film where Batō and Togusa interrogate an informant who knows where Kim is hiding. Togusa reads a stone plaque on a mausoleum wall that has a Buddhist poem carved onto it: “Life and death come and go like marionettes dancing on a table. Once their strings are cut, they easily crumble.”

Regardless, the mechanized body – a technical object – is [over]loaded with information. Perhaps due to the events of the first film and witnessing the unification between Kusanagi and the Puppet Master, Batō realizes this and quotes: “‘What the body creates, is as much expression of DNA as the body itself.’ If the essence of life is information carried in DNA, then society and civilization are just colossal memory systems and a metropolis like this one, simply a sprawling memory.” Indeed, Oshii’s depiction of bodies and the unidentified location is based on a networking/networked culture, preserved and enhanced by information. The *netscape* is the future; upgrading bodies is an inevitable part of the future.

### A *Futurescape* Resembling the *Present*scape

Even if the future does embody a networking/networked metropolis, it may not differ much from the present landscape. *Advantageous*, released in 2015, is an American drama/dystopian/pre-apocalyptic future/science fiction film directed by Jennifer Phang. The movie is set in an undisclosed city in 2041, where the cityscape resembles the networked/networking cityscape in *Innocence*. The only difference between the films futuristic cities is that while Oshii’s future *netscape* are enmeshed with wires, digital screens, and neon lights, resembling the postmodern technological industrialized metropolis in Ridley Scott’s *Blade Runner*, the visual architecture in *Advantageous* is subtle and naturalistic with its bleak use of neutral color tones and non-dramatic skyscrapers and digital billboards, which served as a device to foreshadow the events to come. Phang explicitly depicts that while the future is here, issues such as ageism, gentrification, and sexism continue to exist. The new future, it seems, has never upgraded itself to avoid these issues, gearing the film towards a more realistic social reality.

The film follows Gwen (portrayed by Jacqueline Kim, who also co-wrote the film), who is a single mother, working as “the face” for the cosmetic procedures at the Center for Advanced Health and Living. In the film, the digital billboard airs an advertisement, announcing:

Here at the center for Advanced Health and Living, our procedure provides a solution for any long-term health concerns. The experience is akin to a seamless jump into a disease-free body of your choosing. Through a lossless, relatively painless process. (*Advantageous*)

Though Gwen is comfortable working as “the face” of the company, she experiences financial strains because she is working below the pay scale, unable to afford the tuition for her daughter’s, the precocious Jules Koh (portrayed by Samantha Kim), Arcadia Prep school.

Body altering procedures to prevent the aging process is a familiar issue that Phang chooses to address in her film. She interweaves this issue with the possibilities that artificial intelligence and advanced machines will take over human jobs. Gwen is fired from her job because of her age and left with little options other than becoming an egg donor. The film reveals that many women are becoming more and more infertile, signifying that organic reproduction will perhaps become obsolete in the future. The film later discloses that women are rapidly losing their jobs and have been returning to the home, depicting a regressive society. In a conversation between Gwen and Isla Cryer (portrayed by Jennifer Ehle), her former boss and possibly a human, the idea that everything in *the present future* has gone “pure tech” is revealed:

Gwen: “Well there must be something in a mere human existence that has value.”

Isla: “You and I, in our lifetimes, will see progress 1,000 times greater than the previous century. But, because we’re mere humans, we won’t be able to comprehend it. Humans can only grasp change at a rate they’ve experienced it which is why they are being left behind.”

This conversation reveals that while robots, androids, and artificial intelligence are imperative in societal progress, human beings are rapidly disregarded and forced to move backwards. Thus, after hearing Dave Fisher, Gwen’s other boss/colleague, talk about the company’s cosmetic procedure that transfers her mind into a *new*, younger body, she decides to sign up for it, ensuring her and her daughter’s financial security; however, he also warns her: “This might be a bigger sacrifice than you imagined. Gwen, it’s not like you’re a consciousness in a jar that we’re dumping into another jar. The technology isn’t there yet,” telling her to carefully reconsider. Dave further reveals that the procedure is painful, requiring Gwen to take a shot every two hours for a year.

The film cogently addresses – perhaps one of the few films – how the mind-upload/body upgrade is a form of cosmetic/reproductive procedure (see Figure 4). Like the process of ghost dubbing in *Innocence*, Phang employs the common science fiction trope of consciousness transfers/downloads to further elucidate that while downloading the mind can achieve permanence, there are consequences to achieve that desired levels of immortality. Reexploring the themes in Aldous Huxley’s *Brave New World*, Kathleen Woodward boldly claims that the “ultimate fantasy of technological domination is over the human body, one achieve through biotechnology,” and furthermore, the novel “continues to speak to our society’s dominant fantasies in relation to age today” (287). Following a similar analytical thought, Llewellyn Negrin discusses the connection between cosmetic surgery and women’s identity and states that the “limitation of cosmetic surgery is that it offers a technological solution to a social problem” (25). Woodward’s analysis of *Brave New World* and Negrin’s asser-

tion concerning cosmetic surgery relevantly speak to a society where physically aging is not at all celebratory nor is it considered acceptable, especially for women. Aging, Woodward further critiques, is “derived from the organic realm and a natural part of the “social process” (288). As a process, aging on the biological spectrum, but in a future society where youth and vitality are now re/altered and re/programmable, in/organic bodies remain at a standstill, never moving forward. Gwen even replies to another character: “In fact, the decisions we make in life define us. So, shouldn’t every woman be defined by the totality of her choices? Rather than her race, height, or health? These are things she often cannot control.”

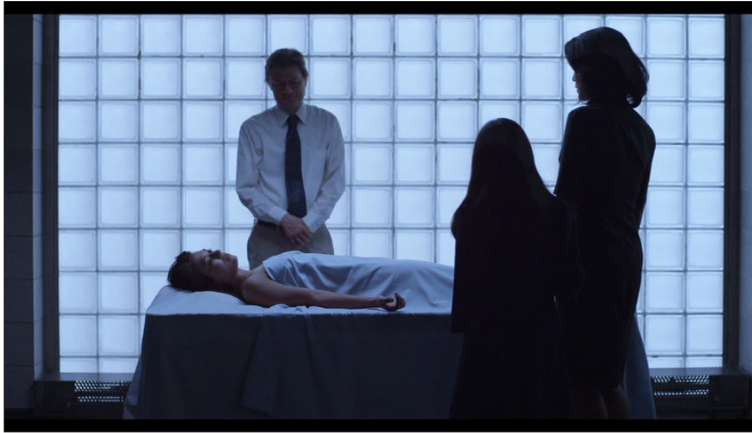


**Figure 4:** *Advantageous*’ cosmetic procedure, where Gwen’s entire consciousness is downloaded to a new body. *Advantageous*. Dir. by Jennifer Phang. Perf. by Jacqueline Kim, Freya Adams, James Urbaniak, Jennifer Ehle, Jennifer Ikeda, and Ken Jeong, Good Neighbors Media, 2016. DVD.

Jules insightfully yet eerily ponders a related question: “Are women really going backwards going forward?” The future, it seems, continue to devalue and control the female body. Gwen later realizes that her termination from the company is due to her aging, an irreversible process that all humans experience. Juxtaposing the scene where Gwen asks her former employers whether she is too old to maintain her job and the scene where Jules appraises a pen her mother gave her in the beginning of the film and telling her mother, “it’s old looking” is a very telling metaphor, one that clouds over the entirety of the film.

The scene where Dave takes Gwen and Jules to see Gwen’s new host body resembles a death scene; more specifically, a solemn visit to the morgue (see Figure 5). The lighting and the white screen produce an ominous effect that mirrors the body’s soulless eyes. Though the Center for Advanced Health and Living champions on the procedure for being the “safest alternatives to invasive cosmetic surgery so [one will] have the chance to be the you you were meant to be,” there is a poetic imagery of

death of the previous life, even if the procedure indicates otherwise. Once the consciousness is transferred to an upgraded, younger vessel, the *older* organic body, limited due to age and wear, is terminally dead. The mind is like a ghost; it is undying and can easily be transferred in and out. The once empty vessel is reborn with a *new* consciousness, ready to repeat the cyclical process. This is an allegory of the life, death, and re/birth cycle.



**Figure 5:** *Advantageous*' "morgue scene," where Dave presents the *new* body to Gwen and Jules. *Advantageous*. Dir. by Jennifer Phang. Perf. by Jacqueline Kim, Freya Adams, James Urbaniak, Jennifer Ehle, Jennifer Ikeda, and Ken Jeong, Good Neighbors Media, 2016. DVD.

The body becomes decoded and encoded, literally changing its flesh. In Scott Bukatman's book, *Terminal Identity: The Virtual Subject in Post-Modern Science Fiction*, they discuss how the body I often "successively – if not simultaneously – addicted to, infected by and wired into the cybernetic system" (243). The body and the human skin changes, deforming both the previous body and identity. After Gwen completes the procedure, for instance, Gwen 2.0 (portrayed by Freya Adams) – a fitting name – returns to the house Gwen shared/shares with Jules. Just as Dave predicted, Gwen 2.0's personality is vastly different from Gwen, something that Jules is also aware of as the two attempt to resume life prior to the procedure, though the atmosphere is much different. Even if Gwen 1.0 and Jules taped reminders via pictures, paintings, and handwritten notes, Gwen 2.0 does not express motherly affection towards Jules. This creates tension between Gwen 2.0 and Jules. Analyzing several science fiction narratives, Bukatman asserts that the terminal identity remodels and "retool[s]" the body as the artificial component takes over (244). While memories and the information entered in a downloadable network is never completely lost, the stored data accumulated can change and be forgotten. Viktor Mayer-Schönberger argues that, since human memories are "weak" and terminal, information and memories should be transferred from the



brain to an “external storage and retrieval device” (28). This is the mark of the digital future. Rather than relying on the “weak link” – the brain – external drives and/or other digital storages enable the “construction [and preservation] of shared common memory” (Mayer-Schönberger 29). Digital stockpiling is perhaps not terminal because memories are kept frozen while the body is opted for decay.

Human flesh is also terminal. Because one’s consciousness is downloadable, memories can be altered. Dave later reveals to Gwen 2.0 that Gwen died as did her awareness during the procedure. The scene where Dave takes Gwen 2.0 to the exact location where he and Gwen went to discuss the procedure in private is vital as the audience now understands the ramifications of the procedure. In the flashback scene, Dave tells Gwen:

In order to reproduce your memories, we have to plant electrodes in your brain. And in the brain of the new host. We use a semi-separable feedback loop between the two of you to generate a psych-physiological twin. New neurons, cloned matter. Once the electrodes are removed, the host brain can repair itself because it’s still young. But your older brain can’t. Your particular awareness will cease to exist. Your cloned brain will wake up in the new body with all your memories, and since she knows nothing else, she’ll believe she’s you. (*Advantageous*)

Gwen 2.0 is a new copy of Gwen, but after the downloading process was complete, the two have separate awareness. Before her death, Gwen requested that the part (the admission above) to not be transferred. This is to ensure that Jules’ future will not be affected. Phang’s vision is in line with Bukatman’s assertion of body mutations. The body is terminal because it can easily be rewritten by a machine (Bukatman 244). The body, in fact, is a machine, “hardwiring” the body and its memories. Technology enhances the body. Enhancements, Hogle argues, is based on “invention, redesign, and upgrade capabilities (697). The film challenges: if the 2.0 version is the ideal and a much better upgrade with vast possibilities, why now delete the *older* version?

In an interview with Mark Asch of *The L Magazine*, Phang divulges that she wanted to explore a narrative involving the “moving consciousness from body to body” that connected to the “mother-daughter-body-life allegory.” This is quite evident as Gwen repeatedly tells Jules that “mothers do what’s best for their children” and here, I want to return to the discussion of how mind uploads, as a cosmetic surgery, impact the duplication of information.

Like *Innocence*, *Advantageous* uses social issues such as life, death, and rebirth as backgrounds to examine the effects of mind transplants and body upgrades. The scene where Gwen’s consciousness leaves her body and is uploaded to Gwen 2.0’s brain illustrates how information is cosmetically exchanged and transferred, even if the results prove disastrous. This goes back to the idea of data made flesh and flesh born out of data. In Eugene Thacker’s perspective, the “modern notion of information – most notably in the extropian concept of uploading – does not exclude the body or the biological/material domain from mind or consciousness, but rather takes the ma-

terial world as information" (80). The cities seen in both *Innocence* and *Advantageous* are filled with buildings coded with information and it is rather difficult to not be submerged into them, duplicating those very data into bodies. Gwen may have died during the transfer and a portion of her memories may have been deleted, but Gwen 2.0's vessel is able to sustain the saved memories and the deleted memories are not completely lost as Jules' own body maintains lost data. Information is never complete nor lost; data is always expanding and flowing into younger, updated vessel – even as problematic as they are – archives them.

### *The Matrix Reloaded: A Pluggable Non-Coda*

Uploading/downloading is a re/generated process of sorts. Mary Flanagan uses the term female *databodies* and *digibodies* to describe Marcel Duchamp's painting, *The Bride Stripped Bare By Her Bachelors, Even*, depicting "a self-sustaining mechanical character in perpetual motion," perhaps suggesting that women can re/produce information (162). Databodies suggest that bodies are modes of information and that data and flesh have been bound to each other. Data will be grafted onto the skin, rendering a hybrid-like informatic body. Bodies produced by information and vice-versa are made possible through the network. The female bodied characters in *Innocence* and *Advantageous* represent these databodies as they, along with other entities, reside within the matrices of the network. The network is limitless yet consequential. Data and bodies are updated based on an upgrade – neither completely new nor old – network. But, at the same time, updates will always "brings about various consequences" (63). These are clearly presented in *Innocence* and *Advantageous*. Even if highly advanced cosmetic procedures preserve the stored information and memories of an individual, a fragmented [w]hole is lost, creating a new type of mode and vessel. How is information, then, not impacted by the sudden loss and change from the upgrade? What happens if all information and the duplicated information suddenly disappear after databodies and the network crush? Will the network – a mode of being in its own right – enter extinction?

But for now, the bodies and information stored matrices of the network are important. That is how humans, for the most part, maintain connection; the mind continues to exist even after multiple cycles of downloads, replication, and upgrades. Yet, what does information look like? How will it look like in the future? Phang and as usual, Oshii, do not provide concrete answers; however, the *netscape* is something to dive into. As Kusanagi tells Batō before transferring herself out of the gynoid: "Always remember, Batō, whenever you enter the Net, I'll be by your side." We are all inhabiting the network, side by side. Both human and mechanical bodies will be upgraded as humanity enters rebirth. Yet at the same time, Laurence Scott asks a compelling question in their book, *The Four-Dimensional Human: Ways of Being in the Digital World*: "Where do our bodies begin and end in a networked world?" (5). Has there ever been a beginning and ending in the netscape?

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### Note

1. I use the term *netscape* as a reference to Netscape Navigator, a web browser that was once in competition with Internet Explorer. In this paper, I use *netscape* to depict how people, things, objects, and animals are living in a modern technological landscape that enables simultaneous connectivity.