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The Future is Female: Gynoidian Skins and Prosthetic Experience

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Abstract

The female cyborg, or 'gynoid', has historically recurred in cinema as a trope by which the female form magnetises anxieties about new experiences proffered by digital technologies. This thesis draws on phenomenological theory, including Laura Marks' notion of the 'haptic' and Jennifer Barker's method of 'textural analysis', to conceptualise the affective experiences that gynoids within a strand of contemporary Hollywood films promote. The gynoidian protagonists of Spike Jonze's *Her* (2013), Alex Garland's *Ex Machina* (2015), and Luc Besson's *Lucy* (2014) attempt to engage the viewer in various 'prosthetic' (Alison Landsberg) encounters: tactility, sensations, gaming and sexual experiences. I argue that these films use sophisticated stylistic means, including what I term 'haptic absence', to employ the gynoid's body or voice as a conduit in promoting a more positive or celebratory exploration of the affects produced by new technologies. The films demonstrate that within this particular cultural milieu, phenomenological experiences of cinema have the potential to open up a less fraught relationship between women and technology.

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Introduction

Cinematic representations of the cyborg have a history as long as the medium itself. The persistence of the figure requires an equal persistence on the part of scholars in constantly re-evaluating what this figure means within contemporary technological and cultural contexts. Cyborgs in film do not constitute one homogenous figure, but exist within a matrix of interlocking registers reflecting evolving attitudes towards technology, embodiment, gender, and agency. In the context of classical Hollywood paradigms, the female cyborg, or 'gynoid', is depicted as sexually subservient or vulnerable to her usually male creators in order to make this fusion of femininity and technology more palatable in patriarchal contexts. Nonetheless, the cyborg figure is predominantly depicted as feminine throughout both historical filmmaking movements and more contemporary science fiction film, as women serve as key mediators for society's relationship to changing technology. This thesis demonstrates that within contemporary Hollywood cinema and the digital era, audiences are increasingly encouraged to identify with the feminine and affectively complex cyborg in ways that previous iterations did not.

Drawing on the theoretical apparatus of phenomenological film theory and cinematic affect, this thesis pays close attention to the textural and material qualities of its case study films and the gynoidian figures they depict. It explores the nuance of the constantly shifting connections between viewer, cyborg and screen in order to argue for deepening models of engagement between spectator and cyborg. As opposed to a cyborg read narratively – a cyborg whose manifest

female lack often presents a frightening or threatening vision of the posthuman to audiences – this thesis opens up an alternative reading, which is a female cyborg brought into ever-closer interface with viewers through a broad range of affective screen experiences. It counters a critical orthodoxy which meets female generated visions of new technologies with anxiety by extending an invitation to experience posthuman existence via a female cyborg mediator.

In the set of films that I analyse, the gynoid inducts the audience into a new definition of filmic skins, which become the primary mark of cinematic medium specificity in a digital age that is characterised by the increasing competition of streaming services, television, home viewing, and general interconnectivity and distracted viewing. In this setting, the cinema becomes the main playground for haptic sensation - for feeling and discerning using our skin and other skins. In an age defined by connectivity and access to and consumption of information, film is the place where we play with our senses and how they interlock with various screens.

The first chapter of this thesis interrogates changing cinematic visions of the cyborg and in turn the 'gynoid', examining what she may consist of and how she may confer meaning. It questions how femininity and cinematic meaning intersect with a creature who is simultaneously human and machine, using a set of frameworks such as human/robotic and autonomy/dependence to work through the cyborg nature. Chapter One also narrows these questions of identity to explore the ways in which the gynoids of *Her, Ex Machina* and *Lucy* adhere to different expressions of cyborg form, and the implications of these differences

for the films' respective comments on society and femininity. Ultimately, Chapter One posits that the gynoid's make-up and essential fluidity is to her advantage in her cinematic role as tactile mediator between society and new imagined technologies.

Chapter Two of this thesis provides a taxonomy of the 'skins' at play in the case study films. Firstly, the chapter explores the viewer's own skin, using the "haptic" terminology of Laura U. Marks to conceptualise the way that affects can be generated in the viewer's own body in *Her, Ex Machina* and *Lucy.* The second section of the chapter considers gynoidian skins, which can appear in modes as divergent as living, human skin or as dead latex. Gynoidian skin, the chapter argues, is a conduit by which viewers are encouraged to 'feel' their way through a gynoidian introduction. The third section of Chapter Two uses Vivian Sobchack's notion of 'film skin' to characterise the interaction between viewer and film, suggesting that the film itself holds a degree of agency in dialogue with the viewer which in itself constitutes an affective technological encounter.

If not through "skin" per se, then affects in *Her, Ex Machina* and *Lucy* are generated through other skin proxies, defined in this thesis as 'prosthetic' experiences (Allison Landsberg). These 'prosthetic' experiences are a neat mirror for the ways in which technology emulates lived experience, playing on existing sense memories to enable the cinematic simulation of a new technological experience. Chapter Three explores dance, voice, memory and gaming through this lens of 'prosthetic experience', examining how it is that the gynoidian protagonists of the case study films are able to engender affective

experiences that extend beyond the viewer's lived experience of technology: a kind of remembering the future.

In the contemporary context of digital interconnectivity, the female cyborg is the perfect metaphor for an identity that is gender fluid, skin fluid, consumerist or at least opportunistic. The unique convergence of the gynoid with tactile experience in the films surveyed proffers alternative readings to the tropes of threat and danger cinema has clung to in the past; these films signal that should we choose to be mindful of the problematics of objectification, phenomenological experience allows potential for the development of a less fraught relationship between women and technology.

Case studies

It is the specific intent of this thesis to explore the lamination of affective experiences to the gynoidian form within a contemporary Hollywood context. While less recent films mobilising the gynoidian figure will be briefly considered later in Chapter One, the films in question here warrant closer attention in that they signify a point of departure from past representations. They proffer an invitation to experience: a progressive gynoid who activates a sense of the thrill, rather than fear, of new technologies. This shift – to what could be deemed a more progressive representation – can be linked with the current influx of haptic technologies and a cultural positioning which foregrounds third-wave feminism amongst media debate.

Her, Ex Machina and *Lucy* exemplify this shift in representation – and, as Anne Balsamo suggests in her work on reading cyborg women, constructing an argument around a specific series of cyborg images echoes something of the makeup of the cyborg herself. "Cyborg images are already interpretations. My paper is yet another. I create another assemblage by seeking out certain images and not others" (156). This thesis, in turn, takes up the task of creating another 'assemblage' of cyborg meaning, by way of films that have only recently been released and therefore create gynoids who exemplify contemporary preoccupations and attitudes toward society, technology and femaleness.

The primary text for this thesis is Spike Jonze's 2013 film, *Her,* which portrays the technology-driven United States of the 2020s. The narrative explores a romantic relationship between Theodore (Joaquin Phoenix) and his Operating

System, Samantha, a disembodied gynoid voiced by Scarlett Johansson. Not only is the world of *Her* strongly textural, depicting an era in which touch-based technologies are prevalent, but the film builds an array of haptic cinematic experiences, ranging from depictions of the embodied gaming Theodore periodically takes part in to the sex between gynoid and human protagonists. The film itself provides a rich field from which to examine new imagined female technologies as sites for promoting prosthetic experiences.

This thesis also examines Alex Garland's 2013 *Ex Machina,* in which a computer programmer (Domnhall Gleeson) is tasked with evaluating the human qualities of a newly created female AI (Alicia Vikander), and Luc Besson's 2014 *Lucy,* in which Lucy (Scarlett Johansson) is able to defeat an organised crime squad by fusing herself with a machine in a cyborg-esque manner. Both films, like *Her,* provide intensely affective experiences for viewers vis-à-vis the female forms they employ, but provide counterparts to Jonze's text in that the females are each afforded embodied presence on-screen. Given that in the former text the AI figure triumphs, killing her creator and assimilating into the outside world, and in the latter Lucy is destroyed by the technology she merges with, these films also evidence the diversity of narratives employed by cinema to deal with disquiet around technological development.

The Phenomenological Approach

The notion of cinema as lived experience has garnered a fresh influx of critical attention in recent decades. Elsaesser characterises this shift in *New Film History,* questioning whether "we [have] been concentrating on films as texts, and neglected the cinema as event and experience" (77). Theorists such as Vivian Sobchack, Linda Williams, Jonathan Crary, Steven Shaviro, Jennifer Barker and Laura Marks have responded to and updated notions of cinema as lived experience, arguing against the neglect of the senses in film analysis. Although it should be noted that the humanist phenomenological tradition taken up by Sobchack differs from the posthumanist Deleuzian tradition taken up by Shaviro, which is different again from Williams' Foucauldian sensitivity to bodies and power, for the purposes of brevity in this thesis these strands are clustered together as part of a single 'turn to the body'. Essentially, as Sobchack argues, "a film is an act of seeing that makes itself seen, an act of hearing that makes itself heard, an act of physical and reflective movement that makes itself reflexively felt and understood" (3). In this way, Sobchack promotes the importance of the experiences viewers' bodies undergo during films, as well as arguing for the film's role as an active constituent in the film-viewer relationship.

In *Her, Lucy,* and *Ex Machina,* recognition of viewers' sensorial engagement is critical in order to theorise the ways in which viewers engage with the gynoid figures and the technologies they present. Engagement, here, can be termed as 'affect', which Massumi describes as "a prepersonal intensity corresponding to the passage from one experiential state of the body to another and implying an

augmentation or diminution in that body's capacity to act" (*Plateaus,* xvi). Because the physical affects the gynoids generate are intrinsically linked with the embodied and disembodied ways in which the gynoids create meaning, a phenomenological mode of analysis leads to an understanding of the films' ability to move from a more outdated stereotypical gynoidian representation toward a more positive harnessing of womanhood.

To lend a brief illustration to how this phenomenological approach can be deployed, the scene in which the female cyborg is introduced in *Ex Machina* is a key example of how screen bodies can act as foci for spectatorial response. Awareness and analysis of embodied experience in these instances can lend much greater depth of meaning to the sequences at hand. Here, the gynoid Ava's appearance, stepping around a wall in the underground lab, is a breathtaking moment. While some of her body parts are covered with dappled plastic, others reveal internal mechanisms shelled in transparent glass. Her textures; her being: both reach to and invite exploration from the audience, who may respond as they see fit. In this way we experience Ava as a possibility, a potentially tactile being who could exist in the exo-cinematic sphere as much as any other.

Thus, Sobchack's contention that "the film experience is a system of communication based on bodily perception as a vehicle of conscious expression. It entails the visible, audible, kinetic aspects of sensible experience to make sense visibly, audibly, and haptically" is illustrated (9). The scene, and Ava as the screen body in this case, communicates with audiences not on a single sensory level, but through a blend of optical, aural and touch-based connection. Marks'

latter term, though, warrants closer inspection: how do 'haptic' experiences manifest themselves in these films, and how do they influence viewers' perceptions of the gynoid figures and the new technologies they concretise?

Laura U. Marks' "haptic" terminology describes "the way we experience touch both on the surface of and inside our bodies", and is central in theorising the viewer-screen dialectic at play in these films (162). Taking, again, the scene where viewers are introduced to Ava, haptics – particularly in terms of discerning skin texture – are a key factor in the way viewers perceive the gynoid. Audiences can not only optically perceive Ava as per a traditional model of cinemagoing which privileges visual perception, but furthermore, they are invited to graze the surfaces of her body with the eyes, to discern familiar textures of smoothness and indentation. More than simply determining outlines optically, the eyes are used to pick out familiar textures and understand the gynoid's makeup in a tactile way. In this moment of revelation, Ava is more than a flat optical image, or a fantastic figure: she is a being to be haptically experienced, not merely seen.

'Textural' analysis

This thesis will deploy a model of textual analysis that Jennifer Barker labels "textural analysis" in her 2009 book *The Tactile Eye.* Textural analysis is an approach to film analysis which does not oppose the consideration of narrative function, but builds on more traditional modes of analysis to emphasise the aspects Sobchack identifies as vital to phenomenological scholarship: the

significance of the mutual relationship between viewer and film and the importance of embodiment in thinking through texts. Barker suggests that textural analysis allows us "to demonstrate the ways in which careful attention to the tactile surfaces and textures involved in the film experience might illuminate complexities and significance that might be overlooked by a focus on visual, aural, or narrative aspects": an approach which privileges Marks' mode of haptic visuality (25). Because so much of the meaning created by the gynoids in *Her, Ex Machina* and *Lucy* is associated with the ways in which they present on-screen – the textures of their bodies, skins and voices – Barker's mode of analysis is well suited to the project. It allows the thesis to conceptualise the many types of experiences the gynoids provide, which are threaded together by the common factor of affect.

For example, undertaking a textural analysis of *Her* (as Chapters Two and Three will provide) not only allows for a description of how the protagonist, Theodore, engages with his sophisticated gaming apparatus, but moves forward to consider how the very tactile depiction of this apparatus can, in turn, engage the viewer with Theodore's activity. Textural analysis foregrounds the viewer's experience of the smooth nebulous 'Alien' game protagonist, Theodore's hand motions in controlling the figure, and Samantha's vocal contribution to the gaming activity, demonstrating how the gynoid acts as a prosthesis for new digital experience in a way that is inviting, rather than disconcerting, for viewers.

Literature Review

In advancing my argument that the gynoidian body or voice is employed as a conduit in promoting a more positive or celebratory exploration of the affects produced by new technologies, I draw on literature from a range of scholars in the fields of embodiment, phenomenology, and technology. In this literature review, I examine scholarship within the more specific categories of bodies and gender; cyborgism; phenomenology and haptics; voice; and technology. This literature review is not intended as an exhaustive account of existing literature, but comprises a review of critical concepts imperative to this project, accompanied with brief accounts of how each of these concepts informs or underpins the work at hand.

Bodies & Gender

To understand the figure of the cyborg and the implications it poses for society requires, firstly, a framework by which we conceptualise the body, and hence what it might mean for a cyborg to take on a bodied form. Foucault's 1975 *Discipline and Punish* remains a central text in cultural studies in terms of establishing the relationship between bodies and power. Foucault attributes four characteristics of individuality to the disciplined body; "it is cellular (by the play of spatial distribution), it is organic (by the coding of activities), it is genetic (by the accumulation of time), it is combinatory (by the composition of forces)" (167). Evaluating the cyborg body by way of this framework validates the cyborg condition, which manifests the same individual characteristics as Foucault's disciplined human bodily form. Ultimately, the closeness of the forms supports

this thesis in arguing that cyborg forms can be negotiated by way of an approachable central humanity rather than as a perceived threat.

Foucault also cites automatons, or early cyborg forms, describing them as “political puppets, small-scale models of power” (136). He situates this comment within a larger discussion on the ‘docile body’, which “may be subjected, used, transformed and improved” (ibid.). The type of body illustrated here is echoed in the cyborg forms of the contemporary Hollywood films examined in this thesis: Ava and Kyoko, in particular, are displayed in flashback footage as disposable subjects within Nathan’s ongoing series of gynoidian creations. Lucy undergoes a chemically induced transformation catalysed by external forces, whereas Samantha consistently reaches for improvement induced by her very makeup.
In addition to conceiving of the cyborgs as bodies, the specificity of their depiction as gynoids requires an approach that quantifies the gendered body.

Although several scholars employed in this thesis draw on traditional psychoanalytical feminist film theory in terms of analysis of on-screen bodies or voices, Judith Butler provides the central framework for gender in this work. Butler’s critical stance on a stable definition of femininity (5-6) is crucial when considering the gynoid within the diverse range of political, social and cultural movements within which she is evoked. The fluidity with which Butler’s feminist rhetoric regards the construction of gender identity is echoed within the cyborg’s own makeup. As such, Butler’s work paves the way for a refreshingly posthuman understanding of what it might mean to identify as ‘female’ or indeed, ‘gynoidian’.

Cyborgism

Moving forward from more general overviews of bodies and gender, Donna Haraway's seminal work on cyborgs reinscribes Judith Butler's adaptable understanding of femininity. Most significantly for this project, Haraway's work is foundational in distinguishing a feminism that places value on the breakdown of strict boundaries between human and non-human, and centrally celebrates the potential of the cyborg figure. She states that "…there are also great riches for feminists in explicitly embracing the possibilities inherent in the breakdown of clean distinctions between organism and machine and similar distinctions structuring the Western self" (174). Haraway's essay, the 'Cyborg Manifesto', was published in 1985 and republished as part of her book *Simians, Cyborgs and Women* in 1991. *Her, Ex Machina* and *Lucy* are produced in a context which enables them to depict digital technologies not yet conceived at the time Haraway writes; simultaneously, though, they invoke visions of gynoidian experience which strongly echo the sentiments of Haraway's cyborgfeminism.

Katherine Hayles follows ground marked by Haraway to emphasise the breakdown of distinctions between traditionally 'human' bodily existence and roboticised forms. She labels this fluidity the 'posthuman', whereby "there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot technology and human goals" (3). Once again, the films considered in this thesis strongly reinscribe the visionary properties of Hayles' work, which was produced in the late 1990s. Indeed, the acceptance of a 'posthuman' stream of

existence, and whether or not this can be seamlessly integrated into society, is the premise which predicates *Her* and *Ex Machina.*

Hayles' work also aims to return embodiment, which she believes "has been systematically downplayed or erased in the cybernetic construction of the posthuman" to the foreground of critical attention (4). Given the tenor of work on the cybernetic since, much of which promotes embodiment as a central concern, Hayles' intervention was timely. In turn, Jonze, Garland and Besson all play on the trope of the promise of disembodied immortality that Hayles so strongly combats. *Her* discusses the problem overtly before returning to an end which relegates Samantha to a disembodied post-human. *Ex Machina* poses an indistinguishably human embodiment as the means by which Ava can integrate into the world. And *Lucy's* strong placement of its protagonist within both a human body, a complex, evolving material world, and a finite lifespan, suggests a fully realised filmic version of Hayles' posthuman.

Jennifer Gonzalez turns from Haraway and Hayles' explorations of cyborgian futures to examine the cyborg past. She pushes Haraway's definition of the form forward to explicate three 'categories' of cyborgism – "organic", "mechanical", and "consciousness" – a useful framework for this study as the categories encapsulate both the bodied cyborg form of *Ex Machina* and *Lucy* that is so significant to Hayles and a more ill-defined cyborg form which suits Jonze's depiction of Samantha (57). Gonzalez takes a similarly broad perspective in conceiving of why cyborg forms arise, which she suggests poses both a "historical record of changes in human perception" (61) and a metaphor for "the

multiple fears and desires of a culture caught in the process of transformation" (58). This duality in conceiving of cyborgs as both a result of the ways in which society engages with material culture and a reflection of attitudes toward changing technologies is the most significant of Gonzalez' assertions. It is dampened, however, by the dated assemblage of gynoidian images she analyses, which leaves most figures written off as 'entertainment' rather than markers of the cultural and perceptive changes she cites (60).

The exploration of why gynoids have historically arisen is also a key feature of Anne Balsamo's work. Balsamo reaffirms Gonzalez' premise of the gynoid as an evocation of societal fear, noting that "her history illustrates several points of intersection with technology, points at which she has been forced to become the cyborg, a hybrid creature of fiction and reality" (152). This is a neat way of suggesting the role of new technologies as a catalyst for the remobilisation of the gynoid form: certainly, *Her, Ex Machina* and *Lucy* should be positioned as propelled into being by a similar collision of technological advancement and societal questioning around female agency.

Balsamo's work is less useful, however, in the way it regards humans and cyborgs as constituting oppositional figures. She claims that cyborgs are read through a lens of 'otherness' which in turn interrogates or destabilises notions of human identity, suggesting that "every cyborg image constructs an implicit opposition between machine and human" (149). Vivian Sobchack's article on postfuturism postures what I would argue is a more relevant model. Although using the terminology of 'alien' rather than 'cyborg', Sobchack indicates that "the

narratives of the postmodern marginal science fiction film…erase alienation by articulating it as a universal condition in which we are aliens and aliens are us" (137). The mutual exchange between ontologies that Sobchack describes presents much more nuanced opportunities for analysis of the forms; it provides a model whereby characters and viewers alike grapple with the very real possibility of a posthuman – as occurs in the diegeses of *Her, Ex Machina* and *Lucy* – rather than dismissing the cyborg for its essential difference. Additionally, I would suggest that phenomenology can intervene at this point to allow for an oppositional reading: it allows for the surpassing of the distance of an optical-based 'othering', instead using commonalities of texture (either body/skin or voice based) to promote an essential dialogue of sameness between viewer and gynoid.

Phenomenology and haptics

The phenomenological approach suggested above is informed largely by philosophy, where phenomenology is understood as the systematic study of the forms of consciousness and experience (see Edmund Husserl, Karl Heidegger, Maurice Merleau-Ponty). Vivian Sobchack's seminal work, *The Address of the Eye,* develops ideas around the operation of phenomenology in cinema to create a rationale for phenomenological film analysis. Sobchack observes that "as a research procedure, phenomenology calls us to a series of systemic reflections within which we question and clarify that which we intimately live, but which has been lost to our reflective knowledge through habituation and/or institutionalisation" (28). Along with Allan Casebier's 1991 *Film and Phenomenology,* Sobchack's work solidifies the more 'reflective' approach she

promotes amongst a wider critical following, often dubbed the 'phenomenological turn'.

The key ideas Sobchack promotes, for this thesis, are both the embodied reflections validated as method above and her key argument, which cites a two-way dialectic between film and viewer and promotes the film's active agency in the screening process. Sobchack explains that "there are always two embodied acts of vision at work in the theater…Although there are moments in which our views may become congruent in the convergence of our interest (never our situation), there are also moments in which our views conflict, our values, interests, prospects, and projects differ; something is not understood or is denied even as it is visible and seen" (24). The concept that the film body has both agency and the ability to articulate an opinion or posit a perspective is central to the process of working through new technologies that this thesis proposes. The film body generates prosthetic experiences, affects, textures, memories: all of which the viewer is invited to join with in embodied experience. Such a joining with the film body is what negates the distanciation and threat of the gynoid figure, placing her at the centre of viewers' lived experiences and positioning her as a figure to be venerated or celebrated for the affects she offers.

To be more specific in theorising the nature of the particular affects Samantha, Ava, Kyoko and Lucy can provide requires a phenomenological model that details the ways in which viewers can viscerally engage with the film's body. Jennifer Barker's *The Tactile Eye* (2009) proceeds by way of three sections – 'skin', 'musculature', and 'viscera' – which provide a range of frameworks by

which viewers can be physically arrested by filmic texts. Barker's work furthers Sobchack's more general phenomenological framework by focusing, in particular, on tactile affects. She also introduces the textural logic by which the analysis in this thesis is carried out (see p13).

Barker's book gestures strongly toward the 'haptic', a theory which hones tactility still more specifically to promote a mode of visuality in which the gaze itself discerns textures, becoming 'haptic' rather than 'optical' (further definition in II.I). Haptic visuality, advanced in relation to film studies by Laura Marks, combines the tactile, kinaesthetic and proprioceptive functions of embodiment detailed by Barker. Marks' work, it should be noted, also places haptic visuality in the specific context of intercultural cinema, arguing that haptic images break down visual hierarchies in order to closen, rather than distance, film and viewer. For this thesis, the notion of haptic destabilisation of optical mastery over images is particularly useful in conceiving of the gynoids as more than simply objects of scopophilic pleasure for viewers, rendering them a partner in the film-viewer dialectic, touchable and discernable as counterparts in the viewing act.

Marks' work is also useful in critically situating this thesis as it emphasises the ability of images to invite haptic sensuousness, providing a range of experiences for the viewer that promote engagement with the new or unfamiliar in an accessible way. She carefully regards a variety of images and experiences that haptic visuality promotes, rather than providing a prescriptive denotation of the affects of tactile spectatorship. In doing so, Marks refutes Steven Shaviro's more aggressive form of tactile spectatorship, noting that "a tactile visuality may be

shattering, but it is not necessarily so" (151). The forms of haptic vision that Marks allows for are those echoed in the films of Jonze, Garland and Besson: images that may verge so far as the uncanny or unfamiliar, but are not by necessity aggressive or disruptive for the film-viewer interaction.

Voice

Kaja Silverman's 1988 *The Acoustic Mirror* is significant in the sense that it explores a traditional avenue of psychoanalytic film theory to advance the argument that classical cinema's restriction of the female voice to her diegetic bodily form reflects lack in the sense of the loss of male subjectivity. Silverman notes that "the female voice seldom functions as voice-over", an observation that is now somewhat dated in light of the form of Jonze's film (165). In her chapter on 'Disembodying the Female Voice', which deals mainly with experimental film, Silverman deals with voices that are not corporeally anchored, rather than the female protagonist whose voice is disembodied, and moreover, is gynoidian. The framework she poses, then, while hugely critically significant, is of limited use to this project.

Silverman's work is more effective in this instance when paired with the more recent work of Miriama Young. Young takes a strongly phenomenological stance, emphasising the unique qualities of voice that render it affective. She gestures toward the role of voice in posthumanism, echoing Haraway, Hayles and Sobchack by contending that when analysing voice "we can begin to challenge and diffuse too-easy dualisms – between bodies and machines, between liveliness and reproduction, between authenticity and mediation, between

inscription and bodily absence…" (6). In stark contrast to Silverman, Young's work has a more visionary, futuristic tenor. She even suggests, regarding *Her,* that "the film is so striking because its futuristic, dystopian scenario seems within our reach" (102).

Technology

The sentiment expressed by Young regarding the seeming closeness of technological dystopian environments is most expressly argued by Sherry Turkle's work on robotics. In *Alone Together* (2011), Turkle, a psychologist, discusses the ramifications of the technological mediation of intimacy: a topic probed explicitly by *Her* and also reflected in *Ex Machina*'s depicition of sexual subserviency. *Alone Together* addresses the present 'robotic moment' and its implications for how we perceive humanity in a manner that seems to stand alongside the queries of the same nature posed by *Her, Ex Machina* and *Lucy.* Turkle's work is essential in complementing the film theories that comprise much of the basis for this project: her work adds a 'what if' component or an extrapolation for how the technological bent of this cultural milieu may be shaping our evocations of cinematic gynoids.

In all, this introduction has established the case studies, methodology, and critical literature that underpin this thesis. It gave an overview of the films *Her, Ex Machina,* and *Lucy,* the rationale for their selection as an 'assemblage' of cyborg images, and highlighted some of the ways in which they intersect. It also demonstrated how phenomenological film theory – particularly Sobchack's designation of the film body and Marks' haptic visuality – can be deployed in

applying Barker's 'textural analysis' to the films at hand. Finally, it provided a brief literature review which outlined critical concepts imperative to this project and their respective relevance. Chapter One, which follows, builds on this initial work to more closely interrogate the makeup and nature of the gynoid.

Chapter One: Gynoids

It is important to push past the term cyborg's vernacular connotations to explore the material and abstract implications of cyborgism, and situate the gynoidian protagonists under examination – Samantha, Ava, Kyoko and Lucy – within more scholarly definitions. This chapter, then, has two argumentative strands, which recur across the chapter's five organising principles. First, it provides a means by which we understand cyborgs in general: their make-up and way of being in the world. Secondly, and more significantly, it situates the three gynoidian protagonists of the films at hand within these definitions of cyborgism.

This chapter will lay out an historical genealogy for the sub-category of 'gynoid', which is most commonly employed throughout this thesis. While some historical examples (e.g. 'automata') will serve to illustrate the salience of the cyborg's existence and form to various historical periods, the intent here is not to fully and painstakingly recount each instance of gynoidian apparition in history, or even merely cinematic history. To do so is well beyond the scope of this thesis, and the task has been undertaken previously in full works (see, for example, Julie Wosk's *My Fair Ladies: Female Robots, Androids, and other Artificial Eves*).

As well as a recurrent historical theme, this chapter includes a recurrent focus on femininity. The three cyborgs imagined here are positioned as *female,* specifically, within a set of frameworks for helping to categorize the cyborg, and within the built/natural environments section of this chapter, we move toward

measuring the extent to which the femaleness of Samantha, Lucy, Ava and Kyoko informs our phenomenological experience of the beings. This also leads, particularly within the section that deals with autonomy/dependence, to discussion of the gynoids' sexual agency and ethics of their objectification.

This chapter defines the cyborgian identity by way of five organisational principles, each of which aids in situating the gynoids of *Her, Ex Machina,* and *Lucy* as such*.* The first of these defines the terms 'cyborg' and 'android' and explicates why it is that this thesis chooses to define the posthuman protagonists discussed as cyborgs. The second principle deals with autonomy and dependence, outlining the ways in which the embodied gynoids interact with the world. The third maps the duality of the cyborg nature, and demonstrates how the figures can be considered ontologically as both human and robotic in nature. The fourth section assesses the built and natural environments surrounding the cyborgs, and the ways in which they are placed within structures such as gender. Lastly, this section considers the cyborgs' biological makeup as creatures of both skin and mechanism.

I.I Cyborg / Android

Whilst the term 'android' is, like 'cyborg', commonly circulated, situating the gynoids discussed in this thesis within the former paradigm would suggest that they are simply machines. An android, in essence, is "an artificial being that resembles a human in form" (Prucher, n/p). To categorise the gynoids discussed in this thesis as such would be doing a disservice to their essential complexity. Not only do the gynoids resemble humans in many aspects other than the ambiguous descriptor 'form', which presumably connotes physical form, the films in question here consistently interrogate the ontological humanity of their protagonists, emphasising the ways in which their makeup can be construed as organic or human.

The brains which Caleb holds – and which audiences, likewise, are encouraged to inspect haptically – in *Ex Machina* are perceived as organic, malleable and fluid, suggesting a construction ethos that shies away from the strictly cybernetic. Samantha's narrative is essentially that of personal growth, espousing a kind of humanist rhetoric that eventually allows her consciousness to move beyond even formless roboticism. And Lucy, of course, is wholly human before her decision to transform into a super-computer. The continued assertion of the organic elements of the gynoids means they are most appropriately termed as 'cyborgs' rather than 'androids'.

For the purposes of this thesis, the definitions of cyborg provided by Donna Haraway, Jennifer Gonzalez, and Claudia Castañeda are most useful: Haraway outlines the essential duality of the cyborg as both animal and machine (149);

Gonzalez builds on Haraway's work to identify three categories of cyborg being; Castañeda considers cyborg embodiment. Each lends insight to how the gynoids in question here exceed the limits posed by the android categorisation to embody various forms of cyborg existence.

The three categories of cyborg being posited by Gonzalez are the 'organic' cyborg, the 'mechanical' cyborg, and the 'cyborg consciousness'. The gynoids of each film considered here fall into separate categories. Lucy is an 'organic' cyborg, or "monster of multiple species" (58). She is fully human before undergoing a radical physical and ontological transformation into a supercomputer and eventually dissolving entirely into a form more reminiscent of the 'cyborg consciousness'. Samantha, meanwhile, is quite a literal example of the cyborg consciousness, which Gonzalez describes as manifest in all cyborgs – the "invisible force driving their production" (59). She lacks physical form, but possesses an indeterminate and seemingly omnipresent form of consciousness. *Ex Machina*'s Ava and Kyoko are mechanical cyborgs, or "techno-human amalgamation[s]" (58). This category, which mirrors Haraway's conception of dual human and technological natures, captures the ontology of the beings much more thoroughly than the android delineation, which ascribes them merely a likeness to humans.

Castañeda's work on robotic skin, likewise, furthers the implications of the cyborg label for the creatures' mode of being in the world. Unlike androids, which exist as robots or mere imitations of human embodiment, "[cyborgs] must be thought of in terms of how a particular body's matter and meaning work in

and through each other" (224). Castañeda suggests that the cyborg can come to generate and draw from embodied meaning: a notion which is supported by the gynoid figures of *Her, Ex Machina* and *Lucy.* Each gynoid presents a unique iteration of embodied (or in Samantha's case, disembodied) experience, which holds in tension aspects of sameness with and difference from human embodiment in a way that shatters the potential fallacy of their labelling as mere androids.

I.II Autonomy / Dependence

Having established the creatures at hand as cyborgian, how then does one account for the texts' lamination of cyborg being to femininity? The most manifestly feminized feature of the cyborg, judging by the case studies in this thesis, is her servanthood. The essential subservience ascribed to the cyborg body seems to displace the rhetoric whereby woman and technology are often considered incompatible: women may not be wielders of technology, but women *as* technology or subordinate to technology are palatable. The gynoid protagonists of each film begin as submissive, reminiscent of Foucault's disciplined or docile bodies (ref). Samantha is an electronic personal assistant, playing on a traditional understanding of the woman as secretary. Ava is a pawn in Nathan's experiments. Kyoko was initially conceived for a similar experimental purpose, but is now relegated to a kind of housekeeper who serves the men at meals and, more disturbingly, proffers her body for sexual purposes without being prompted. Lucy, conversely, actually regresses from human woman to coerced drug mule to submissive due to the changes that the drugs are wreaking on her body, eventually becoming obsolete and sacrificing herself for humankind.

Clearly these examples are problematic from a feminist perspective, rendering Sobchack's assertion that a body's femaleness is one amongst "a broader range of culturally significant bodily discriminations" pertinent to the gynoidian form (46). By way of the films' narrative forms, the female cyborg bodies are submissive to human demands. They play roles that typically subsume them to male control and concerns. Thus, they echo something of the way technology is

currently understood as both a means by which we complete tasks efficiently, and a dated influence of patriarchal work roles which casts women in auxiliary or subservient positions: again, the cyborgian duality of electronic and flesh parts is reinscribed.

The issues of autonomy and dependence in relation to gynoidian bodies are closely linked with the beings' sexual agency. The dialectic between viewer and gynoid means that a range of specific affective experiences are often fostered in the viewer. The nature of these experiences, especially within *Her* and *Ex Machina,* is commonly sexual: in the case of *Her,* the intercourse between Theodore and Samantha, and in *Ex Machina,* the desire expressed between Nathan and his gynoids, both of which proffer the potential for emotional or even physical arousal for audiences. This could have been inscribed by either the overt femaleness of the gynoids within a culture that repeatedly views on-screen female bodies in a highly sexualised manner (the flesh aspect of the cyborg); the questions the films continually proffer about the extent to which the gynoids can fulfil human functions such as emotional lovemaking or physical reproduction (the mechanical aspect of the cyborg); or a combination of both. This is not to prescribe an affective response of arousal in viewers, who are confronted with a variety of sexual material in both films, but to question whether the gynoid bodies proffer these prosthetic experiences in a way that exploits or celebrates their femaleness.

In a real world robotics situation, the gynoid as object of sexual pleasure can be either an imperative or a facet that requires curtailing. Sherry Turkle's study on

the Akiko robot notes that the robot is programmed to assert her physical boundaries – eg, "I do not like it when you touch my breasts" (49). Turkle comments that "I find these programmed assertions of boundaries and modesty disturbing because it is almost impossible to hear them without imagining an erotic body braced for assault", lending credence to the view that the inherent perception of gynoidian sexual submission is problematic.

Within a filmic discourse, though, this question is lent a different dimension. Do the film and its body constitute a 'safe' boundary within which affects including titillation can occur, or do viewers stray into the realms whereby they return to a straightforward objectification of the female robot body? Does the fact that the gynoid's body is robotic dissipate the problematic element of her objectification? Is the gynoid, in effect, autonomous? Looking to the past, and to gynoid figures more generally, problematic constructions of power relations in automaton fiction dominate the field throughout the 19th century and into the 1900s. Auguste Villiers de l'Isle-Adam's *L'Eve Future* (1879) centres on the creation of Hadaly, an android, in order to fulfil the needs of a male protagonist – the rationale being that a human female is incapable of doing so. At the novel's end, the android is destroyed, ostensibly neutralising the threat of this technology to the traditional family unit, as is the 'Maria' gynoid at the conclusion of Fritz Lang's 1927 film *Metropolis*.

Perhaps more subtle in its critique is Lester del Rey's 1938 short story "Helen O'Loy", which depicts the happy marriage of a man and gynoid until the tale's final twist, which reveals that the gynoid's inventor (and the story's narrator)

has been in love with the gynoid the whole time, undermining the mythology that gynoids are an effective conduit for male fulfilment, which has been placed front and centre of the story's concerns. This thesis argues that while readings through more traditional feminist modes (Mulvey) will render the gynoids of *Her, Ex Machina* and *Lucy* classically objectified and fetishized, a phenomenological reading frees the viewer-image dialectic from hierarchisation, allowing room for a more sophisticated relationship whereby viewers are in close dialogue with a material image rather than distanced from and wielding a problematic level of power over the gynoids.

I.III Human / Robotic

The cyborg form is centrally characterised by the combination of human and non-human elements. Donna Haraway begins from the most basic level, demarcating a cyborg as "a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction" (149). This definition is important in fleshing out the duality of the cyborg nature. Exemplified by the protagonists of all three films, this duality is embodied most clearly on the level of physical form: an outward expression of the drive toward ontological humanism. In Lucy's case, it is marked by a narrative transition from human to robotic form, whereby the opposing forms displayed at the beginning and end of *Lucy* serve to showcase her alternate natures.

Ava and Kyoko, meanwhile, represent both human and other. Ava combines human skin with android parts, the clear surfaces of her torso laying her electronic wiring bare; Kyoko is presumed human until she reveals the electronic surfaces concealed beneath her skin. In both cases viewers may be led into the 'uncanny valley' identified by roboticist Masahiro Mori (33), the combination of textures and natures rendering the gynoids uncannily familiar yet strange. Mori's notion reflects the duality of the cyborg nature, holding in tension the familiarity and newness with which viewers regard the gynoids. The films render the gynoids as creatures new yet recognisable, allowing viewers elements of familiarity through which to connect with and ultimately accept the figures. The emphasis the films place on the human aspects of the cyborg form, therefore, is vital in functioning as a point of connection between audiences and the gynoids.

Samantha presents a more complex incarnation of this human/non human dialectic than Ava, Kyoko and Lucy, because she is without a traditional humanesque bodily form. Where the other gynoids possess human-shaped bodies, limbs, skins, mannerisms, and specifically female genitalia, Samantha lacks these more human gynoidian qualities. However, Theodore's cellphone commonly acts as an avatar for Samantha's physical presence: he repeatedly treats the phone camera as if it were her eye, propping up the phone so Samantha can watch him sleep and allowing the camera to protrude from his breast pocket so she can 'see' where he is walking. The cellphone parts comprise Samantha's 'body', while her female voice is her more traditionally human component: still the creature "simultaneously animal and machine" that Haraway describes (149).

At this point, in order to better characterise the gynoids' definitive characteristics, it is useful to harness the cyborg categories provided by Gonzalez, who proposes an interconnected tripartite set of groupings for cyborg figures. She suggests that the cyborgs are firstly either organic or mechanical, with the disclaimer of some areas of overlap between the categories. Thirdly – and most significantly – Gonzalez notes that a 'cyborg consciousness' is manifest in all cyborgs (ie, both organic and mechanical cyborgs possess the consciousness), and is "the invisible force driving their production" as well as a basic metaphor for the cyborg condition (59). This consciousness renders the cyborgs bearers of spatial and political agency: however, where Gonzalez suggests that this agency is specifically gained through embodiment, I would

argue that embodiment is not a precondition, as evidenced by the Samantha figure.

In Jonze's film, the Samantha gynoid exemplifies the purest possible form of this 'cyborg consciousness'. Lucy, Ava and Kyoko clearly possess the consciousness to varying degrees, and articulate it by way of their spatial presence amongst the humans in the image, along with the narrative moments in which they gain dominance over the human characters. One would suppose, then, that in the formless Samantha gynoid the consciousness is lacking: conversely, though, it is evidenced through her omniscience, omnipresence, and eventual rejection of human consciousness alongside Theodore in search of a higher ontology. Samantha transcends the notion of the gynoid being defined solely by a hybrid bodily form, but allows viewers to conceive of a more fluid form of cyborgism: one that is closer to the cyborg forms already infiltrating contemporary culture, especially due to the image of the cellphone that *Her* commonly harnesses to symbolise Samantha's existence.

Ex Machina and *Lucy* are much more traditional in their interpretations of cyborgism. While the classification of organic cyborg, or a "monster of multiple species" is not pertinent within these films, Lucy, Ava and Kyoko fall into Gonzalez's second subset of 'mechanical cyborg', or a "techno-human amalgamation", a conceptual framework that mirrors the dual nature Haraway suggests (58). *Ex Machina* uses the gynoids' physical appearance to reinforce their ontological order, with different areas of Ava's body simultaneously covered by human-like skin, textured metal and transparent glass to expose her

wiring. Kyoko eventually also exposes her technological elements by peeling back her more organic looking interface, and Lucy assimilates her human form into a fully electronic one.

Similarly, the hybrid nature of the gynoids is characterised by their emotional makeup. Balsamo suggests that "female cyborgs [...] are culturally coded as emotional..." (151). In his estimation the emotional attribute of the gynoids stems from a particular cultural sensibility whereby characteristics are attributed to beings on the basis of a gender binary. It is possible that this cultural coding occurs on the level of production and reception of a film. Audiences are all too ready to connect the ideas of femininity and emotion, and this may be part of the basis on which these contemporary emotional gynoids are rendered so familiar and approachable to audiences: an emotional and therefore 'human-like' site for prosthetic experience.

The directors of these films also seem very aware of the importance of constructing the gynoids as emotional beings. In *Ex Machina,* Garland inserts multiple scenes during which Ava and Kyoko's creator explicitly discusses the rationale behind testing Ava, which is that she should be emotionally intelligent enough to be indistinguishable from a human. The film's end remains ambiguous in terms of whether Ava is found out after escaping from the laboratory, but the lingering shots of her shadow amongst other human shadows strongly gesture toward her assimilation into the human world. This is, of course, a beloved trope of robot films: testing whether the created can enter the realm of the creator, and

be let loose amongst humans, not only physically but also emotionally indistinguishable from them.

This sentiment is echoed in real-life work on robotics. Rosalind Picard, an affective computing expert from MIT, expresses the emotional component as the definitive characteristic of cyborgs' integration with humans: "…if we want computers to be genuinely intelligent, to adapt to us, and to interact naturally with us, then they will need the ability to recognise and express emotions, and to have what has come to be called 'emotional intelligence'" (Turkle, 140). This drive for emotional intelligence in robotics, along with the fact that this kind of emotional intelligence has traditionally been linked with femininity, partially accounts for the proliferation of gynoid figures in both real and imaginary (cinematic) fields. It also explains the reading of *Ex Machina* that perceives Ava's eventual escape into the world as a threat: the emotional intelligence achieved by the gynoid suggests that she has transcended her robotic parts, threatening the very definition of humanity.

In specifically considering the physical female embodiment of the gynoid figures, however, this threat can potentially be displaced. Katherine Hayles argues that

> Humans may enter into symbiotic relationships with intelligent machines (already the case, for example, in computer-assisted surgery); they may be displaced by intelligent machines (already in effect, for example, at Japanese and American assembly plants that use robotic arms for labor); but there is a limit to how seamlessly humans can be articulated with intelligent machines, which remain distinctively different from humans in their embodiments. The terror, then, though it does not disappear in this view, tends away from the apocalyptic and toward a more moderate view of serrated social, technological, political and cultural changes (284).

In Hayles' view, the technological elements of the cyborg body belie its difference, creating an essential separateness from human embodiment. *Lucy* strongly supports this notion, as the artificial substances that transform the protagonist from woman to gynoid betray her at every turn: on the plane, she attracts significant notice from the people around her as her body begins to disintegrate, and her final iteration as a supercomputer renders her physically unrecognisable.

The past of roboticism closely foreshadows the development of later, complex cyborg forms such as Lucy. Automatons, more simply known as self-operating machines, are referenced as early as in Greek mythology and the Hellenistic period. The figures are commonly human in form and recur prolifically throughout the centuries, shaped by not only new waves of manufacturing and production expertise, but by social structures (as Deleuze so aptly notes, "machines are social before being technical" [13]). Foucault suggests that automata historically function as sites of power, noting that "Frederick II [King of Prussia 1740-1786], the meticulous king of small machines, well-trained regiments and long exercises, was obsessed with them" (136). Frederick II's interest only slightly predates the so-called 'Golden Age' of the automaton, which spanned from 1848-1914 (Bailly, 1). The evident preoccupation with mechanical humans did not end, though, with the automaton, and it is easy to see how the interest developed, alongside the evolution of technology, into a more specific android form, and eventually a full cyborg consciousness.

The physical manufacture and production of automata was paralleled by the evocation of automaton figures in literature and film. Each medium of creating the figures – mechanics, paper, celluloid – can be seen through the paradigm of Foucault's expression of power, the manifestation of ideas around 'playing God' or creator. This dynamic, given that the creations often utilise the female form, gives rise to the kind of problematic power relation evidenced between creator Nathan and his gynoids Ava and Kyoko in *Ex Machina.* Very early examples include Olimpia in Hoffman's *Der Sandmann* (1816), whose narrative parallels Kyoko's in that her mechanical inner is eventually revealed. Unlike Kyoko, this revelation sends Hoffman's protagonist, Nathanael, mad.

Bleak as the above gynoidian depictions are for feminisms past, it is somewhat heartening to take a comparative approach with the films considered in this thesis. I do not claim *Her, Ex Machina* and *Lucy* as explicitly feminist texts (if indeed, such a delineation even exists). However, even leaving aside the phenomenological intervention that I propose, their narrative forms are at the very least willing to discuss what it is that it means to create posthuman forms, and what it means for these forms to be female.

Lucy, while the least overt in doing so, provides its gynoidian protagonist with the choice to sacrifice herself – and in doing so, she becomes the saviour, rather than downfall, of the human race. *Ex Machina* consistently foregrounds dialogue around Ava's perceived emotional capacity, humanity or lack thereof, and narratively gestures toward her eventual assimilation into humankind. *Her,* likewise, features consistent dialogue during which Theodore questions

Samantha's ontological being, and more importantly, during which she is granted the agency to question her own. A clear shift in perception is demarcated here: the texts move from a position of assigning threat and fear to the gynoid figure and displacing this fear by way of disposing of her, to a willingness to interrogate the position of artificial intelligence in society. The predicator, for the 2010s texts, is that the gynoidian figures are already amongst us: disposing of them is no longer a viable option. Instead, the films promote a need for negotiation of the gynoidian form and function, posing questions around if and how the experiences gynoids afford can be considered in a positive light.

I.IV Built/Natural Environments

The gynoids' embodied and disembodied meaning-making creates implications for both the filmic and audience's worlds. As Haraway notes, cyborgs "populate worlds ambiguously natural and crafted": a dual reference, in this case, to the worlds of the gynoids' respective films and the 'real' world of the audience (149). The natural and crafted aspects of the former world are particularly interesting in that they seem to work to evince the contrast between both: the lush bush surroundings of the sterile lab in *Ex Machina,* the picnics on hilltops amid the cityscapes of *Her.* Gonzalez suggests that "[t]he cyborg body is that…through which the interface to a contemporary world is already made. Visual representations of cyborgs are thus not only utopian or dystopian prophecies, but are rather reflections of a contemporary state of being" (58). This is a useful manner of bringing the cyborg into the audience's ontological order: the gynoids do not promote a terrifying or even idyllic future, but are contemporary constructions that bear the hallmarks of the society and filmic landscape that generated them, signifying to users through their very on-screen materiality that they inhabit the present day.

Gonzalez is correct in suggesting that "[i]n order to determine the character of any given cyborg identity and the range of its power, one must be able to examine the *form* and not merely the *fact* of this interface between automaton and autonomy", and hence a specific consideration of the female form is vital to tease out the implications of the gynoid figures (61). As this chapter explores, the tandem relationship of cyborg and female forms has a long and storied history. It is essential to relate each of these forms to their particular contexts: as Judith

Butler notes, “it becomes impossible to separate out ‘gender’ from the political and cultural intersections in which it is invariably produced and maintained” (4-5). Again, the synthesis of cyborg form and cyborg meaning lingers – the female attributes of the gynoids posit both a reflection on the attitudes and contexts of their production and a foreshadowing of their ramifications.

It is important, then, to situate analysis of each gynoid strongly within its context. For example, take Gonzalez’ assertion regarding L’Horlogere (an eighteenth century engraving of the ‘Mistress of Time’, whose physical form incorporates a clock): “The fact that she represents a female body is indicative of the role she is meant to play as the objectification of cultural sophistication and sexuality” (61). Gonzalez’ continued argument suggests that gynoid figures are very much constructed to provide entertainment. While this may have been true for the 1700s, to assume that this assertion rings true for all gynoids would disregard Butler’s methodology, which emphasises the unstable nature of gender categorisation. For example, Samantha, who certainly evidences a feminine sexuality, is nevertheless conversely representative of accessibility, rather than a more aloof sophistication, through the avatar of the cellphone: hence, the analysis of each gynoid cannot be regarded as a prescriptive group of suppositions about every gynoid.

Taking into account the ephemerality of definitions of gender and femaleness is again important when examining Balsamo’s claim that “female cyborg images do *more* to challenge the opposition between human and machine than do male cyborgs because femininity is culturally imagined as less compatible with

technology than is masculinity" (151). Similarly, this claim may have been important during a certain cultural milieu, but I would argue that at this point associations between femininity and technology are perceived as commonplace: the female 'Siri' voice; Microsoft's personal assistant 'Cortana' (based on the video game character from the *Halo* franchise); the singing synthesiser application and holographic star performer Hatsune Miku. This would suggest, then, that Balsamo's emphasis on whether or not the relationships are typical needs to be displaced by analysis of the nature of the relationships.

Firstly, then, we note that the importance of the contextual assessment of cyborg/gynoid figures cannot be underestimated. As Gonzalez notes, "[t]he image of the cyborg body functions as a site of condensation and displacement. It contains on its surface and in its fundamental structure the multiple fears and desires of a culture caught in the process of transformation" (58). Gynoids are not stagnant cultural figures which reproduce a set of fixed meanings in each fresh iteration; conversely, each new invocation of a gynoid figure, particularly within cinema, poses an embodied cultural touchstone from which a set of meanings can be extracted.

Moving forward to consider more recent waves of gynoidian expression naturally brings the discussion into the 1980s: the age of the *Blade Runner* (Scott, 1982) gynoids, of Sigourney Weaver in her metal suit in *Aliens* (Cameron, 1986), and the inception and rise of Haraway's cyborgfeminism. As evidenced by earlier discussions of *L'Eve Future* and "Helen O'Loy", this is a strong shift away from the model proposed by Mary-Ann Doane whereby "there has also been a curious but

fairly insistent history of representations of technology that work to fortify – sometimes desperately – conventional understandings of the feminine. A certain anxiety concerning the technological is often allayed by a displacement of this anxiety onto the figure of the woman or the idea of the feminine" (110). The gynoidian image continues to develop in tandem, with the technological and feminine commonly joining to trace a trajectory of societal change.

The continuing collision of technological and feminine images, most commonly in gynoidian form, remains a point of interest for scholars. Balsamo neatly evokes the recurrence, explaining that "[woman's] history illustrates several points of intersection with technology, points at which she has been forced to become the cyborg, a hybrid creature of fiction and reality" (152). The notion of the intersection producing the cyborg image – much as an Eisensteinian montage might produce meaning of a different kind by juxtaposing two images – aids in explaining why gynoids are inextricably linked with the culture in which they are produced, and in turn, why reading films such as *Her, Ex Machina* and *Lucy* can allow us to work backwards to infer conclusions about both current constructions of feminism and technological development.

It is possible to characterise the recurrence of the gynoid in relation to genre, as does Doane. She suggests that "From L'Eve Future to Blade Runner, the conjunction of technology and the feminine is the object of fascination and desire but also of anxiety – a combination of affects that makes it the perfect field of play for the science fiction/horror genre" (119). *Ex Machina* sits comfortably within this categorisation, whereas *Lucy* is ostensibly an action film and *Her*

more clearly a drama – genre classifications which move away from those produced by the traditional combination of the woman/technology trope, suggesting once again that anxiety is not the key motive at play here.

I would argue that moving away from the past trend of characterising the gynoidian image by way of the anxiety it provokes, in fact, allows for a much more nuanced reading of the ways in which the images might be speaking into the culture that produces and receives them. Balsamo suggests two alternative ways in which the combination of technology and femininity might operate: the first, that "technology emancipates woman from her corporeal body", the second, a "construction of an ideological critique of the cyborg image as it has been produced by patriarchal culture" (152). I agree that these are the kinds of readings that engender movement past the tired cliches of straightforward objectification and/or woman-as-threat, and toward the version of cyborgfeminism that Haraway so eloquently promotes.

I.V Skin / Machine

We understand, then, what the cyborg form is: a hybrid form; a mechanical form; a consciousness. In order to more clearly explicate the shift in the relationship between women and technology that gynoidian figures engender, and also the ways in which they can be analysed phenomenologically, it is important to additionally explore how the cyborg means. Castaneda expresses one such framework: "[cyborgs] must be thought of in terms of how a particular body's matter and meaning work in and through each other: how the stuff of this body generates meanings, and how its meanings come to be materially embodied" (224). This is a neat evocation of the ways in which we consider the interplay between cyborgs' consciousness and form – and in turn, becomes more significant in considering a textural approach to gynoids. Their textures can be perceived as the ways in which they present themselves to the world: hence they are intrinsically connected with the gynoids' significations, and vice versa.

Gonzalez' categories of cyborgism, then, each hold a slightly different potentiality for making meaning: mechanical cyborgs and cyborg consciousnesses may generate different meaning through their different embodied forms: whereas mechanical cyborgs such as Lucy, Ava and Kyoko are present in a certain way, their textures relating in a specifically bodied way to the world around them, and generating a certain set of meanings, the form of consciousness adopted by Samantha represents a slightly different set of potentialities.

The key interfaces Lucy, Ava and Kyoko present in order to create meaning are their bodily forms and skins. This work repeatedly references Lucy's dramatic

transformation in bodily form because this showcases her ability to produce and confer meaning as both a human amongst humans and a gynoid amongst humans. Her bodily transformation – the gradual disintegration of her parts into the blue crystal-like particles, her eventual presentation as a monstrous super-computer that completely dominates the screen space with unfamiliar texture – promotes a kind of sublime wonder, which eventually situates the gynoid as a self-sustaining site of autonomous power. Meanwhile, we understand Ava and Kyoko via their skins as interface: Ava's varied surfaces of transparent fiber, metal joinery or skin-like rubber speak to aspects of her humanity and likewise, aspects of her roboticism, signifying her limbo as both human and other. Kyoko, more like Lucy, appears as human until the shock reveal which displays to audiences her robotic inner: a familiar sense of skin gives way to disgust or revulsion at the monstrous inner.

Samantha, meanwhile, lacking the embodiment of the other gynoid figures, creates meaning through voice: not merely the content of her dialogue, but also the quality, inflexion and texture of her voice work. When, for example, picnicking with Theodore and his colleagues, the intimation is that she is a natural companion, laughing and joking with the bodied humans in tones that match theirs. Thus, Samantha is rendered 'human' to the audience. At other points in the film, she addresses Theodore in condescending tones, assenting that "I can see how the limited perspective of an unartificial mind might perceive it that way" and hence reinscribing her intellectual - and ontological – difference.

Gonzalez' notion also helps to explain why these gynoids are so texturally approachable for audiences – why viewers are permitted to feel their skins and haptically discern their bodies: because the gynoids are contemporaneous, they are amongst us, they demand to be experienced and felt as part of a here-and-now experience. As Jonathan Crary notes, the body is increasingly "becoming a component of new machines, economies, apparatures, whether social, libidinal, or technological", and it is in this multiplicity of ways that the cyborg extends an invitation from the film to viewers to embrace new forms of embodiment - ironically, forms of embodiment that already exist in the exo-cinematic sphere (2).

The meaning of the experiences the gynoids configure for viewers has the potential to shift the way in which viewers experience the filmic medium. Crary believes that "increasingly, visuality will be situated on a cybernetic and electromagnetic terrain where abstract visual and linguistic elements coincide and are consumed, circulated and exchanged globally" (2). In the sense of texture, this thesis traces a shift within the films from Marks' more video-based haptic to Ross' crisper, slicker 'plastic haptic', and I would argue that this trajectory will be pushed further in the future. As Gonzalez notes, the cyborg "represents that which cannot otherwise be represented", and thus the increasing symbiosis between human and machine may also reconfigure the boundaries of the dialectic between screen and viewer (58). The filmic content and medium work in partnership: as the gynoidian presence impacts the phenomenological experience, so too can the phenomenological experience

express a more nuanced reading of the relationship between women and technology.

Visually, the films are overt in rendering the gynoids as recognisably female. Kyoko is the most so, regularly shown with female genitalia exposed. Ava performs her gender by dressing in traditionally feminine clothing (explored more fully in Chapter Three). Lucy begins as a fully recognisable female human. Samantha, although, of course, never visually depicted, is specifically identified as female when Theodore selects her gender during the creation process. This then begs the question of whether the gynoids are, therefore, subject to the paradigms which explicate the viewership of female forms in film studies. I would argue that while the gynoids present as female, this is indeed the case.

Laura Mulvey's famous assertion of female "to-be-looked-at-ness", naturally, is therefore applicable: but I would argue that the way in which audiences are encouraged to view the gynoids – haptically, rather than optically – disrupts the mastery of viewer over female on-screen object more traditionally at play here (29). Because viewers are typically engaged in discerning textures rather than objects, haptics break down the optical hierarchy whereby viewers are placed in a position of power in order to consign viewers not as masters over gynoids, but one with gynoids. The act of haptic looking promotes closeness, rather than distance, between the gynoidian embodiment and our own, and in turn generates a viewing relationship within which the prosthetic experiences gynoids provide are possible.

This model of viewership fits neatly with the nature of the human embodied experience which the gynoid forms emulate. Gail Weiss uses Maurice Merleau-Ponty's notion of intercorporeality "to emphasise that the experience of being embodied is never a private affair, but is always mediated by our continual interactions with other human and non-human bodies" (5). In this way, film content neatly slots with form: the tactile film body's interaction with the viewer allows for an embodied connection to be made between viewer and screen, and hence also viewer and gynoid.

Secondly, this kind of contextual treatment opens up the potential for an oppositional reading of gynoids to the more traditional perception that the figures are avatars for the fear and threat of new technologies. The gynoids, conversely, proffer the new technologies to viewers for closer inspection by virtue of their approachability (in part produced through a tactile cinematic rendering). It is also possible that they gesture toward constructing the "new sort of feminist politics" that Butler believes "is now desirable to contest the very reifications of gender and identity, one that will take the variable construction of identity as both a methodological and normative prerequisite…" (8).

At this point, the development of perception and technology begs examination alongside the narrative trajectory of the gynoid figure: the traceable shifts in visual culture are, I argue, part and parcel of what drives the progression of gynoidian representation to its current, more nuanced, situation. The first step in this shift is the challenge to the primacy of the optical which dominated 19th century art, interconnected with shifts in perception and technological

development. These changes can be integrated with movement in the construction of subjectivity, which impacts both feminist and posthuman frameworks of analysis.

The 19th century, alongside the previously noted rising interest in automatons, heralds a turning point for mass visual culture. Eventually, as Jonathan Crary argues, the separation of sight and touch and primacy of the optical is broken down entirely (19). As Crary notes, to simply attribute this shift to technological development is a gross oversimplification, given the primacy of other factors such as "a new arrangement of knowledge about the body and the constitutive relation of that knowledge to social power" (17). The arrangement of knowledge that Crary observes gives the observer a degree of agency, allowing for embodied meaning-making to displace mere absorption of optical experience. Katherine Hayles, like Crary, strongly emphasises the interplay between perception and technological development, and pinpoints the presentist implications of the dynamic in stating that "the perception of virtuality facilitates the development of virtual technologies, and the technologies reinforce the perception" (14).

An additional layer can be laminated to these developments by considering their effects for feminist theory. The acknowledgement of a bodied female viewer and validation of this viewer's lived experience of the film as part of the film's meaning-making, in part, begins to open up possibilities that extend further than Mulvey's rhetoric of the gaze and scopophilic objectification. As Laura Marks notes, "the critique of ocularcentrism has a considerable legacy among feminist theorists, who link vision to the distanciation from the body and to the

objectification and control of self and others" (133). Once sensation and embodied experience are brought into relief, as in the cultural transition that Crary characterises, the proximity of viewer to image and foregrounding of subjective experience engenders a more nuanced and potentially progressive form of relationality.

This new form of exchange is not, however, a straightforward equation, as Crary elaborates in exploring twentieth century models of observation: "once vision became relocated in the subjectivity of the observer, two intertwined paths opened up. One led out toward all the multiple affirmations of the sovereignty and autonomy of vision derived from this newly empowered body…The other path was toward the increasing standardisation and regulation of the observer that issued from knowledge of [the] visionary body, toward forms of power that depended on the abstraction and formalisation of vision" (150). At this point we move toward the viewing model relevant for *Her, Ex Machina* and *Lucy,* and it is vital to emphasise: I do not purport that the first path Crary outlines is by necessity the model of viewership at play in these films, or that somehow the privilege of the viewer's embodied experience equates to a complete negation of objectification processes for all viewers. The audience, after all, is not a monolith. I do, though, believe that in tracing the development of embodied interaction with images, a realm of possibility opens up that allows vision and touch to work in symbiosis, giving some viewers the agency of transcending the merely optical to engage on a more equal footing with both the images at play and the gynoidian bodies they represent.

The body, after all, is not as treacherous as it would seem: the prevalent assumption seems to be that the perception of filmic images will consistently provoke viewers to fall into problematic modes of objectification or selfish gratification. The body, though, as Brian Massumi reminds us, is seen at certain points in history to be centrally and quite normatively involved in "practises of resistance" (2). I would suggest that this is part of the reason Hayles fights so strongly to reinscribe embodiment at the centre of the posthuman experience (4): because engagement between a filmic body and a viewer's body, a gynoidian body and a viewer's body, a posthuman body and a human body, holds the potential to surpass a perception that by necessity privileges one form over another.

Finally, the affective nature of the experiences the gynoids provoke must not be discounted. Their bodies and the filmic body reach towards the viewer, extending multiple invitations for intercorporeal engagement. In this way, the gynoids command a certain amount of agency: the viewer is not always the sole generator of their experiences. Turkle's assertion that "computers no longer wait for humans to project meaning on to them" is here aptly demonstrated via the filmic medium (2). However, I would argue that in a cinematic sense, Turkle's phrase need not be imbued with the apocalyptic dread that it connotes: rather, the opportunity to join with the gynoids in creating meaning and experience can also be cause for celebration.

The first chapter of this thesis has examined the nature and meaning-making of the cyborg, lending consideration to changing cinematic visions of the cyborg,

and in turn, the ‘gynoid’. It questioned how femininity and cinematic meaning intersect with this creature who is simultaneously human and machine, using a set of five interconnected sliding scales to situate Samantha, Ava, Kyoko and Lucy within existing definitions of the cyborg and illustrating the figures’ differences and similarities in terms of cyborgism. It pointed to the implications of these intersections for the films’ respective comments on society and femininity. Ultimately, Chapter One posited that the gynoid’s essential fluidity is to her advantage in her cinematic role as tactile mediator between society and new imagined technologies.

Chapter Two: Skins

Gynoids are not merely the product of unbridled imagination and computer generated imagery, coupled and let loose to play on a flat, unresponsive cinema screen. The gynoid figures of the films examined in this thesis are presented as more than two-dimensional image: they command and proffer prosthetic experiences for viewers by seemingly transcending the bounds of the physical screen's dimensions. Viewers are not merely presented with imagery or information, but are invited to join with the beings in prosthetic experiences. As much as the viewer's attention extends to the screen, so does the screen's to the viewer: the "exchange of perception and expression" that Sobchack promotes (21). Such exchanges, in *Her, Ex Machina* and *Lucy,* are commonly fostered by skins: the haptic brush of the viewer's gaze against the on-screen human skin; audiences' less familiar, tentative, tactile exploration of gynoidian skins; and the consistent dialectic of ebb and flow between the skins of the viewer and screen.

These skins, for the purposes of this chapter, are treated in three sections: the viewer's skin, the gynoidian skin, and the film screen's skin. Some, of course, are more markedly metaphorical than others. The first section explores hapticity as a connector between the viewer's skin and imagined futuristic experiences. It suggests that because we accept the proximity of gynoids through touch, engaging with them through the medium of our skins, we may also begin to accept their closeness cognitively. The second deals with contrasting uses of cyborgian skin: the stable human reference point constituted by *Her*, and the dead skeumorph used in *Ex Machina,* which highlight again the hybridity of the

gynoid. The third section posits that the skin of the cinema screen has the potential to render gynoidian figures fully accessible to audiences' touch, and helps to depict a new awareness of the body and posthumanity's technological potential.

In this chapter, Sobchack's model of viewership is partnered with that of her more contemporary counterparts, Jennifer Barker, Laura Marks, and Miriam Ross to provide a framework for understanding the ways in which Samantha, Ava and Lucy connect with viewers in a tactile sense. Sobchack delineates the relationship between viewer and screen, while Marks' "haptic visuality" is a tool to explore viewers' connection with gynoids more explicitly through touch. Deploying Barker's 'textural' logic, the chapter will examine the ways in which skin – and cyborg skin in particular – acts as a "site of possibility" (Castaneda) and engagement between viewer and gynoid. Finally, Miriam Ross' work on 3D cinema and the 'hyperhaptic' provides a springboard from which to consider the 3D release of *Lucy,* and the particular opportunities stereoscopy offers viewers for working through the technological changes that the gynoids posit.

II.I Feeling Skins: Haptics

The root term 'haptic' suggests that something is akin to touch or based on our touch sense, deriving from the Greek 'haptein' or to fasten (Barker, 37). It was initially applied to art philosophy by art historian Alois Riegl, who expressed the privileging of texture in Egyptian textiles as a shift from emphasising distant, optical vision to a closer, more tactile gaze (ibid.). The original notion of haptic perception has since been brought to film scholarship by theorists such as Laura Marks, who explains that "haptic *perception* is usually defined by psychologists as the combination of tactile, kinesthetic, and proprioceptive functions, the way we experience touch both on the surface of and inside our bodies. In haptic *visuality*, the eyes themselves function as organs of touch" (162). Hence, audience members no longer merely optically view images, leaving the synaesthesic operations of bodily senses at the cinema door: they are able to 'feel' their way through scenes, experiencing the textures and sensations provided by the film. Barker suggests that a more narrowly used traditional definition of haptic, "to designate a horizontal look along a flat surface", is the most useful deployment for film phenomenologists: it describes the way in which the eyes function as they graze the screen's surface, looking or feeling the textures of the image rather than discerning optical details (37).

The function of haptics in *Her* can be illustrated at a very basic level by the close-up shots of Theodore's head, which are consistently repeated throughout the film. In fact, the very first image of the film is a closely framed head shot of Theodore, under clear natural light that renders each miniature pore of his skin discernible. Because the image presented to us is so close to his skin – closer, in

fact, than one would be if holding a conversation with the character in everyday life – the minutiae of his face are accessible for the audience, inviting closer inspection. Marks notes that "haptic looking tends to move over the surface of its object rather than to plunge into illusionistic depth, not to distinguish form so much as to discern texture" (162). In this scene, the small indentations in Theodore's skin, features and lines of his face, his bristly facial hair and the smooth round frames of his glasses: each surface is not only optically obvious, but allows the audience to haptically isolate and experience familiar textures.

The audience, hence, at this key establishing moment in the film, is getting to know Theodore through the twin workings of sight and touch. Notably, Jonze is also deploying a voice-over: Theodore's job is to write personalised love letters from clients to their nominated recipients, and at this point (unbeknownst to the audience) he is voicing a letter draft to a transcribing machine. The information that the audience is gaining from his words suggests Theodore is deeply in love; however, this could not be further from the truth, as the sequence eventually reveals. In part, this plays on the very real digital era fear of the disparity between digital appearances and lived reality, whilst also producing an ironic humour. Apart from promoting a humorous reaction, the fact that the aural information the audience is receiving is false only serves to privilege the alternative sensory experiences the scene provides: the workings of optical and haptic vision constitute the true manner in which the audience is getting to know Theodore, as opposed to simply being told.

This is not to say that the audience is forced into identifying with Theodore, or necessarily experiencing sympathy or empathy (Smith) for the character, but demonstrates that the film works on multi-sensory levels to promote engagement between the image and viewer. As Marks notes, "haptic cinema does not invite identification with a figure – a sensory-motor reaction – so much as it encourages a bodily relationship between the viewer and the image" (164). Indeed, as Theodore is the sole 'bodied' protagonist of the film, this kind of haptic engagement is most significant in that it lays the foundation for the viewer's relationship with the film itself. It is because the viewer is phenomenologically engrossed with the film's own body that they are able to cope with the disembodiment of the Samantha figure, and willingly embark on the multiple sensory experiences promoted by the film. Given the privileging of the haptic response in this sequence, it seems that Jonze is interested in encouraging viewers to embark on enjoying the full range of experiences the film, and the gynoid figure, provide, right from its beginnings.

The initial haptic inducement in *Her*, created by the close depiction of skin, can be classified as the kind of haptic Marks describes in "Video Haptics and Erotics" as 'video haptic' (331). Marks believes that "both film and video become more haptic as they die", citing techniques such as changes in focus; graininess; and under or over exposure as often holding haptic properties (172). Often this is indeed the case with the case studies Marks examines: experimental or intercultural cinema, which often lays bare the filmic medium or evidences a kind of decay to promote haptic engagement. Further scholarship, though, has promoted additional forms of haptic technique, with scholars such as Miriam

Ross suggesting that a more 'plastic' haptic is also evident in more mainstream, contemporary texts (189).

The 'plastic' haptic Ross describes is notable in two ways: firstly, its tactile evocation of the smooth plastic surfaces so common to recent animated films, and secondly in terms of its "potential for the haptic to be associated with industrial objects and hyperaesthetic culture" (192). In other words, the particular smooth look of the on-screen objects emphasises not only the touchability of the objects at hand, but links them with a cultural milieu which is preoccupied with capitalist modes of production and marketing. This kind of plastic haptic is present both within the sleek, polished spaces of *Her* (workplace surfaces; home surfaces; even outdoor environments and the cityscape) and the new forms of present technological devices it proposes (gaming devices; computers; photocopiers; mobile phones): Jonze effectively harnesses it to construct a quasi-futuristic world for his characters to inhabit. However, it is most important to delineate a more futuristic plastic haptic in order to accurately evaluate the haptic effects of *Ex Machina,* and, in particular, its gynoid protagonist.

While *Ex Machina* makes use of opposing haptic means from those of Jonze's film, the effects produced are in some aspects similar: as Marks suggests, "the haptic image forces the viewer to contemplate the image itself instead of being pulled into narrative" (163). This is particularly significant for Garland's film, as the processes at work do not force the viewer into identification or close proximity to the gynoid figure herself. Instead, haptic engagement allows the viewer to

experience closeness to the on-screen gynoid in a non-threatening manner: by experiencing the image itself. Barker notes that "while optical perception privileges the representational power of the image, haptic perception privileges the material presence of the image…[it] involves the body more than is the case with optical visuality" (163). Hence, gynoids, who have more traditionally been perceived as representative of technological threat, are rendered approachable and even 'touchable' by the haptic medium.

In some sequences, Garland even plays with these opposing presuppositions. The audience learns, along with Caleb, that Ava is able to cause power outages at the research facility the characters inhabit by using her batteries to overload the generator. The outages typically occur during Caleb's repeated interviews with Ava, during which he interrogates her emotional intelligence. During the outages, the facility's lighting, which usually simulates natural lighting in the subterranean building, turns red: the mise-en-scène and characters alike are cast in a solid red filter. Combined with the piercing alarm-like sounds that broadcast the powercut and Caleb's confusion around what is happening, the scenes are imbued with a strong sense of danger: and Ava, who remains calm, is cast as the agency behind the threat.

This treatment of the gynoid as the harbinger of danger lies in contrast with the phenomenological effect of the red filter on the scenes. There is a strong sense that, as Barker suggests, "the viewer's skin extends beyond his or her own body; it reaches toward the film as the film reaches toward it", promoted by the filter's translucent layer (41). Optical access to the characters and mise-en-scène,

amongst the almost oppressive redness, is rendered inefficient; the eye cannot easily discern key features of the bodies or objects. In order to meet the film's reach in the manner that Barker conceptualises, audiences turn to haptic visuality: eyes grazing the screen to render the surfaces of the objects and bodies familiar, clinging to the familiar textures of skin and glass. The haptic event is a cue for audiences: in juxtaposition with the narrative and optical cues, Ava is not dangerous. She is familiar: a set of surface textures that viewers have come to know and recognise.

It is in this way, then, that Garland presents a gynoid figure who is accessible for audiences: first phenomenologically and then cognitively. As Haraway suggests in her seminal work on cyborgs, "the boundary between physical and non-physical is very imprecise for us" (153). It is possible that in the physical acceptance of gynoids and their tangibility provided by these films lies the seed of a more intellectual acceptance. The experiences of the robotic worlds promoted so strongly in *Ex Machina* and *Her* allow for the notion that these extraordinary films may be more ordinary than they first appear. What appears initially as futuristic is, in fact, startlingly mundane.

The premise of the films' phenomenological ability to generate connections with alternative spheres of being is not as outlandish as it may initially appear. Marks' own seminal work is based around the notion of hapticity in relation to intercultural cinema, and she believes that the haptic is "a visual strategy that can be used to describe alternative visual traditions…" (170). In the same way that her video haptic links with alternative cinematic forms, a more futuristic or

plastic haptic can link with imagined dystopian scenarios. The audience's sense of touch, in tandem with the on-screen image, posits a familiarity of the unfamiliar, using the screen's interface to not merely visually present a new way of being – or in this case, posthumanity – but to haptically introduce us to it.

Marks suggests that haptics can function as a descriptor for feminist visual practises, but disputes the idea that the haptic holds an inherently feminine quality (ibid). This is a fundamental concept in considering these case studies; the haptic qualities of these films are not specifically produced due to the cyborgs' feminine attributes and characteristics. We must differentiate, as Marks does, between incorrectly perceiving the gynoids' femininity as the producer of haptic experience, or haptic visuality as a vector for experiences that are capable of connoting quasi-feminist expression. In *Lucy,* for example, it is not due to the protagonist's femaleness that haptic moments are generated, but it is possible to read the film's moments of strongly promoted sensory experience as a reflection on the unique abilities of cyborgs construed as female figures.

Of course, this is not merely a hypothetical analysis. The haptic technology of iPhones comes pre-loaded with a female 'Siri' voice. Amongst these case studies, *Her* comes the closest to replicating this experience, with the female voice of the Samantha operating system added to the haptic scrolling, flicking and visualisation Theodore is able to access on his phone. Theodore is given the choice between a female and male operating system, and – as with many other moments in the film – Jonze plays the choice off with humour, requiring Theodore to describe his relationship with his mother and cutting him off as he

begins to characterise it in-depth. Later, the choice of a female becomes crucial, as it is the means by which Theodore can engage in a heterosexual relationship, including simulated sexual relations, with the OS. The haptic experiences generated in these sequences are, as we will explore in later chapters, strongly linked with feminine qualities, but they are not by necessity female in either origin or deployment.

Ex Machina is even more explicit in the femaleness of its gynoids: they are often shown naked, female genitalia exposed, and their bare skin is often the catalyst for haptic experiences. Once again, however, this does not demarcate the experiences promoted as 'female', but brings into question the role of these experiences in shaping perceptions of femininity: especially given how closely current real world sex bots are replicated in the film's gynoids. Haptic connection and tactility render Ava and Kyoko 'real' and presumably desirable, neutralising the traditional threat of the gynoid. However, the haptic medium means that this interaction does not necessitate the objectification process of Laura Mulvey's 'male gaze'. Marks would argue that the nature of the haptic connection, its closeness and tangibility rather than distance, neutralises the viewer's mastery over the on-screen object to equalise the subject/object relations and dismantle the potential for objectification (174). This is, naturally, an operation subjective to the viewer.

While I will consider the sexuality and embodiment (or lack thereof) of the gynoids more explicitly in Chapter Three, at this point it is possible to posit two conclusions as regards the specific effect of the haptic images in this context. The

first, as above, uses Marks' model of hapticity to lend an equality to the relationship between viewer and image: the gynoid is providing an experience that is not produced necessarily through her own submission, but that results from the interplay between audience body and screen body, the commingling of the viewer's and gynoid's skins. This is a more pleasing way to contemplate the image-viewer relationship from a feminist perspective, allowing the on-screen female to retain a degree of agency in the viewer-image dialectic.

An opposing lens, though, returns to the notion of the plastic haptic to apply the logic of David Howes' work on hyperesthesia. Howes posits that from a capitalist perspective, "factoring tactile stimulation into the design of products and strategies of salesmanship makes good sense", arguing against the privileging of visual display in consumerist rhetoric (287). The haptic image, therefore, is merely part of a consumerist model that purports a kind of 'try before you buy' approach. Applying this to *Ex Machina,* then, creates a reasoning whereby the erotic (in both an overtly sensual and more generally appealing sense) sensations created by the gynoids are simply part and parcel of this consumerist model. In an even more overt sense, the idea that one can actually purchase sex dolls and, in an imagined future, the types of gynoids the film depicts, for the purposes of sexual gratification creates a sense of 'hyperesthesia' in audiences, who have the potential to become real world, not just filmic, consumers of these haptic experiences (288). Obviously this notion, from a feminist viewpoint, leads to quite the opposite conclusion from Marks' model, suggesting that the gynoid figures' femaleness, and the haptic experiences they provide, serve to reduce them to the status of consumable items.

The point of outlining these multiple interpretations of gynoidian agency is not to declare one or the other the dominant reading, but to highlight the ways in which the phenomenological approach can proffer an alternative, more progressive way to theorise the viewer-gynoid interaction. To declare one reading or the other more widespread would negate the viewer's agency and individuality, as would to label one or the other 'correct'. The key here is that more than one reading is present: that the way in which these films dwell on surfaces and skins, in line with the contemporary Hollywood preoccupation with depicting plastic haptic textures, underscores the potential touchability of the gynoid. The cultural milieu in which the films were produced gives rise to a way of perceiving the gynoid, and the technological change in her wake, that surpasses a history of mere struggle for mastery over threat.

The viewer's skin, then, has a hugely significant role to play in *Her, Lucy* and *Ex Machina.* The films demonstrate that it is not exclusively a character identification process through which viewers approach gynoids, but that equally as important as coming to terms with the character is coming to terms with the materiality of the image at hand, along with its potential interactions with viewers' own bodies and skins. As Barker identifies, "touch is a 'style of being' shared by both film and viewer…particular structures of human touch correspond to particular structures of the cinematic experience" (2). Viewers are able to be with the gynoid imagery, feeling around textures and haptically engaging with the figures, in a manner that can quash the figures' threat and render them approachable to audiences. While these qualities of haptic perception are not feminine by necessity, they are utilised by the films in a way

that serves to comment on feminine experience and traditional feminine modes of technological engagement.

II.II Gynoidian Skins

Drawing on Donna Haraway, affect theorist Sara Ahmed quips that "in the same way that Haraway argues that bodies do not necessarily end at their skins, we suggest that skins do not necessarily end at their bodies" (15). Ahmed's assertion is, throughout her edited collection, applied to many forms of skin: usually human. The statement is also particularly pertinent to the films under examination here, in multiple ways. The first is that the skin of cyborgs is coded as so much more than merely skin: as this section will explore, it simultaneously negotiates otherness and sameness, roboticism and humanity. Secondly, with regard to the employed phenomenological methodology, neither the gynoid or viewer's skin is laminated to its own body; each continually extends, screen to viewer or vice versa, proffering not just tactility but also experience. As Castaneda suggests, "the skin becomes a site of possibility in which the nature of the encounter is established through the process of 'touching', one body in *relation* to another" (234). The processes of touching in these films – largely through haptic visuality – allow viewers to work through the challenges the gynoid figures present, establishing the human-robotic encounter as affective and stimulating rather than necessarily threatening.

It is the particular familiarity of skin's texture that strongly draws viewers to co-occupy space with the images of human and gynoid skins. As previously discussed, the very first image of *Her* promotes haptic inspection of the character Theodore's skin. This is one of the moments in the film in which Sobchack's assertion that viewer and film are reaching toward each other is most overtly evident: the haptic qualities of the image extend an invitation to the viewer to

feel and engage, which is in turn taken up as viewers discern the familiar skin texture. The analysis of this scene as skin-based in particular, though, furthers the scene's implications. As Margrit Shildrick indicates, "the experienced ambiguities, the doublings and reversibilities of touch confuse the sharp distinctions philosophers try to draw between what is 'internal' and what is 'external'. Through our flesh and thanks to tactility, we are always already 'outside' of ourselves" (168). Applying Shildrick's thesis suggests that the haptic properties of Theodore's skin enable viewers to transcend a merely internal viewership, connecting with the on-screen image in a way that promotes the closest possible simulation of moving to co-occupy screen space with the material image.

Skin provides a safe, stable reference point in *Her:* indeed, the images of Theodore's skin are one of the most commonly repeated motifs in the film. They are displayed each diegetic 'night', as Theodore is in bed either conversing with Samantha or when she is purportedly watching him sleep. They are also often depicted as the gynoid converses with Theodore when he is out and about, via a close over-the-shoulder shot that, using deep focus, allows viewers to inspect Samantha's earpiece in Theodore's ear as well as placing the features of his face into clear relief. These moments, when tactile response is so strongly foregrounded and viewers' skins reach so eagerly toward Theodore's, constitute a central human touchstone within *Her.* In a film where so much relies on futuristic cool glass, on disembodied voices and on a female protagonist who has no bodily presence, skin is uniquely able to form a strong point of connection for viewer and image. The viewer is bonded to the film by way of the repeated fusion

of Theodore's skin and their own, the image that haptically connects with the viewer's interior sensation and exterior being. In a world where so much is unfamiliar and new, Jonze provides a point of safety, stability, and an unquestionably human reference point for his audience.

Sartre expressed the phenomenon of feeling skin as follows: "I *feel* my skin and my muscles and my breath, and I feel them…as a *passion* by which I am engaged in the world and in danger in the world…" (505). While the use of skin in *Her* suggests Sartre's first point, engagement in the world, the skins of *Ex Machina* tend toward the second, evincing a sense of discomfort in the world. In fact, Garland's appropriation of skin in *Ex Machina* is almost as opposite to Jonze's as it is possible to be: skin is not comfortable and certainly not an invitation to familiarity. Skin is only occasionally human; skin is to be penetrated and sliced and violated; most frighteningly of all, skin is usually dead.

The skin of the gynoids – Ava, Kyoko, and the other unnamed fembots – appears externally to cover their bodies' surfaces in the same manner as human skin. Ava's surfaces comprise a combination of transparent surface areas (her legs, neck, arms and part of her bodice) separated by metal rivets from the areas covered in grey textured matter, and her face, which is human skin. Kyoko, due to the film's narrative structure, needs to originally appear as human: her skin appears flawless, and Garland often allows the camera to frame parts of her body closely, highlighting the natural qualities of her sinewy limbs and frame. Katherine Hayles' premise of the skeumorph, "a design feature that is no longer functional in itself but that refers back to a feature that was functional at an

earlier time", is useful here (17). The gynoids' skin is not necessary to their operation, as proved by Ava's many transparent areas. However, "it calls into play a psychodynamic that finds the new more acceptable when it recalls the old that it is in the process of displacing" (17). The gynoids are more palatable for viewers when they adhere to a certain degree of human appearance: particularly as for Ava, this involves the covering of traditionally genital and therefore taboo body parts.

The function of Kyoko's skin as skeumorph is more complex, and more fascinating: it is used both to conceal and reveal her ontology. Initially, Kyoko is presented as completely human. However, after a series of suspicious encounters during which Nathan assures Caleb that Kyoko simply cannot understand English, the film reveals that she is gynoidian: in fact, an earlier prototype of Ava. This not only throws Nathan's obviously sexual relationship with Kyoko into different relief, but also contrasts the safer approach that *Her* and *Lucy* take to introduce their gynoid figures with a more horrific inflexion. As Caleb is finally alone with Kyoko, having unearthed Nathan's collection of earlier gynoids and footage of his terrible treatment of them, Kyoko reveals her secret to Caleb by way of slowly peeling off segments of her skin: first from her torso, then from her face.

Ex Machina is strongly aware of both the narrative and visual shock of this reveal moment, and lingers over the sequence: the shots are not gratuitously closely framed, but the scene is slowly paced. Steven Connor describes a similar scene in Joanna Briscoe's 1997 novel, *Skin:* "The removal of the skin from the face is

accompanied by an attempt to strip away the anthropomorphism of skin. Detached from the body, like the face that hangs from the patient's skull, it is mere facticity, mere waste, beneath metaphor" (49). In a similar way, the haptic effects of the *Ex Machina* scene render the skin, which first appeared living and human, as something quite different. Kyoko's skin, which was bound to viewers through a tactile sameness, now hangs in limp flaps from her body; it has a visually discernible white layer under the outer fleshy tones, and haptically feels not so much like human skin as like foam or latex.

The removal of Kyoko's dead skin is both an effective and affective scene for audiences. As Barker suggests,

> "humans experience the skin as a limit and a container: it is the thing that brings us into contact with the world, but always also that which separates us from everyone and everything else. What is so upsetting about repulsion is the violation of the skin as container, as smooth and clean surface that should conceal the oozing stuff inside and protect us from what's outside but fails to do that here" (49).

Because Kyoko has been so carefully presented as human until this moment in the diegesis, the memory of the human experience of skin is still in operation, shaping viewers' expectations about what they may see or feel when Kyoko's skin peels off. Even when the expectations of gore are not fulfilled, instead replaced by sleek silvery glass-like surfaces with robotic wiring and mechanisms optically discernible, the removal of Kyoko's skin "reminds our skins of their own vulnerability to violence and decay" (Barker, 49). It is no accident that skin is so often the conduit for intense experiences of digital connectivity in science fiction: it is able to double as the promoter of new experience and reminder of our own fragile embodiment.

The ability of the gynoid to reflect humanity's experiences and potential in this horrific manner is part of the reason they have so commonly been perceived as threatening or dangerous. As Shildrick suggests in her work on monsters, they have the ability to "both define the limits of the singular embodied subject and reflect our own ultimately insecure and unstable identities…they invoke in us all…both a nostalgia for identification and the horror of incorporation" (170). Kyoko's reveal can simply be read as a horror film trope, a moment that induces disgust or revulsion in viewers, and hence presents the traditional threat of the gynoid, the fear of hybridisation that Shildrick posits.

Alternatively, though, the scene can also connote a more progressive reading. Hayles couples her analysis of the skeumorph's function – the new recalling the old – with a reaction that "finds the traditional more comfortable when it is presented in a context that reminds us we can escape from it into the new" (17). Hence, the moment when the perception of Kyoko's skin shifts from traditional or natural flesh into gynoidian cover is a moment that reveals potential: the viewer, after all, has perceived Kyoko as human for much of the film, and so the possibility of gynoidian assimilation is highlighted. Although the genre of the scene may seem to displace this emphasis on futuristic potential, it must be acknowledged that the haptic dimensions of the scene render it more than merely a frightening or repulsive sight. The haptic function allows the film not only to present to viewers a possible societal change, the merging of human and robot sensibilities to create gynoids, but also to *feel* their way through the change. Audiences not only optically perceive the layers which gynoids are made

up of, but are able to haptically touch their "skin", their "skulls": to understand what a move toward incorporating electronic dimensions to beings may feel like.

The drive to keep certain forms of traditional human embodiment alive in the film is what enables *Ex Machina* to pose such an approachable vision of the future: "…it is not a question of leaving the body behind but rather of extending embodied awareness in highly specific, local, and material ways that would be impossible without electronic prosthesis" (Hayles, 291). Indeed, this more palatable approach to embracing cyborgism is echoed in the film's narrative as we move from the horror-esque depiction of Kyoko's reveal into the conclusion of the film, which depicts Ava moving away from the robotic appearance of her exterior and toward a clothing of humanity: which, of course, is represented using skin.

The sequence in which Ava clothes herself in skin strongly invites haptic engagement. It is, interestingly, introduced in the same manner as the film's other sequences involving the robot: an intertitle screen labelled 'Ava: Session Seven'. The portrayal of Ava attaining an appearance of humanity is, conversely to Kyoko's frightening duality, just another facet of her existence, lent a certain mundanity by the familiar intertitle. Much closer camera work than in the Kyoko sequence shows Ava entering the room where Nathan's other inactive gynoids are kept and inspecting their bodily forms. Viewers can see and haptically engage with both Ava's form in the mirror and the textures of the other gynoids' body forms as Ava unclips various naturalistic body parts and replaces her own more electronic looking ones. The camera temporally and spatially lends itself to

closer inspection of Ava than ever before, lingering over the soft movements of her hand, her strokes of her own textures and caresses of the new ones, which viewers can easily partner in sensing haptically. In the cumulative gesture of the scene, Ava peels off the skin of another gynoid and applies it seamlessly to her own torso.

In essence and tone, the scene could not be more different from Kyoko's reveal. Although it represents the film's narrative climax and also leads to Ava's ultimate deception, whereby she escapes into the world, passing as human, the audience is not now distanced from the gynoid figure. The strong promotion of haptic engagement within the moments of change suggests that the audience is meant to remain close to the images, remaining part of the character's process of change and aware of the dual natures she embraces. Shildrick argues, similarly, that the usage of skin can promote not the metaphorical and physical covering up of roboticism, but its continued presence, noting that "once the surface of our bodies is understood not as a protective envelope that defines and unifies our limits, but as an organ of physical and psychical interchange, then the (monstrous) other is always there, 'like my skin'" (171). The scene, then, is not about confronting us with Ava's roboticism, or even to emphasise the relative safety of her covering of her robot parts, but about viewers learning, through sight and touch, to accept the inherent relationship and tension between her human and robotic components.

This model of acceptance, whereby viewers are viscerally engaged in learning about the duality of the gynoidian nature and how she might be in the world, is

the central function of the characters' skins in *Her* and *Ex Machina.* While the former focuses, more holistically, on rendering skin as a familiar touchstone within the film's more unfamiliar world, the latter employs 'dead' skin to showcase the gynoid's ability to physically merge seamlessly into groups of humans. *Her* invites viewers to move forward from haptic experiences of characters' skins to fearlessly inhabit a futuristic world in which cyborg consciousness is more commonplace, suggesting that we can live in a gynoidian world. *Ex Machina,* more subtly, posits that despite what is under the skin, the transmutability of the surface will allow gynoids to live in ours.

II.III Screen Skins: 3D and 'Hyper-haptic' Images

Unlike *Her* and *Ex Machina,* Luc Besson's *Lucy* was not only released in 2D in July 2014, but in October 2014 was additionally re-released in 3D to cinemas in France and China. While it is easy to construe this solely as a move to garner extra revenue from a targeted theatrical re-release, it is also evident that elements of the film in some way lent themselves to stereoscopic treatment. Likewise, as Jonathan Crary notes, shifts in mass visual culture – such as the move back toward mass 3D release of feature films in the late 2000s – are not merely propelled by technological change: the emergence of new technical forms of attraction has the potential to draw attention to affective experiences (2; 17). It is worth, then, setting aside factors of financial and technological impetus and considering how the nuance of the stereoscopic medium is able to impact the affective experiences proffered by the 'Lucy' gynoid.

The most coherent way for this study to theorise the shift to stereoscopy is to follow the terminology of Miriam Ross, who furthers Marks' haptic visuality to coin the term "hyper-haptic". Ross suggests "if the intercultural cinema that Marks examines plays upon and exploits the uncontrollable, tactile quality of images in the production of haptic visuality, then 3D cinema asserts an uncontrollable, infinite depth in its image, producing a *hyper-haptic* visuality" (24). Because the images are able to spread toward (into negative parallax space) and extend backward from (into positive parallax space) the audience, as well as horizontally across the cinema screen (the level of zero parallax), the possibilities for haptic engagement in a stereoscopic film occur over multiple planes. The audience can, in 3D films, engage in a mode of 'hyper-haptic'

visuality, responding to a screen body that seems to be moving in the cinema space around them or receding away from them in extreme depth.

Lucy employs blunt juxtaposition of these stereoscopic techniques to convey the exchange whereby its protagonist begins to become post-human. Like Kyoko in *Ex Machina,* the viewer is forced to comprehend a shift in the gynoid's ontology: this time, though, we witness a transformative process whereby woman becomes gynoid, as opposed to a sudden revelation of roboticism.
In this sequence, Lucy has become the vessel of an international drug cartel, with a pouch of the blue crystals known as 'CPH4' sewn into her stomach. When her captor enters the room and kicks her in the stomach, the film's diegesis takes viewers into a CGI created bodily interior to display the effects of the drugs (which, the film purports, enable her brain to reach its full capacity). The blue crystals are travelling violently through Lucy's system, causing the cloud-like trails of chemical reactions to trail through the screen space, through negative and positive parallax, along with bright explosions. The elements at play themselves lend them to haptic inspection from audience members, with the jelly-like textures of inner organ walls set against the hard crystal surfaces and dissipating gaseous trails. Due to the stereoscopy, though, the elements move beyond the bounds of the flat cinema screen to extend into the auditorium, or negative parallax, space, with some also receding backward into positive parallax space. The effect is claustrophobic: audiences are bombarded by the visual and tactile elements of the chemical change.

Conversely, 3D techniques also lend an agoraphobic quality to the sequence, as the scenes inside Lucy's body are intercut with scenes in which she is placed in longer framing within the prison room, her body experiencing some kind of seizure as the drugs take effect. In these shots, the walls of the room extend backward into positive parallax space, rendering the area where the cinema screen would normally bear the image as empty space, the room's interior. It is difficult to tell whether Lucy's body, which, shuddering, travels along the floors and then up the walls, is at the screen level (zero parallax) or protruding slightly toward the audience (in negative parallax). Either way, the effect is the same: the body encountering horrific change is isolated within the mise-en-scène, with the stereoscopic depth of the empty room emphasising this beyond the capability of a flat two-dimensional room.

Something of a match or a partnership is constituted here. Viewers are narratively engrossed in working through the changes of a new technology – one that, the film tells us, unlocks the human capacity in a way that allows us to function as post-human. This content is articulated through filmmaking form, including stereoscopy. Due to the confrontational manner of the stereoscopic medium and the CGI required to create it, it is new technology in itself – 3D in its twenty-first century, digital iteration - that renders this experience of posthuman being available to the audience. The diegetic technological change is partnered with existing technological change, encouraging viewers to intellectually consider the possibilities evoked and also promoting an embodied response that affectively binds viewers with the post-human. Through the stereoscopic effects

of Lucy's transformative sequences, viewers encounter and feel, rather than merely viewing, the post-human.

At the film's conclusion, the abilities of the hyper-haptic aesthetic to explore new technological frontiers become still more pronounced. Lucy, due to the effects of the CHP4, reaches 70% of her brain's capacity and announces her intention to download her entire knowledge base into a computer she will create, given her imminent demise. This action is initially heralded by the repetition of the previous scenes depicting the drug reactions in the cells, coupled with exterior shots as Lucy spews light from her mouth. Interestingly, Professor Norman (Morgan Freeman) is viewing Lucy's final efforts through a video camera set on a tripod in the room, and at several moments the audience are privy to his viewing position: the images from this perspective are portrayed without stereoscopic effects, are black and white and heavily grained. A nod, certainly, to cinematography past, but also, for audiences, a throwback to Marks' original 'video haptic' aesthetic, as viewers are forced through hampered optical vision to 'feel' their way around the low-quality image to discern the unfolding events.

It is in the moments following these shots, though, that Lucy becomes truly gynoidian. Like Kyoko in *Ex Machina,* the skeumorph of human skin is cast off as Lucy develops a form by which she can transmit information. Rather than creating a separate technological means, Lucy enfolds her robotic task within her being: as Bateson indicates, the cyborg "is not bounded by the skin but includes all external pathways along which information can travel", and thus Lucy, by forming these external pathways, completes the process of becoming a gynoid

(319). Besson's film thus articulates the post-human in a more confronting way than *Her* or *Ex Machina,* both of which presuppose gynoids' existence. *Lucy,* however, asks viewers to follow the protagonist's transformative process, all of which occurs on-screen: thereby suggesting not only that gynoids may exist or be created, but that we, like Lucy, may shed flesh skins for robotic ones.

During Lucy's final transformation, during which she attempts to download her information before she is assassinated, Lucy's skin ripples and blackens; she grows tree-like, cable-like limbs from her hands that reach toward the floor and burrow into it. The limbs, in dually evoking natural and technological forms, prove a visual link to the dual robotic and human natures Lucy attains. The protuberances resemble plastic, but a more liquefied form, and audiences can discern a shiny, rubbery, thick, smooth texture – a plastic haptic – aided by the 3D contouring and depth around the four separate trunks that extend to the floor. In this way, viewers are haptically fused to Lucy's sequence of growth, drawn by the fixating qualities of the unique black texture of the limbs. By haptically discerning textures, we touch and feel Lucy's process of transformation along with her.

The black 'limbs' eventually become more cable-like, resonating with an electric blue charge that runs along their lengths, and they spread out like a five-pointed star around the protagonist. The mise-en-scène has been completely removed to isolate Lucy within a clean white space, mirroring the agoraphobic effects of her earlier transformation. Some canted angle shots are set from behind the trunk-like structures, placing them in negative parallax and hence close proximity to

the audience. Ross suggests that "it is the combination of [optical and haptic] – the deep space visual system employed in stereoscopic depth and the tactile, palpable quality in its seemingly material presence – that provide the 3D field screen with its particular, hyper-haptic aesthetic", and this is clearly evident in the sequence as the limb structures are thrown into such extreme optical and haptic relief (25). Viewers are – quite literally, as the limbs appear in negative parallax within the cinematic auditorium space – close to Lucy's newly developed hyper-haptic cyborg parts. It is commonly noted that audiences of 3D films believe so strongly that they can 'feel' the objects around them that they extend an embodied response, reaching to touch or feel the objects (Ross, 12). The gynoid, here, invites such gestures of touch: she is rendered fully accessible to the audience.

Besson makes an unusual choice at this point in the narrative, marking what could be construed as the futuristic pinnacle of the film with a return to primitivism. He takes the protagonist – and hence, viewers – on a whirlwind journey through time and space, as Lucy on her chair seems to travel through a series of blurred images, displayed at high speed, to end at landmarks such as the Eiffel Tower and Times Square. Not only does this suggest an overt link, the futuristic elements of the film to its primitive beginnings, but the sequence could also be viewed as a commentary on post-humanity itself, situating a robotic humanism as merely the next step within a much wider progression of human history. Even the pre-human is constructed as touchable by the film, which confronts the Lucy gynoid with what is narratively suggested as the ape version of herself. The ape stands before Lucy, rendered in slight negative parallax so as

to extend toward the audience, with the textures of fibrous hair hyper-haptically accessible to viewers. The past, then, is not so far away, it is so close it is touchable – and is but a small step from a post-human future. Besson situates robotic humanity within the development of human history, using altered temporality and haptic visuality to reduce a robotic future to one of many smaller shifts for humankind rather than a fundamental, fear-imbued change.

Lucy culminates with the protagonist reaching 100% of her brain's capacity. Before her would-be assassin can reach her physical being, which remains seated in the chair in the same room, she is depicted in negative parallax, the textures of the swollen black mass that is the computer distinctly tangible to audiences as some kind of limb protrudes to hand a USB stick to Professor Norman (Morgan Freeman). The tangibility of the gynoid in this moment is starkly contrasted with the loss of textured surface when the scene returns to her: newly collapsed into a pile of dust. A character questions where Lucy is, and a text message arrives on his phone: "I am everywhere". This is an aperture eerily similar to that of *Her,* in which the Operating Systems depart known existence to find their own transcendence, leaving the human protagonists to seek comfort in one another.

Jonathan Crary believes that "[shifts in mass visual culture] are inextricably dependent on a new arrangement of knowledge about the body and the constitutive relation of that knowledge to social power" (17). *Lucy* envisions this statement, making substantive use of 3D's resurgence in visual culture to depict a new awareness of the body's technological potential. Through Lucy's evolvement into a supercomputer, the film posits the possibility of a posthuman

era, and moreover, constructs this era as a tangible possibility for viewers through the use of hyper-haptic stereoscopic effects. While some would suggest that the film's closure – along with that of Jonze's film – negates the positive promotion of a post-human shift, I would argue that in fact, the eventual transcendence of the technologically engaged figures signals potential, rather than threat, for humankind.

The key offering *Lucy* submits within the context of this thesis lies within the film's demonstration of hyperhaptic visuality. While II.I and II.II dealt with the skins of the viewer and cyborg respectively, the use of stereoscopy in Besson's film foregrounds the abilities of the cinema screen, the 'skin of the film'. While undoubtedly a more abstract concept than the two former skins, the film's skin is no less significant in understanding how it is that audiences are encouraged to connect with gynoid figures. As the stereoscopic screen skin extends toward and away from the viewer, hyperhaptic engagement invites viewers to close phenomenological association with both the skin itself and the gynoidian image it displays. Gynoids are not displayed on a screen 'over there' or at the 'front of the cinema', but appear to co-occupy space with the viewer: stereoscopy, thus, quite overtly suggests a gynoidian sharing of the viewer's world.

Additionally, *Lucy* strongly promotes affective connection with the process of human to gynoid transformation. The transformation process is not depicted in *Her* and *Ex Machina,* both of which communicate worlds where gynoids are electronic, not human, in base origin. The transformation scenes build on the hyperhaptic possibilities noted above: the screen skin not only extends and

recedes to meet the viewer's skin, but does so while visually proffering the possibility of the viewer's human skin transforming into cyborg skin. In this way, all three types of skin – viewer's, cyborgian, screen – are brought into close relief, uniting to signal the possibility of the transformation into hybrid posthuman skins through affect as well as narrative content. Viewers are therefore offered something more than merely fear of posthuman development: they are enveloped in prosthetic experience that gestures toward communicating how the new, posthuman hybridity could feel.

Throughout Chapter Two, then, a clear trend in the representation and perception of skins is evident. II.I charts the base function of haptics within *Her* as a point of familiarity for the audience, a means by which viewers are offered security by way of haptically feeling Theodore's skin, which is so similar to their own. It notes that Jonze at times privileges this haptic mode of introduction to character over a more traditional aural or visual approach, providing a human foil for the haptic absence posed by the Samantha character. In opposition to Jonze's approach, II.I argues that Garland, in *Ex Machina,* deploys a 'plastic' haptic that interrogates the links between gynoids, consumerism and hyperesthesia, ultimately posing contradictory readings in terms of whether the gynoids possess power and agency.

Finally, II.I demarcates between incorrectly perceiving the gynoids' femininity as the producer of haptic experience, citing haptic visuality as a vector for experiences that are capable of connoting quasi-feminist expression. It suggests that while the potential operation of the male gaze within the films should not be

discarded, haptic visuality can potentially neutralise the viewer's mastery over the on-screen object by bringing viewer and image into close proximity, equalising the relationship between viewer and image, and in turn, viewer and gynoid.

Section II.II deals more specifically with notions around the skins of gynoid figures, with particular attention to Ava and Kyoko (*Ex Machina).* It echoes the dual nature of the cyborg foregrounded in Chapter I to argue that cyborg skin negotiates otherness and sameness, and in turn negotiates between viewer and gynoidian selves as both are drawn together in a series of robotic encounters. II.II explores how gynoid skin (and Kyoko's in particular) can be 'dead', using Hayles' notion of the skeumorph to identify tbe appearance of gynoidian skin as a useful interface for points of contact between gynoid and viewer. It notes that narrative moments of traditional gynoidian threat posed in *Ex Machina* are offset by the haptic function of skin, which allows viewers to feel their way through change. In particular, the scene where Ava clothes herself in gynoidian skin draws viewers into the process of gynoidian assimilation in a manner less human, but nevertheless equally as affective, as Lucy's process of transformation. II.II argues that we can learn to accept the combination of robotic and human qualities that lie under the gynoids' skins.

Finally, section II.III discusses the skin of the cinema screen and the possibilities of stereoscopy, a revitalised form of technological attraction that draws attention to the affective experiences at hand. It explores the operation of Ross' 'hyperhaptic' visuality within *Lucy*, and the claustrophobic and agoraphobic

senses the 3D techniques used throughout the film are able to produce. II.III notes that *Lucy*, conversely to historical gynoidian depictions, narratively and hyperhaptically places the process of human transformation into the posthuman as merely the next step within human history and evolution, working to negate the senses of fear and threat posed by a more gargantuan change. It argues that the film pairs the technological abilities its production showcases with on-screen technological development, using a sense of the potential of the digital age to work to promote the positive aspects of technological shifts. Ultimately, it is clear that the haptic portrayal of skins operates as a key point of audience interface and orientation in these films. The rendering of skin and skin's tactility by way of the screen's own skin points to broader sentiments around the connection and disconnection between technology and human identity, as well as the constant reworking of the relationship between people and cinema viewing.

Chapter Three: Prosthetic Experiences

It has been established that gynoids consist of dual human and robotic natures, and that their skins provide a means by which audience negotiate the simultaneous otherness and sameness of the figures. How, though, do these encounters extend beyond a relationship with skin itself and into a broader range of affects? This chapter explores this notion and thus provides a taxonomy of a number of these affects as produced in *Her, Lucy* and *Ex Machina.* It examines how it is that the gynoids' unique connections with audiences can help viewers surmount the barrier between lived experience and imagined future experiences, providing a safe space in which viewers can begin to engage with new technologies.

For the purposes of this thesis, the unfamiliar experiences viewers embark on are termed as "prosthetic". This notion borrows from Landsberg's conception of "prosthetic memory"; memories which emerge at a point of encounter with the past and allow individuals to conceive of or 'remember' a past which is not their own (3). For example, cinema itself may act as a prosthesis as a viewer watches an historical film and thus participates in a process of 'remembering' a past which was previously unfamiliar. Landsberg holds that through this experience, "the person sutures himself or herself into a larger history" (2). In the context of these particular films and the gynoidian futures they promote, remembering the past is displaced in favour of 'remembering' the future, turning our typical process of memory on its head and enabling a prosthetic imagining to suture viewers into possible post-human futures.

The chapter discusses four aspects of these imagined futures and their respective conceptions within the case study films. The first and second of these aspects, dance and voice, are largely sexual: within *Ex Machina* and *Her,* Garland and Jonze depict a number of ways in which sexual encounters might take place in a futuristic world. While *Ex Machina* largely relies on image and touch to promote these prosthetic experiences, *Her* pushes further in testing the bounds of film form, playing off Samantha's disembodiment to range from image-based to purely aural haptic stimuli. The chapter interrogates the implications of the gynoids' roles in promoting sexually based affects, noting that while the intimation of the positive potential of laminating new technologies to the female form is progressive, the pleasure of the prosthetic experience can also serve to mask an inherent commodification of the female form.

Memory, while less loaded in terms of gender, is another aspect of the films which works strongly to connect viewers with imagined futures. The texts employ techniques ranging from a more typical flashback apparatus to more overt play with senses in order to convey the act of remembering. *Her* counterpoints human acts of remembrance with the omniscience of the Samantha gynoid, using the affective abilities of film to present the potential of a less limited temporal perspective. To a similar end, *Lucy* demonstrates the eponymous gynoid's ability to transcend space and time through post-human expansion of memory, extending a similar experience to viewers through affective means. *Ex Machina,* meanwhile, offers a more simplistic form of object memory based on tactile affects, which serve as a prosthetic connection between

familiar memories of texture and imagined future bodily composition.

Finally, an examination of the gaming sequences that recur throughout Jonze's film moves beyond the other examples in demonstrating how prosthetic experiences can encourage audiences to effectively become cyborgian. In watching characters gaming, an invitation to participate in the gaming process is proffered; in turn, viewers engage with prosthetic experiences of gaming movement to explore what it may feel like to be posthuman. The gaming sequences of *Her,* this chapter argues, extend an offer of a tactile and visual posthumanity to the phenomenologically engaged viewer.

III.I “Let’s Dance”: *Ex Machina*, Dresses and Female Forms

Garland’s *Ex Machina* is the most traditional of the films in the way it evokes gynoids using a partly mechanical, partially human bodily form. Before moving on to more complex manifestations of cyborgian form (the disembodied gynoid of *Her*), it is appropriate to address the specific configurations presented in *Ex Machina* more thoroughly. Despite the narrative and genre of the film pointing strongly toward a fear or threat based response to the beings, a phenomenologically based reading of the film points to a more nuanced reading. In this way, the film strongly promotes that the gynoids are among us as embodied beings who are touchable. The film encases new technological experiences in a female form, which is an historically typical way of displacing anxieties about change. *Ex Machina,* though, moves beyond merely evoking the threat and fear of the new to also express the thrill of the possibilities of future technologies by undermining the privilege of optical visuality and promoting haptic engagement with the array of experiences the film body proffers.

One such experience is the kinaesthetic empathy promoted through *Ex Machina*’s much lauded, albeit brief, dance sequence. Nathan enters the room in which Caleb is trying to stop Kyoko from unbuttoning her shirt to expose her breasts to him. “I told you, you’re wasting your time talking to her”, Nathan drawls, “however, you would not be wasting your time if you were dancing with her”. He flips a switch and as the sparse room is flooded with a heavy, dense red filtered light, he and Kyoko begin to dance – in unison, a choreographed routine – to disco music. The scene has become something of a cult favourite in Internet

circles, probably because the blunt change of tone comes across as humourous within such an intense narrative. However, it is significant in more ways than just as a narrative interjection.

The first point to note here is the body-to-body relationships of the characters. The eye is drawn toward the bodies' movements within the minimal mise-en-scene and thick sameness of the image's red tint. Their synchronised dance moves place them in a mimetic form of tandem movement, and because Kyoko is fully clothed in her human skin at this point, she and her creator Nathan have never appeared more equal. This is the only point in the film in which Kyoko is depicted as more than Nathan's slave, and it is interesting that even in his dialogue in this scene, he suggests that dancing with her – sharing embodied movements – is the most powerful experience that Kyoko can afford. Nathan models a primarily embodied, rather than cognitive, form of engagement with the gynoid.

Likewise, the spectator is invited to join in this experience. D'Aloia suggests that "the most effective cases of empathic relation in the film experience are those in which the movement of the represented body elicits tension and creates a field of energy that vitalises the space between the character's body and the spectator's body" (98). Thus, just as Nathan suggests engagement with Kyoko through dance produces a desirable affect for himself, this experience can be mirrored as the viewer, too, takes part in the dance sequence: an engagement which could be expressed proprioceptively or physically. As an arm is thrown up, so too might the viewer's musculature revel in its unrealised potential to respond to this

gesture of the filmic body. As the symmetry of the characters' blocking connotes, every action invites an equal reaction, for the bodies both within and outside the diegesis.

No matter how concise the synchronisation of bodies here (characters'; film's; spectator's), there are still hierarchies at play. Presumably the reason that Kyoko knows the dance moves is that Nathan has taught her, rendering her once again subordinate to his needs. The gynoid's limber physicality reminds audiences of the degree of control he exerts over her, continuing the negotiation of a complex gender dynamic between both on-screen bodies and viewers. On the level of spectatorship, it is interesting that Garland places both a male and female body on-screen, displacing some of the female to-be-looked-at-ness that Katharina Lindner suggests dancing female bodies on screen commonly promote (322). The visual hierarchy of spectator over objectified body is also broken down by the use of the red filter, which demands haptic, rather than optical, identification of the shapes in the scene. In this way the viewer is drawn alongside the dancing bodies, rather than distanced from them and retaining power over them. While the tandem movements of creator and created can be read as a dynamic of both co-equal power or control between the characters, haptic visuality in the scene provides an opportunity for a more equal platform for interaction between viewer and gynoid, neutralizing the mastery of viewer over gynoid.

The dance scene demonstrates the way in which gynoids can promote affective experiences on multiple levels. Within the diegesis, the gynoid is harnessed by her creator in order to display his mastery and control, and to provide a kind of

enjoyment derived from the viscerality of their tandem movements. For the viewer, the scene is enjoyable on the level of a narrative and tonal departure, as well as the kind of energy that D'Aloia describes: "the film images are experienced as celluloid bodies that, nonetheless, express vitality thanks to their *movements* and their *resemblance* to human bodies and movements" (95). Within the relationship of the film and spectator body, an affective experience is haptically provided. Within the diegesis, a more nuanced suggestion is made that the experiences gynoids provoke allow their creators to feel joyful and powerful.

The power of the creator is evoked in a tonally oppositional manner during a separate sequence in *Ex Machina.* Nathan allows Caleb to look around his workroom, where Ava was created. As with the character, this is the first time viewers are allowed access to the space, which is sterile, blue toned and emitting a quiet hum. 'Body parts', or electronic components, are laid across pristine white tables: prosthetic skin faces, small clean gadgets, jelly-like blue oval brains. Seeing the components of the gynoids' bodies deconstructed is a strange experience for the viewer, and one that foregrounds their nature as created, technological beings. They are not merely robot-like humans: as Doane notes regarding Lang's *Metropolis,* "the woman's body literally becomes a machine" (113). In contrast with this "machine" are both male characters: Nathan as the traditional 'creator' figure, the remnant of past methods of reading gynoidian figures; Caleb as the viewer themselves, newly allowed access to this world of posthuman textures and tactile affects.

The way in which the male characters interact with these machine parts strongly invites haptic inspection. Nathan explains that the components needed to be able to structurally rearrange, rather than being held static, hence the ‘structured gel’ brains which he refers to as ‘wetware’ rather than hardware. Both he and Caleb hold a smooth blue brain in their hands, initially framed in mid shots before the camera pulls closer to inspect their hands nestling the blue gel structures. As Caleb’s hands pull back from the foreground, it is as if the film’s body fully reveals the ‘brain’ to the viewer in all its closeness, and the cool smooth softness of its surface against the relatively rough skin of the hands is easily discernible. The gynoid is stripped back to her mechanical elements, devoid of threat, and the film presents her to the viewer for inspection and caress.

Although *Ex Machina* does not equate the viewers to or necessarily identify them with the main protagonists in this sequence, there is nevertheless an uncomfortable feeling in terms of the gynoids’ femaleness. Haraway’s suggestion that “[t]he cyborg is a kind of disassembled and reassembled, postmodern collective and personal self…the self feminists must code” seems all too pertinent in terms of overt metaphor, but grinds against the passivity of the deconstructed body parts and their lack of agency against fully bodied males (161). The assertion that a woman’s existence is predicated by her sexual appropriation is more appropriate (Haraway, 159), especially after considering the ‘finished’ gynoids’ roles as the “powerful, yet vulnerable, combination of sex toy and techno-sophisticate”, as Gonzalez describes Kiddy from *Silent Mobius.* The body parts themselves, then, may be appropriated, but the way in which the viewer engages with them haptically is not necessarily appropriative.

Consider, furthermore, Ava as a wholly complete creation, and the way in which she encourages viewers to share in her performance of gender. This is primarily showcased in one of her sessions with Caleb, during which she dresses as a female. The sequence sits in contrast to much of the film's stark, sterile interiors and texture. Ava instructs Caleb to close his eyes as she moves to a back room, shifting dresses along a rack and holding them in front of her. The camera frames her in close-ups, promoting haptic inspection of soft fabric and skin textures, as she slides a dress over her arms and torso and pulls thick woollen stockings up her legs. Ava strokes the fine strands of hair that comprise her different coloured wigs, suggesting for audiences not only the optical gloss of the light reflecting on the hair but a tangible connection with the texture of the hair strands. The film presents viewers with extreme close-ups of Ava's face in the mirror – with no robotic parts visible, she appears as any other human woman. Likewise, when she returns to Caleb, only a small part of the robotic veneer around her neck is exposed, and they are framed as equals by the mise-en-scene.

Doane, along with Christian Metz, best describes the exchanges taking place via the medium of the gynoid in this scene:

> Christian Metz, for instance, refers to the play 'of that *other mirror,* the cinema screen, in this respect a veritable psychical substitute, a prosthesis for our primally dislocated limbs.' From this point of view it is not surprising that the articulation of the three terms – 'woman', 'machine', 'cinema' - and the corresponding fantasy of the artificial woman recur as the privileged content of a wide variety of cinematic narratives… (113)

In this way, the film itself acts as a kind of technological extension of the viewer's body as Ava is dressing. Viewers not only optically perceive the gynoid's

movements as she dresses, but engage with the filmic body and in turn, the gynoid's body, as both express familiar movements and varying textures. The film body invites audiences to this experience of robotic womanhood, simultaneously interrogating the very nature of the gynoidian identity and femininity. Cinema, though, allows a safe space or prosthesis within which such issues can be explored: the non-threatening nature of the phenomenological connection between film and viewer (a bond which can be broken at the viewer's behest) in combination with the soft familiarity of much of the scene, allows for participation in the dressing ritual without fear.

Likewise, the verbal exchange between Ava and Caleb during this session encourages a relational, affective connection between human and cyborg. Ava moves their previously intellectual conversations forward with a number of more provocative statements: "How do I look?" "This is what I'd wear on our date…I'd like us to go on a date." "Are you attracted to me? You give me indications that you are…the way your eyes fix on my eyes and lips, the way you hold my gaze – or don't. Do you think about me when we aren't together?" The gynoid moves past a merely robotic form of recognition here, but also transcends the common sexbot trope by placing emphasis on emotionality and attraction as opposed to mere physicality.

The exchange, then, concretises an imagined future interplay whereby gynoids are neither robotic in appearance and manner, nor physically human-like and to be appropriated for sex, but are independent entities who can enter into holistically human relationships. The film revolves on this premise, and hence

Ava's tangibility is purposeful: the key to Nathan's Turing test is not how Caleb perceives Ava's intelligence, but whether or not he is susceptible to her charm. As Turkle aptly notes, "We will not care if our machines are clever, but whether they love us" (286). I would additionally suggest that the affects and experiences the film generates for audience members mean that the test is not only for Caleb, but also for viewers, interrogating whether we, too, will fall for Ava's emotionality and the haptic experiences she affords.

A strong connection with Ava is promoted during one of the film's climactic sequences. The gynoid achieves the appearance of a human being by appropriating the skin of Nathan's abandoned previous models, before her departure from the laboratory altogether, leaving Nathan dead and Caleb trapped inside. The way in which Ava's new assumption of identity is depicted is of particular note because it emphasises the role of embodiment and bodies, in both their centrality to the narrative and the strongly phenomenological paradigm by which viewers experience the film; this runs conversely to Hayles' assertion that "embodiment has been systematically downplayed or erased in the cybernetic construction of the posthuman" (19). As in the other sequences in the film, touch proves a conduit by which the new technologies concretised by the gynoid are rendered accessible for viewers' exploration.

The scene begins as Ava enters a room containing a large number of wardrobes with mirrored doors. She is reflected multiple times from different angles as she opens the closets' doors to reveal the other deactivated gynoids. Caleb, meanwhile, peers in at her from a separate room through a glass wall. The

refractions mean the viewer has almost full access to view Ava's unclothed figure from all angles, with Caleb's gaze foregrounding the voyeurism potentially at play.

Longer shots give way to close-ups as the film body invites closer tactile inspection of Ava's skin-clothing process. She disconnects and drops her arm, replacing it with that of another gynoid. Each of her movements are fluid, but also undeniably robotic in execution as metal pins and rods extend and retract to allow her to connect and disconnect body parts. The juxtaposition of these robotic parts with the human skin she dons foregrounds, once again, the duality of her nature. Her actions, likewise, evidence both: a machine-like testing of her new components as she stretches and manipulates her own fingers; a more emotional appreciation for her new skin as she caresses the other gynoid's face and runs her hands down over her own body.

These moments in *Ex Machina* – the close, roving camera work, the soft lighting – not only emphasise Ava's exploration of her new, human-passing self, but invite viewers to be involved in this process through haptic discernment of skin and metal textures. It posits that the machine can become seamlessly (outwardly, at least) human, but simultaneously invites the human viewer to be a part of this process, neutralising the threat that a non-distinguishable gynoid more usually suggests. Moreover, just as the scene materialises a different way of thinking through the figure of the gynoid within contemporary society, Castaneda believes that cyborgs also hold the possibility for imagining touch in different terms: "this possibility is not lodged in the robots themselves, but rather in the

potential relationality that becomes evident through their different and very particular embodiments" (235). The parts of this scene that make Ava so unique – her metallic joints and fixtures – are the very parts that encourage viewers to depart from a more traditional sense of feeling skin and flesh to sharply and directly juxtapose these senses with cold, sharp metals. Likewise, *Ex Machina* promotes a model of touch that brings viewers in contact with an otherwise unknown entity, allowing them to fully explore and understand it through haptic textures, and work through the possibilities that the technology presents in more ways than merely the traditionally privileged optical and auditory means. This new possibility for touch, as Castaneda posits, is produced by the interplay between Ava's embodiment, the viewer's own body, and the film body.

It is clear, then, that Ava does not simply become human in this sequence, but adopts a human exterior while the film continues to suggest her unique gynoidian form of embodiment. The close tactility of the shots where Ava peels off skin and carefully applies it to her own torso is finalised by a shot of her whole form as she closes away the other robotic gynoid. She regards herself in the mirrors, flicking her hair slowly back over her shoulder. Ava opens the last cabinet to carefully finger a lacy dress, before the scene cuts to an extreme close-up of Caleb's own skin as he presses against the dividing glass, and ends with a long shot of Ava exiting the lab, fully clothed. Rather than bringing closure to the transformation, these moments of contrast between Ava and Caleb's touch accentuate the fundamental remainder of difference between the characters. Castaneda puts it thus: "robotic re-embodiment of touch suggests that bodies must indeed be both material and semiotic, but that they do not need to conform

to the 'imaginary morphology' (Butler 1993) of the human, with all the internal hierarchies and absolute differentiation from the non-human this entails." (233)

Ex Machina, then, promotes gynoidian protagonists who are overtly female bodied. They are traditional figures in the sense that they are both mechanical and human in appearance and nature, and are often forced to perform roles or activities that are perceived as feminine. However, they are also contemporary figures: they evidence technological capabilities that run concurrent to what is now possible, and furthermore, do so by harnessing their embodiment in ways that invite the viewer to engage fully with the film's body and, in turn, the gynoid body in a manner that transcends optical vision or mere voyeurism. Despite the narrative and genre of the film pointing strongly toward a fear or threat based approach to the beings, the phenomenologically based reading explicated here points to a more nuanced reading. In this way, the figures intervene in feminist theory in one of the two ways that Balsamo suggests: the "construction of an ideological critique of the cyborg image as it has been produced by patriarchal culture" (152). Next we turn to Jonze's *Her,* which takes up the other half of this model, whereby "technology emancipates woman from her corporeal body" (ibid.).

III.II “I Wish I Could Touch You”: Disembodiment and Voice

In *The Acoustic Mirror,* a psychoanalytic exploration of the female voice in cinema, Kaja Silverman suggests that particularly within experimental feminist cinema “the female voice is often shown to coexist with the female body only at the price of its own impoverishment and entrapment” (141). It can be probed, then, whether films such as *Her,* which conversely emancipate the female voice from a bodily form, produce similar implications. The following analysis of Spike Jonze’s disembodied protagonist ‘Samantha’ argues that a lack of embodied presence does not necessarily equate to a negative or lacking form of representation for female gynoids. Neither does it negate the prosthetic experiences gynoids can provide, which the film body expresses for viewers through what I term ‘haptic absence’. Ultimately, unlike *Ex Machina,* the disembodied female form in *Her* challenges the body/machine dualisms inherent to the gynoid figure, rather than celebrating them.

A slightly different stream of phenomenology from that deployed previously in this work deals specifically with the voice. Miriama Young traces the development of this work vis-à-vis Roland Barthes, Michel Chion and Mladen Dolar. She suggests “the voice invites the listener to experience physical empathy, as the listener’s ear and body wrestle with the physicality we hear in the other’s voice, thereby producing an inherently kinaesthetic relation. In listening to speech or song, we are invited to hear another’s voice with our own body, in relation to our own” (2). This statement serves as the basis for not only a kinaesthetic connection between voice and listener: it can be applied also to

the act of hearing film sound, which promotes a kinaesthetic tension between the voice produced by the film body and audience members.

Marks suggests that this kind of moment can complement her notion of hapticity, noting that "one might call 'haptic hearing' that usually brief moment when all sounds present themselves to us undifferentiated, before we make the choice of which sounds are most important to attend to" (183). As when a haptic image presents itself for textural, rather than optical, inspection, so the haptic sound is not yet fully discernible, but nevertheless evokes some sense of familiarity.

These types of images in *Her* take the form of Young's 'acousmatic' images, which she describes as "a kind of likening in which we hear the sound object without the visual accompaniment" (18). Haptic hearing, I would argue, is amplified in this absence of an on-screen image, whereby Marks' 'brief moment' becomes of fuller temporality and therefore encourages a similar kind of engagement to that of a haptic image, whereby viewers work to constitute a relationship with the film's body based on texture – in this case, the textures of sound, an acousmatic image, rather than an optical image.

In Jonze's film, these acousmatic sequences recur during the sexual encounters of the protagonist, Theodore. It is interesting that the film deploys haptics in this way – in a moment where touch and sensuality are foregrounded by the subject matter, the film tries to mimic this approach for the viewer through its own textured sound, rather than providing a more typical visual softcore scene. Given that in one instance, Theodore is engaged in phone sex, and in the other, sex with

a disembodied Samantha, both scenes rely on technological advancement to drive sexual pleasure, lending credence to Turkle's assumption that "technology proposes itself as the architect of our intimacies" (1).

In the first of these scenes, Theodore lies in bed, trying to sleep but grappling with memories from his past relationship. He eventually turns and puts in the portable communications headpiece. The program he accesses is like a voice-based Tinder: Theodore explores a category of women who can't sleep and are "ready for some fun", basing his assumptions on only their vocal introductions before either 'passing' or sending a vocal message to introduce himself. The introductions are framed by a single static shot, with the lack of movement foregrounding the vocal exchange rather than the visual image of Theodore's head within the darkened room.

The human voices are of paramount interest within the scene, setting the pace, with breathy tones and exclamations from both Theodore and the woman on the phone (Kristen Wiig) taking precedence. As their exchange intensifies into explicitly sexual content, viewers access Theodore's imagined activity with blunt cuts to his fantasy about making love to a pregnant woman (notably, one whose leaked nude photos he earlier accessed via mobile device while commuting). Ultimately, though, the scene fails for Theodore: his line of fantasy is broken as the woman begins to instruct him to "choke me with that dead cat", and he complies at the expense of his own arousal, returning to a wider shot which amplifies that he is alone in his bed.

The scene – and particularly, its lack of impact for Theodore – is significant in that it is the viewer's first taste of the amplified vocal exchange, which at this point is still accompanied by image. The images, which juxtapose Theodore's reality of isolation with the bright sheen of his fantasy, play on both Theodore and the audience's visual memories, bringing forth images provided in part by his mobile phone. Ultimately, though, the titillating power of these images is removed by the woman's human foible, which draws the scene into a humorous sensibility. The suggestion here, at the simplest level, is that human sexual interactions are not always fulfilling for both parties. In this exchange, it is not the technological element of the phone that is at fault, but the human needs of Theodore's chosen partner, which render him, the visuals suggest, more alone than when he started.

Jonze places the humour of this scene in stark contrast with Theodore's next sexual encounter, which is depicted after he and Samantha have been romantically involved for some time. In this case, the gynoid – despite her disembodied form – is able to provide Theodore with the fulfillment that his more humanoid exchange could not. The scene begins with a visually more intimate tone, with a soft non-diegetic soundtrack and the lights of a city lending a rounded softness to the close-up images of Theodore's face. As the haptic contours of his skin are available to viewers to access, so the characters discuss an imagined tactility: "I wish you were in this room with me now so I could put my arms around you, so I could touch you…" "How would you touch me?

With the gynoid there is no kind of contract for a sexual encounter or sense of forcedness, but the verbal interplay arises naturally from their conversation as they move into an imagined kiss. Visually, the extreme close-ups continue, but Jonze then pushes the audience further by fading the visuals of the scene completely to black and relying on acousmatic images to continue the exchange. At the point when visual censorship often curtails the depiction of sexual intercourse within mainstream Hollywood cinema (as Theodore begins to describe kissing Samantha's breasts), the acousmatic images allow viewers to continue in the prosthetic experience of the scene.

The voices, whether by artistic choice or the actors' natural timbres, are heavily textured, both with husky tones. They are both explicitly human in quality, deviating from the machine voices Young describes which are "designed as 'ideal' specimens, absent of bodily residue or the necessary signs of existence" – however, the impact is the same as she suggests, which is that "the machine…enables the realm of dreams and imagination to become realised objects of desire" (77). Samantha and Theodore's voices are unquestionably human in timbre: they sometimes form words, describing their imagined actions, and sometimes just moan or gasp.

Despite the absence of the images on-screen, a kind of haptic is still strongly operating here, partially arising from the descriptions (for example, Samantha questioning "what are you doing to me? I can feel my skin…" evoking a sense of skin tactility) and partially from the acoustics of the voices, which evince two bodies from where they are produced. The framework of the gynoid as dually

technological and human, as per *Ex Machina*, is broken down by the exchange, which in obscuring the visual elements of the film's body, privileges the element by which Samantha is rendered wholly human: her voice. Through haptic absence, the viewer is not necessarily engrossed in the scene's visuals, but is entangled in the characters' exchange through the strands of voice and music that the film body extends to the viewer. Exchanges such as "I can feel you", "We're here together", and "I feel you everywhere", serve as inclusive for the viewer, who is engaged with the scene through the film body's audio prosthesis, just as Theodore is engaged in sexual experience through the prosthetic technological medium of his Operating System.

The scene's conclusion, aided in a sense of aperture by the crescendo and then regression of the non-diegetic music, makes clear that this has been a fulfilling experience for both characters. They express this verbally: "just lost…"; "it was just you and me…"; "everything else just disappeared, and I love that, Theodore". It is reinforced by the visuals, which fade back in to the now familiar night-lit cityscape before progressing to fade into a sunrise. The sexual exchange, particularly in contrast of tone and content to Theodore's last sexual encounter, very much showcases the potentialities of the Samantha figure. It depicts the power of the gynoidian voice emancipated from her body, and likewise, the haptic potentialities of the film body when emancipated from the necessity of on-screen image.

Haraway specifically deals with ideas around new technologies and sexual possibility in her work on cyborgs. She argues that

> …new technologies affect the social relations of both sexuality and of reproduction, and not always in the same ways. The close ties of sexuality and instrumentality, of views of the body as a kind of private satisfaction - and utility-maximising machine, are described nicely in sociobiological origin stories that stress a genetic calculus and explain the inevitable dialectic of domination of male and female gender roles. These sociobiological stories depend on a high-tech view of the body as a biotic component or cybernetic communications system. (169)

In some ways, *Her* conforms to Haraway's vision, with a narrative emphasis placed on bodies as affording multiple new technological means of communication. By Theodore and Samantha's sexual encounter, this view is already assumed, and the film no longer needs to reinforce Samantha's electronic makeup or lack of embodiment by showing the mobile phone she supposedly inhabits. The film can indeed be viewed as one of Haraway's 'sociobiological origin stories', overtly depicting the interplay between body as instrument of both sexual pleasure and utility.

However, *Her* divorces from Haraway's writings at the point of expressing a dominant aspect of the male over female partners. I argue this is due to the haptic absence operating within the sequence. Despite Samantha's disembodiment, the film dismantles Theodore's privilege and renders both as equals within the scene by removing visual depictions entirely, effectively disembodying Theodore also. The haptic qualities of each voice, while reinforcing gendered difference by their differing tonal depths, serve to allow both characters to co-exist with the viewer in different yet equal relationship with the film body. Haptic absence operates to express the pleasurable affects for each character within the scene, replacing the primacy of vision with aurality

and the hierarchy of male needs with a symbiotic pleasure for male and female, and film and viewer.

It is noteworthy, then, that when the film attempts to replace the disembodied Samantha with a bodied female substitute later in the diegesis, the encounter ends in disaster. The scene depicts a woman, Isabella (Portia Doubleday), who arrives at Theodore's door with a camera and earpiece that vocally and visually connects Theodore with Samantha. From the start, Theodore is awkward and stilted, and while viewers see him engaging in acts of touch, feeling her waists and breasts at her direction, these physical acts have been superseded by the prosthetic experience the gynoid herself, without bodied substitute, provides. Despite the physical hapticity of the scene for the viewer, with many images of familiar textures such as skin and hair provided, the contrast of the scene with the intensity of the prior sexual experience renders it insipid by comparison. The characters, likewise, realise this, with Isabella leaving in a taxi in tears and Theodore left to try and make sense of the failed encounter in dialogue with Samantha.

The body, here, is what should have constituted a normative, affective sexual experience; the body, though, is the breakdown. It must be assumed that the body that is important throughout these encounters is not the physical body of the character, but the imagined embodiment proffered by the film body and grasped by the audience. This is what Simone de Beauvoir expresses when she describes a good body as a "sexual, desiring, imaginative and surprised body" – as Margrit Deutscher notes, "Beauvoir laments that feminine existence has in this

sense been deprived of 'the body'" (147). The deprivation that Beauvoir suggests is depicted in *Ex Machina*: which, strangely, is the film that contains physical gynoidian bodies. Conversely, the 'good bodies' that she describes are proved in the evocation of the disembodied Samantha figure.

Moreover, the kind of erotic embodiment that Beauvoir attributes to these ideal female bodies is echoed in the sensuality of the haptic absences in *Her.* As Deutscher neatly summates:

> Beauvoir values the particular relation to the other, theorised in terms of simultaneous sameness and difference, and simultaneous confirmation and disruption of my subjective and bodily boundaries, which erotic embodiment represents. To lose this possibility, then, would be to lose what she consider [sic] to be both the fundamental, most valuable human possibility of relating to the world and to the other (148).

Firstly, the film mimics the kind of duality expressed by the framework. It consistently oscillates between placing emphasis on the essential sameness and difference of the protagonists, not only with regard to gender – as is probably most pertinent to Beauvoir's original context – but additionally in terms of human and machine. At times, such as when Samantha is pinned in Theodore's pocket, the camera straining to accommodate both within a close shot, robotic to human difference is evoked. When the image is stripped away in the moments of haptic absence, the likeness of the human voices promotes an essential sameness.

Likewise, the acousmatic images create the 'simultaneous confirmation and disruption of bodily boundaries' that Beauvoir suggests erotic embodiment entails. While her analysis presumably regards this as an encounter between two

human individuals, within the filmic moments of eroticism at hand the bodily boundaries of the individual viewer are consistently renegotiated, held in tension and tangibility between the imagined bodies of the characters, the film's body as it proffers and resists, and the viewer's body as their skin and musculature reaches toward the film's body. This interplay between boundaries is one of the most significant prosthetic experiences that *Her* proffers, as the gynoid commands affects that extend to impact even the viewer's negotiation of self.

Barker theorises a similar affect of erotic embodiment within filmic and phenomenological discourse, also making the salient point that an overtly erotic (ie sexual) experience on-screen does not necessarily correlate to an engagement of the same nature between film and viewer. She relates the experience of a sequence from Carolee Schneemann's 1967 *Fuses:* "The film obscures its objects, not prudishly but playfully, using shadows and superimpositions, among other things, to make vision difficult and thus to invite the viewer to feel rather than see the film, to make contact with its skin. And we respond accordingly, touching back, concealing and revealing ourselves to the film and pressing ourselves against it…" (23).

As this quote reveals, *Fuses* is not as determinative about the scene's optics as *Her,* failing to completely conceal the image from the viewer. However, the way in which Barker describes the engagement between viewer and film is useful in conceiving of the way in which we might connect with Theodore and Samantha, waiting for the film body to express the experience, latching onto and responding

to the film's vocal cues. It is a particular form of haptic experience, neither necessarily titillating or requiring the viewer to engage: as Marks aptly notes in disagreeing with the aggressive form of tactile spectatorship that Steven Shaviro promotes, "a tactile visuality may be shattering, but it is not necessarily so" (151). This is important with regard to the gynoidian aspect of the prosthesis: erotic engagement is not forced upon the viewer, whereby the gynoids providing the experience would seem at least prescriptive and at most dominant and frightening. Because the haptic experience is merely extended to the viewer, with the onus on the viewer to engage or disengage, the gynoid providing the experience can be seen in a more progressive manner – ironically, as either a technological device that one can choose to take up, or, as a human which one can choose to relate to.

The fact that the viewer can relate to the gynoids as either or both of these aspects is, ultimately, a result of the haptic absence the film provides. Young believes that through reading voice "we can begin to challenge and diffuse too-easy dualisms – between bodies and machines, between liveliness and reproduction, between authenticity and mediation, between inscription and bodily absence, between the 'grain' and the 'death of the author'" (6). This may explain why Jonze relies so heavily on voice in conceptualising his film: the human voices which ground the diegesis aid in bringing the film's world into closer proximity to our own, making the technological universe more tangible for a contemporary viewer. It also means, of course, that the Samantha gynoid who underpins the film's premise is not merely a far-off or imagined concept, but a reality who, despite her disembodiment, displays a form of presence both within

the filmic universe and via experience proffered to the viewer. In this way, the gynoid is not merely the machine, the other – although she is also not human. She is, though, amongst us: a breathing, speaking, erotically active and at times, captivating presence, who, through haptic absence, allows viewers to experience the affects of a technological world that is, after all, not so removed from their own.

III.III “The Past is Just a Story We Tell Ourselves”: Prosthetic Memory

Memory is the most elusive of the prosthetic experiences delineated in this thesis. However, it demands analysis by virtue of its consistent presence: indeed, memories of various shapes and forms play a significant part in all three case study films. *Her* uses a typical flashback apparatus to allow viewers rich haptic access to Theodore’s memories, and mobilises this mode of remembering as a vehicle for connection with an imagined future, as opposed to a person past. Prosthetic memories created by play with sensory experience throughout the film serve to draw viewers into Theodore and Samantha’s world, amongst the technological developments it proposes. *Ex Machina,* meanwhile, uses texture and object memories as a device to connect viewers with components of posthuman bodies and a futuristic world. *Lucy* is predicated on the conception of human history as existent within the protagonist’s extended memory, and the film shares this experience with viewers, situating a robotic or posthuman evolution as merely the next logical step in an historical chain of developments.

While I have employed the term ‘prosthetic’ to conceive of a wide range of experiences within this thesis, Allison Landsberg’s specific notion of ‘prosthetic memory’ is the most significant terminology for this particular area of analysis. Landsberg notes that prosthetic memory is made possible by modernity and mass culture, and “emerges at the interface between a person and a historical narrative about the past, at an experiential site such as a movie theatre or a museum” (2). The experiential site that Landsberg indicates is so crucial to the process of prosthetic memory is, in this case, the film’s body. The film’s body acts

as the interface or prosthesis not exclusively between viewer and historical narrative, but between viewer and imagined pasts, or even, in the case of these films, imagined futures.

Laura Marks' work on haptics, likewise, imagines the film as a point of connection between viewer and alternative sphere. Marks' argument in *The Skin of the Film* centres around the ability of intercultural cinema to harness haptic visuality as a point of cultural association between the viewer and film. She notes that while "optical images are disturbing when not connected to living memory" (50), "haptic visuality implies a familiarity with the world shown" (187). In this way, Marks' notion can likewise be applied to films that depict an imagined future, as opposed to an extant alternative culture. Haptics is, in the case of these films, the tactile means by which the prosthesis operates to suture viewers together with visions of the new.

The gynoid interacts with the practise of prosthetic memory in a range of ways throughout the films. She can behave as a catalyst for memory, her omniscience prompting the film's body to bring forth experiences from a character's past or visions of an imagined future. Her components, her biology, her ontology, all serve to call bring into relief the link between affects we understand and remember and the affective aspects of imagined futures. And the very existence of the gynoid can be construed as a prosthetic memory: the gynoid acting as prosthesis by which we understand historical practises of the body and of femininity while simultaneously grappling to engage with future ones.

Prosthetic memory, likewise, contributes to viewers' abilities to connect with the gynoids. Landsberg suggests that "prosthetic memory creates the conditions for ethical thinking precisely by encouraging people to feel connected to, while recognising the alterity of, the 'other'" (9). The framework Landsberg describes here, whereby sameness and difference are equally reinscribed, is central to acceptance of the gynoidian figures. Through the prosthesis of the film body and the affects it proffers, viewers engage with a figure who is simultaneously human and machine: and often this engagement is predicated by sensuous or tactile memories.

Her, in particular, stitches arrestingly tactile images and montages of Theodore's memories throughout its diegesis. For a film so concerned with depicting the near future, this obsession with the recent past is significant, and I argue it belies more than simply an attempt at developing the character through revelation of portions of his back story. The frequent memory sequences serve as a counterpoint to the new technologies that permeate the film, posing a familiar touchstone for viewers in terms of both content and form. In contrast to the newness of the gaming forms, the disembodiment, and the gynoid herself, haptic memories are comforting in their familiarity: a familiarity of touch that, in turn, feeds into the way the new affects are presented and imbues them, in turn, with an element of the familiar.

The first memory sequence in *Her* occurs before Theodore initialises Samantha, orientating the viewer within his lonely existence, but more significantly establishing the logic and tone of the memory flashbacks which are interspersed

through the rest of the narrative. The film often isolates Theodore through the same tactics deployed in this scene, showing him in first a mid shot and then head shot, lying in bed in the dark. In this instance, though, viewers are invited to share in the memories Theodore is obviously revisiting in the form of short two to three second clips. The clips are cut together softly, bathed in Instagram-esque gentle filters that render the mundane moments depicted – moving furniture, or watching his partner (Rooney Mara) wake up – quite ethereal and beautiful, and speak to the traditional technique of a fade or fuzziness to connote a memory or dream sequence. The colour palettes are soft and the scenes use bright natural light to pick out the closeness of features, elements, and particularly skin. The film body extends familiar textures to the viewer, acting as the prosthesis between viewer and Theodore's memory, before abruptly severing this connection by crash cutting back to the darkness of Theodore's room.

This introduction to Theodore's memory in *Her* is reminiscent of the form of memory cited by Henri Bergson, who describes a "bodily, experiential form of memory that is triggered by sensation" (16). The viewer is invited by the film body to embark on an experience of Theodore's memories, supported by the qualities of the images, which intimately reveal texture and feel for the viewer's bodily engagement. Furthermore, Bergson suggests that this form of memory arises in "reaction to the new technologies of mass culture that worked to engage the body" (16). The working of cinema itself as prosthesis for this bodily experience of Theodore's memory is reminiscent of a cultural shift that places value on phenomenological modes of being. I believe that Bergson's notion additionally works in reverse: as technologies of embodied experience influences

the way in which viewers engage with memory, so too can embodied memory affect our engagement with new forms of technology.

This tandem relationship is modelled by the next memory sequence in *Her.* This time, Theodore is already well acquainted with Samantha, and the memory sequence comes at her prompting following Theodore's arrival home after a bad date. Samantha asks Theodore what it is like to be alive in the room right now, and Theodore's answer, through voice-over, accompanies a series of brief flashbacks. These memories are of that night's date, and are presented from Theodore's point of view. The tone is much blunter than in the previous, more removed memories, and the handheld camera work is jarring. The focus is shallow, with skin always the key feature of the frames, drawing the viewer in to the familiar textural properties of the image. At one point Theodore's hand extends forward from beneath the camera's perspective to take that of his date, and viewers can feel at one with the film body – as if it has carried out the gesture the viewer's own body so badly wanted to perform.

At this point the tone of the sequence shifts, segueing back into the former, brighter memories, and viewers understand the visual shift as a signifier that the memories are now of Theodore's previous relationship with his wife. Theodore's voice-over, at this point, muses on the following: "Sometimes I think I have felt everything I'm ever going to feel. And from here on out I'm not gonna feel anything new…just…lesser versions of what I've already felt." The line matches with the haptic and optical workings of the film to provide an attempt at articulating what it is to remember, or to revisit a past feeling.

In this way, the film affectively binds the viewer to the human act of memory, using the twin workings of sight and touch to both play on the viewer's own experience of memory and entwine them with Theodore's. The gynoidian role, too, is significant here: it is Samantha who was the catalyst for this embodied experience of memory, suggesting that gynoids might not only be concerned with providing new affective experiences, but with embarking on human ones. The fact that Samantha is so concerned with understanding Theodore's experience, and with 'feeling' itself (indeed, the exchange that directly follows this scene is a discussion of the gynoidian ability to 'feel') emphasises that rather than merely thrusting new threatening experiences on humans, conversely, gynoids have the potential and motivation to embrace very human elements of being.

The third memory sequence in Jonze's film is, again, prompted by Samantha. Theodore, in narrating the montage of memories, suggests that "the past is just a story we tell ourselves", not only opening Samantha's access to remembering in terms of recounting his memories visually, but suggesting that his storytelling enables the gynoid to actually share his memories. In the same bright, filtered, soft style as the previous clips recounting his marriage, Theodore gives a narrative trajectory of his relationship with his ex-wife. Again, the sequence plays a significant role in terms of character development, allowing audiences to fully understand some of the attributes Theodore has developed and why he might be so readily accepting of posthuman forms of companionship.

However, an embodied reading allows the sequence to surpass this function. There is an imagined sameness in the way that viewers are able to very viscerally connect with Theodore's memories – the hapticity of skin, the extreme close up shots of Catherine blowing away an eyelash delicately balanced on her fingertip – and in the knowledge that Samantha, too, is being affected by these memories, and, as the film proposes, 'told the story of the past'. It is never with other human characters that Theodore experiences these memory flashbacks: they are shared only with Samantha and the viewer, binding the gynoid and viewer together in a sameness of experience enabled by the filmic prosthesis.

Ex Machina, conversely, contains no such treatment of overt memory within its diegesis. However, as opposed to proffering a connection with the memories of a character and using the act of remembering to unite human and gynoid, Garland's film plays on the viewer's own sense memory. *Ex Machina* uses familiar textures to compose unfamiliar elements of mise-en-scene, creating a collision that ultimately renders the threatening and unfamiliar as familiar through the safe tactility of the filmic prosthesis. In this way, the film acts as a connector between familiar elements of a viewer's past and elements of the director's imagined future, allowing viewers to prosthetically explore the notion of posthumanism.

Although familiar surfaces are prevalent throughout the film, they most strongly promote embodied affect and play on sensuous memory when the Nathan introduces Caleb to the components that make up his gynoidian creations. The gynoids' brains are made up of what Nathan refers to as 'wetware', as it the

material, unlike hardware, has the ability to rearrange its structure when necessary. To the viewer, the brain appears as a kind of structured blue gel, denser than jelly in its ability to hold its shape. Through haptic vision, viewers understand that the brains will be smooth and cool to the touch. As the characters are allowed to inspect and caress the brains, so too is the viewer, with the cinematography employing close-ups that reveal the contrast between the smooth brain material and the skin of the protagonists' hands.

The viewers, hence, encounter disembodied components of the gynoids for the first time: but the sequence, which in subject matter is quite radically horrific, is instead rendered familiar by the haptic properties of the objects at hand. The viewers' own memories of similar textures to the brains: of gels, jellies, even playdough or stress balls, allow a type of haptic recognition to take place. The viewer instinctively knows what the brain feels like, despite the fact that the brain is a bodily organ of a posthuman gynoid. It could be argued that a new prosthetic memory is formed: a prosthesis which suggests that the viewer already knows this unfamiliar object. Landsberg's assertion that "the cinema…might be imagined as a site in which people experience a bodily, mimetic encounter with a past that was not actually theirs" is brought to fruition (14).

In this way, *Ex Machina* allows the gynoid to assimilate into the viewer's own archive of memory. Rather than a being that might exist in a filmic world, or could exist in the future, she is rendered a being that does already exist. As Landsberg suggests,

> …memory remains a sensuous phenomenon experienced by the body, and it continues to derive much of its power through affect. But unlike its precursors, prosthetic memory has the ability to challenge the essentialist logic of many group identities. Mass culture makes particular memories more widely available, so that people who have no 'natural' claim to them might nevertheless incorporate them into their own archive of experience. (8)

It is the affective properties of the memories inscribed in the filmic image, then, that allow the gynoid to transcend a merely fictional existence. Through embodied experience, she gains traction as a part of the viewer's remembering, and in turn, a part of the viewer's lived experience.

Besson's *Lucy* deals with memory in a different manner again than Jonze or Garland's films. It is slowly revealed throughout the film that the gynoidian protagonist, Lucy, possesses an extended form of memory that encases the entirety of human history. Viewers are led to believe that Lucy originally – and indeed, simultaneously with her current incarnation as a female human and then gynoidian supercomputer – existed as an ape in prehistoric times. *Lucy* posits that there is an essential sameness to lived experience, whether in a pre-human or indeed, posthuman form.

The way in which the film introduces the notion of Lucy's transcendence of time and space is highly stylised. Amidst the protagonist's transformation from human to gynoid, the audience is presented with a huge number of images that consecutively, via Eisensteinian montage, connote the development of human history. The difference between this and a more classical montage is the speed: the images are cycling so fast that viewers can barely gain an optical sense of

what each one contains before the frame shifts to a fresh image. As Marks suggests occurs in the absence of a clearly optically discernible image, the viewer may engage in haptic looking in order to discern elements of the images, picking out textures which render the image at hand familiar (64).

This cycling through the past, then, while overwhelming in terms of temporality, also engenders a tangibility that allows the viewer to grasp the commonalities of the experience at hand. As Landsberg suggests occurs in prosthetic remembering, there is a duality here whereby people "are led to feel a connection to the past but, all the while, to remember their position in the contemporary moment" (9). The viewer is at once bombarded with the enormity of human history and situated within it. The fact that it is the gynoid who enables this experience likewise places her within this spectrum of human history: the viewer can situate past forms of humanity, present forms of humanity, and posthumanity on the same continuum. While remembering a past that is not their own, the viewer simultaneously engages in remembering an imagined future.

The "portable, fluid and non-essentialist form[s] of memory" that Landsberg conceives of are extrapolated in vastly different ways, but to similar ends, by all three case study films (18). In *Her,* embodied experience of Theodore's memories serves to unite viewer and gynoid in the act of remembering. In *Ex Machina,* gynoidian parts fuse familiar texture with unfamiliar object to render the gynoidian being part of the viewer's archive of memory and lived experience. And in *Lucy,* a phenomenological remembering that spans all of human history

places posthuman forms of existence as merely the next step in continued human development.

III.IV Becoming Cyborgs: Haptic Gaming

Thus far, the prosthetic experiences considered have been tethered closely to a more typical experience of cinema going: both are closely concerned with responses to image and sound. This section, however, moves a little further in analysing several sequences from *Her* in which Theodore engages in gaming activities, nudging viewers toward the embodied movements associated with the real life activity and movements of gaming rather than merely looking, listening or feeling. I argue that the viewer is encouraged to work through the prosthetic gaming experience along with Theodore and Samantha, engendering abilities of manipulation and power that neutralise the anxieties possibly associated with both new forms of gaming technology and the gynoidian figure. This section demonstrates that, through the experience of haptic gaming alongside the gynoid figure, *Her* encourages an engagement with the mechanical apparatus that constitutes a kind of preparation for post-human existence.

There are two kinds of gaming depicted in Jonze's film. The first is a game that Amy (Amy Adams) is developing and tests on Theodore, here labelled as the 'Mom Game'. The second, which is revisited several times in the film's diegesis, is a game Theodore engages in at home, usually while conversing with Samantha: the 'Alien Game'. Ash notes in his work on screen spatiality in video games that "different games produce different relations between the visual and haptic"; hence separate close examination of each gaming sequence within *Her* is necessary (2119). As in the first section of Chapter II, when examining haptic visuality through skins, it is useful to examine the more basic form of gaming –

the 'Mom Game' – first, establishing the pattern of the protagonist/game and viewer/film relationships before moving to the more complex positions formed by the 'Alien Game'.

Theodore's experience of the Mom Game, situated about halfway through the film's diegesis, provides a strong link to the ideas around gender roles and gynoidian subservience that the film develops thematically. The game, as Amy explains to Theodore, revolves around the player, or Mom, fulfilling certain tasks in order to gain Mom points. The narrative, within the sequence we see, takes a day in the life approach, requiring the player to carry out tasks such as feeding the children breakfast (here, for example, Theodore loses points for feeding them too much processed sugar) and dropping them at school. In a kind of role reversal, Theodore is forced to play within the mode of servitude typical of a governess or child minder, which is displayed within the game by a female avatar. The film is interrogating the ways in which technology, gender, and traditional societal gender roles intersect: in the opposite way to the Samantha gynoid, a female personal assistant, the male Theodore is forced into a stereotypically female 'Mom' role, positing that in some instances the new technologies are able to provide a prosthetic experience of an alternative subjectivity.

Turning from narrative to embodied analysis, in terms of method of gameplay – and particularly, in comparison with the Alien Game – the Mom Game is quite distinctly presentist, with a mode of play that will be quite familiar to most viewers. Theodore controls the female avatar via an iPad-type touch screen lying

flat on the desk in front of him, with his character and actions within the game's world displayed as two-dimensional images on a large monitor on the wall. To achieve actions within the game, Theodore seems to press, swipe or touch the pad in front of him, while seeing the results of his choices play out on the screen.

Theodore's actions while engrossed in gameplay evidences the kind of technology interactions that Larssen, Robertson and Edwards cite in their work on haptic gaming. They regard the process of gameplay as a kind of coupling between player and the object that controls gameplay, noting that "in the process of incorporating things into our bodily space, there is a *dialogue* between our perception and the thing, which is enacted as a change in our potential for action" (4). This kind of dialogue is strongly evident in the Mom Game sequence, as Theodore is bonded with the on-screen Mom through his motions and her perceived actions.

Not only does this result in a kind of empathetic structure built between the film's protagonist and game's protagonist – as aforementioned in the comments on narrative above – but the prosthetic experience provided by the game provides a model of the potential for dialogue between the viewer and film. Returning to Sobchack's model of viewership, the film's body, too, is engaged in reciprocal dialogue with the viewer. There are, then, two levels of experience occurring during this scene: the experience of gameplay the game affords to Theodore, and the prosthetic experience of gameplay that the film proffers the viewer by way of both visual and haptic modalities.

Theodore is engaged in what Larssen et al. would regard as "active" haptic gameplay, which "occurs when people move their fingers and hands to explore properties of an object" (3). His hand runs over the smooth, hard glass of the touchpad, discerning these textures, while he uses it to play the game. Consider, then, the potential bodily responses as viewers interact with Theodore's gaming process. Presumably this is built on some degree of familiarity with the experience of using touch screen or tactile technology, as per a smartphone or iPad. Haptic visuality plays on these sensuous memories to allow viewers to experience what engaging with the game might feel like. Hence the second half of this paradigm, whereby the viewer engages with the film, is the kind of "passive" haptic engagement that Larssen et al. denote, whereby "stimuli are simply pressed into the skin" (3): not in a physical sense, clearly, but in the kind of metaphorical engagement whereby the film's body extends to the viewer that Sobchack theorises.

The Mom Game, then, provides a basic model of the tactile affects proffered by the gaming sequences in *Her*: as Theodore is bound up with the game through the twin workings of sight and touch, so viewers are bound up with the film's body and the prosthetic experience it enables. As well as play with gender roles and subjectivities on a narrative level, the game exemplifies the ways in which viewers can test and work through new technological experiences via the safe medium of the filmic body. A still more sophisticated iteration of this experience, whereby viewers can prosthetically experience a cyborgian or posthuman form, is offered by the more extended gaming sequences of the film: the Alien Game.

The first time viewers are introduced to the Alien Game is when Theodore has only recently initiated Samantha. Rather than being exposed to any tedious initiation process, the film cuts to the scene when Theodore is already immersed in the game. Theodore informs viewers – and, more accurately, Samantha, as she is present for and involved in the gaming process – that he has been going in circles for an hour. In this way the film does not presume to orientate viewers within the game visually or cognitively in the kind of setup process that is usual within video games, but immediately presents a fresh visual and haptic field which viewers are invited to explore: almost as if the sequence is a test version or in-store demo of a video game.

The space of the Alien Game is created by what appear to be four projectors in the corners of Theodore's darkened living room, which spill out blueish light – and the three dimensional image of the tunnel system that Theodore is currently lost in – into the room's centre. The game space appears to take up the majority of the empty floor space, with sparse pieces of furniture and boxes around the outskirts. An illusion of translucent depth is created as the game world recedes back in front of Theodore, who sits in a single armchair as his protagonist – a small spaceman, astronaut type figure – plays out the movements of his hands.

The game arena evidences Ash's notion that "in video games the validity of the haptic remains a constitutive mode of sense, but becomes reconfigured forming a deepened and altered relation with vision" (2117). Sight and touch work in close relationship to create the world that extends before Theodore for both protagonist and viewer. For Theodore, the choices he makes with his hands will

actively reconfigure the tunnel space around him. For viewers, the relatively low lighting of the mise-en-scene poses an invitation to haptically discern the game space: particularly given the transparent qualities of the lit scene, which has the potential to engender touch memories such as slicing one's hand through a beam of projected light, or making shadow puppets on a wall – the feeling of movement through uninhibited light which nevertheless has its own sense of texture.

Thus far, the haptic inspection taking place could be compared with that of a still image. What happens, then, when the particular visceral movements of this type of gaming are taken into account? As Larssen et al. suggest, "in a movement dialogue there is an encounter of a willing mover and an inviting space in which to move", and in this instance the tunnel-like structure of the game, as well as its three-dimensional quality, invite further exploration from Theodore, who appears to be engrossed in his explorative task (4). In the absence of a controller, Theodore is able to produce the on-screen forward movement of his spaceman figure by making paddling motions with two fingers on each hand, which send his avatar's legs running forward.

Ash notes that video games of this kind are able to "actively produce rhythmical territories of touch between the fingers and hands and they generate these rhythmic responses on the screen" (2116). The dialogue between their respective bodies produces the connection between Theodore and his avatar, and this connection, in turn, can be replicated for viewers. Viewers may experience the movements of Theodore's hands proprioceptively, as a mimetic

tension of musculature or inward desire to movement. Hence the rhythmical territory that Ash describes is, in the case of the gaming presented by *Her,* occurring on multiple levels: between the game avatar and Theodore, and between the film and the viewer. The viewer, then, is not merely seeing what an advanced technological form of gaming may look like, but invited to experience what it may feel like through the prosthesis of the filmic medium.

In the sequence, Theodore eventually negotiates the tunnel system ahead of him with help from Samantha, who notes that the tunnel on the left is the only one he has not yet tried. This fresh exploration heralds the arrival of the 'Alien', another of Jonze's comedic devices within the film in the form of a small, marshmallow-like form who, despite his innocent appearance, cusses insistently and harshly mocks Theodore for his ineptitude. Theodore is able to interact with the Alien by zooming closer, using an upward motion of his hands to pull the non-existent screen toward him.

Again, this motion has the potential to produce a mirroring affect for the viewer, who is not only engaged through the dialogue at play, but through a material engrossment with the image. Ash suggests that within this exchange, dual forms of spatiality are linked: "an *existential space,* where the content of the image is made 'sense' of through the user's bodily knowledges and capacities; and an *ecological space,* where the expressive nature of the image constructs an affective territory between body and screen" (2108). In this sequence, Theodore models the negotiation of these dual spatialities for the viewer, who in turn is able to

work through prosthetic forms of the existential and ecological spaces as produced by the film body. The viewer, in effect, is also invited to game.

The gynoid, too, is involved in the gaming experience. Samantha not only offers advice and guidance to Theodore throughout his play, but is also engaged in her more typical activities. Partway through the scene, Samantha notes she has received an email. Theodore asks her to read it for him, upon which she challenges him for addressing her as if she is a robot, and the Alien follows by asking what Theodore and Samantha are talking about. Samantha explains that Theodore has a potential date, bringing pictures of the woman up in the gaming space for Theodore to scroll through using hand motions reminiscent of Tinder swiping. The sequence, then, not only models a futuristic form of gaming – comparable to current developments in Virtual Reality technologies – but also a kind of holistic technological experience whereby different technological facets of Theodore's life, such as his gaming avatar, his Operating System, are fully aware of each other and able to interact synergistically. The sequence, then, is an invitation to much more than merely a gaming experience: it provides a multi-sensory affective field through which viewers can engage with a plethora of imagined technologies.

I would press this point still further in arguing that not only does the sequence showcase the potential of haptic technologies, but additionally invites Theodore and the viewer into a mode whereby they are united with the technologies through visceral movement (or the potential for it). As Larssen et al note, "in any technology interaction we are reliant on the potential for action that technology

creates for us, i.e. that has been designed into the technology. Just as we learn new skills, devices and ways of interacting with technology are incorporated into our bodily space, and change our bodily space" (6). In this scene, then, the affects for Theodore and the viewer are not merely mimetic forms of potential movement, but constitute a change in the way that the viewer experiences embodiment and perceives their embodiment in relation to the world around them. The viewer's natural ways of being are fused with the potential for action provided by the technology, meaning the viewer is at once part flesh, part mechanical prosthesis. The viewer is, in effect, a cyborg. In this way, an engagement with the Alien Game sequence of *Her* constitutes an affective experience of posthuman embodiment.

After this initial experience of the Alien Game, the film revisits the experience once more, further in the diegesis. This latter gaming sequence is nowhere near as extended, and occurs in the midst of a montage depicting Theodore's experiences exploring Los Angeles with Samantha. There is no dialogue within the montage, only non-diegetic sound, but viewers can gather from the short clip which shows Theodore relaxed in his armchair that the Alien is trying to entice him into playing. By this stage in the diegesis, Theodore is much more comfortable with Samantha and indeed, has entered into a relationship with the gynoid: the appearance of nonchalance toward the gaming pursuit, which he previously engaged in so energetically, is a marker that the gynoidian mediation of his experience of life is a much more powerfully enticing experience than the pull of the video game.

This notion is amplified by the rest of the montage, which not only includes scenes which reveal Theodore is becoming much more social with other humans, but which also suggest that he is more attuned to everyday experiences which play on his base human senses. He sits watching a person dancing on the streetside, which for viewers is displayed in an altered slow motion temporality as if to suggest that Theodore has been absorbed in the body's movement for some time. Another shot presents only a close-up of icicles dripping; still another shows dust motes floating through the air. Each minor sensory event is pronounced, allowed significant temporal space within the film, as if to explain that Theodore is much more engaged with not only the small affective aspects of human experience, but his own act of being embodied in the world around him.

In a filmic world where so much is futuristic, this return to the affective mundane is a rather pronounced move on Jonze's part, and I would argue that it once again constitutes an attempt to normalise an existence in which technologies are holistically prevalent. Ash suggests that over a period of engagement with haptic technologies we may start to see the world through an "altered phenomenality": however, rather than this altered phenomenality being threatening or reductive of the human elements of embodied existence, it serves to reinscribe the base human experience of being in the world (2116). It is through walking, talking and experiencing the world with Samantha that Theodore is finally able to fully engage with the world around him. He moves forward from the escapism of absorption in the fictional gaming world to immerse himself in reality.

It follows, then, that this is the experience haptic gaming likewise proffers to viewers. While it involves moments of intense technological connectivity, such as the experience of movement provided through the Alien Game, these are not reductive of more naturally produced affects. Haptic gaming in *Her* extends an offer of a tactile and visual posthumanity: but not at the expense of an essential humanity. Viewers are encouraged to experience what it may feel like to be posthuman through the donning of the film's prosthesis, and effectively technological limbs, but the duality of the cyborg is reinscribed by the situation of the video gaming within other everyday tactile experiences. Just as viewers are in close encounter with the machine, so the affects produced by the film encourage an ever-closer relationship with the human.

If not through "skin" per se, then affects in *Her, Ex Machina* and *Lucy* are generated through other skin proxies, which have been defined in Chapter Three of this thesis as 'prosthetic' experiences. As the analysis of sequences from the case study films proved, prosthetic experiences play on existing sense memories to enable the cinematic simulation of a new technological experience. Chapter Three explored dance, voice, memory and gaming through this lens of 'prosthetic experience', examining how it is that the gynoidian protagonists of the case study films are able to remember the future, and engender affective experiences that extend beyond the viewer's lived experience of technology. It posited that *Her, Ex Machina* and *Lucy* have the potential to proffer prosthetic affects that range anywhere from a tactile sensation of future technology all the way to a simulation of posthuman experience, all within the non-threatening sphere of the cinematic experience.

Conclusion

Past notions of using female figures in cinema as projects of societal phobias are too simplistic in the case of the films analysed in this thesis, which posit touch and prosthetic experience as a means for viewers to work through technological potential and developments. They use female gynoid figures to underscore not merely fear or threat but also the thrill of the possibilities of future technologies by undermining the privilege of optical visuality and promoting haptic engagement with the array of experiences the film body proffers. As Turkle puts it, perhaps robotic figures are now less about expressing anxieties and more about offering solutions (11). In these films, gynoidian protagonists offer audiences new ways of feeling, experiencing, and indeed, being within increasingly technologically advanced environments.

Chapter One of this thesis makes clear that the gynoid figure has not stagnated throughout centuries of evocation, but conversely, has been evoked in a series of fresh iterations which each point to characteristics of the society that produced them. For this thesis, the most significant of these markers are to do with attitudes to gender and technological change. The traceable shift in these representations culminates with the case studies of this thesis. Samantha, Ava, Kyoko and Lucy are – albeit in diverse ways – markers of significant shifts in attitudes toward both technology and gender. The ways in which the films evoke cyborgs who inhabit both built and natural environments, who are constituted of both skin and machine, android and human, evokes Hayles' dream of the posthuman that embraces, rather than demonises, technological possibility (20).

With regard to gender, tropes such as servitude linger within the case study texts. However, the films demonstrate that Hollywood is beginning to interrogate, rather than simply recreate, these tropes. The ways in which the gynoids offer haptic experience to induct the viewer into the films' technological worlds suggest that haptic technologies can potentially allow women to wield, rather than be enslaved to, their power.

Chapter One notes that contemporary depictions of the gynoid can tend toward differing registers such as robotic or human, skin or machine, autonomous or dependent, in effect making her the perfect conduit to mediate between viewer and new technology due to her inherent fluidity. Even simply the four gynoidian figures analysed in this thesis display a wide range of ways of being or meaning making, showcasing the flexibility of her potential. Within contemporary cinema, the gynoid's ability to act as an avatar for both present and future enables the viewer not merely to regard technological change as a far off possibility, but to engage the viewer in the process of feeling their way into the future and the digital experiences it proffers.

Chapter Two explores the unique role of skins in promoting haptic engagement between viewer and gynoid. It examines three modes of skin: the viewer's own, the gynoid's skin, and the film screen's own skin (including stereoscopic skin). Each skin has a specific function in promoting engagement between viewers and on-screen technologies, and each skin works both independently and in tandem with the other skins to achieve this end. The particular affect, the simultaneous sameness and difference of haptic skin suggests that gynoids can exist within the

viewer's world, and, perhaps more powerfully, that viewers could exist within theirs.

Chapter Three, in turn, moves forward from the relative simplicity of the 'skin' model to theorise around what happens when the affective experiences proffered in *Her, Ex Machina* and *Lucy* transcend the skin metaphor. It uses the terminology of 'prosthetic' experiences to explore how the capabilities of cinema can play on sense memory to produce simulations of imagined or future experiences. Chapter Three discusses four such prosthetic experiences: dance, voice-based, memory, and gaming, noting that these experiences move beyond merely gesturing toward a posthuman future by inviting viewers, in an affective sense, to 'become' cyborgian.

The prosthetic experiences Chapter Three outlines can be seen as markers of the potential that haptic experience allows for the development of cinema as a medium. Prosthetic experiences allow viewers to move beyond natural means and move toward digital means of generating new embodied experience and in turn, can induct us into a new way of being or embodiment. Not only is this reminiscent of current technological developments such as Virtual Reality, but this is the new potential posed by cinema itself: a medium that is not dead, but is consistently finding new ways to be reborn. Indeed, this form of prosthetic experience, and the particular ability to work through new technological forms in a non-threatening manner that it evidences, reveal the potential of haptic film experiences in keeping the cinematic medium alive.

When considered in tandem, the three chapters of this thesis demonstrate the significance of phenomenological and feminist approaches to the posthuman. We need a phenomenological approach to the post-human because we need to move beyond considering optical visuality as the sole means of connecting with both cinema itself, and in turn, increasingly haptic technologies. As Barker notes, haptic visuality is able to reconfigure the relationship between viewer, film and subjects (40). This is precisely the operation at play in the films analysed in this thesis: the phenomenological mode of analysis allows the hierarchisation of viewer over image to be broken down, bringing both together in a tandem experience of tactility. When considering the female cyborg, a phenomenological approach has the potential to free viewers from the burdens of scopophilia or voyeurism, instead physically working to feel their way around the images presented and hence come to terms, at least filmically, with the existence of the gynoid.

It is also logical that in a world where digital technologies are becoming increasingly oriented around touch and touch-based response (think of the iPhone's operation as an echo of the two-way dialogue that Sobchack insists takes place between the film and viewer), feeling becomes a central tenet of learning our way around new technologies. Castaneda suggests that viewers are developing a "new more complex sense of touch", and in turn, links this notion to a yearning for the post-human (229). There are few more appropriate arenas to test this notion than the cinema: a sphere of relative familiarity and safety amongst newer, more bewildering developments. The touch of the post-human, in the haptic cinematic sense, is both accessible and acceptable; it is an outlet for

the yearning Castaneda describes, but packaged with the familiarity and comfort of the filmgoing experience.

Likewise, a feminist approach to the post-human is critical for the development of both ideologies. Additionally, this critique need not be performed in a strictly negative sense. Haraway and Balsamo both laud the potential of the cyborg image to break down stable oppositions such as that between organism and machine as a disruption from which feminists can gain (156; 174). Certainly, in the case study films at hand, the ways in which the gynoid wields a degree of power and agency (such as when read phenomenologically) warrant further inspection, in order to emulate them as the posthuman becomes reality. As Turkle notes, robotics usually fails to challenge new models (104): I would suggest that cinema is currently posing these challenges and will prove a valuable tool in continuing to contest and shape aspects of post-human change.

Perhaps the most critical task alluded to by *Her, Ex Machina* and *Lucy,* though, is the framing of the advent of Artificial Intelligence as more of a presentist than futuristic event. By bringing us into close proximity with the post-human through haptic visuality, the films ask viewers to move beyond merely optically considering a post-human shift, and to touch and feel and work through a post-human that is very much experienced in the now. This can be, as Hayles suggests, a prospect which evokes both terror and pleasure (283); regardless of these prospective emotional effects, the urgency of the task and the significance of these films in bringing it to attention remains. As Haraway so knowingly quipped around three decades ago, "our machines are lively and we are frighteningly

inert" (283). The strides made by *Her, Ex Machina* and *Lucy* in bringing viewers into closer interface with gynoids and a very close advent of post-humanism need to be echoed by other means and mediums in order to galvanise thought, wariness and action in equal measure.

This wariness is a sentiment shared by many theorists when considering the post-human, and one which (as discussed previously) places the narrative of the films at hand here very much at odds with the more positive, celebratory aspects of knowing post-humanism that phenomenological readings provide. Turkle perhaps expresses this best with the cautionary view that "before we move forward, we should question why people no longer suffice" (19). It is this sentiment that the narrative elements of *Her, Ex Machina* and *Lucy* echo, while the prosthetic experiences they proffer extend invitations to touch, feel and be part of a new manner of being and embodiment.

The tension present here is the same as that inherent in the cyborg being; it is the cumulation of oppositions that causes Gonzalez to suggest "the cyborg body captures a culture in the process of transforming" (58). Transforming into what, exactly, is a question that the oppositional readings of these films leave open. It seems, on one hand, that the post-human could hold the terror of cyborgs past, the otherness and lack of the female signifying the overwhelming anxiety of the power and threat posed by new technologies. Alternatively, Samantha, Ava, Kyoko and Lucy – the cyborgs present, if you will – gesture toward an alternative in which haptic experiences of new technologies, provided in safe spheres such as the cinema, provide a pathway to acceptance and embrace of the potential

thrill and excitement of a post-human present.

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