Emerging Automodernity and Artificial Intelligence: A Digimodern Reading of *Ex Machina* and *Her*

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Certificate

Certified that this is a bonafide report of the project entitled *Emerging Automodernity and Artificial Intelligence: A Digimodern Reading of* Ex Machina *and* Her done by Sameena P. A. (Register No. 18001100243) for the fulfillment of the requirement for the M.A. degree in English under Mahatma Gandhi University, Kottayam during the year 2018-2020.

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Declaration

I, Sameena P. A., hereby affirm that the dissertation titled *Emerging Automodernity and Artificial Intelligence: A Digimodern Reading of* Ex Machina *and* Her is a genuine record of work done by me under the guidance of Ms. Nasnin S. and Ms. Lissy Kachapilly of the Post Graduate Department of English, Bharata Mata College, Thrikkakara and has not been submitted previously for the award of any masters or degree.

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Chapter 1

Introduction

Films over time have represented areas of science to differing degrees of accuracy. As scholarly subjects, though, Film Studies and Science have remained separate because the consumer driven nature of the texts studied in the former tends to relegate exact representations of science to inconsequential levels. The visual spectacle and entertainment required to make such texts financially viable has often taken precedence instead.

When looking at the possible near future Artificial intelligence become a serious technological possibility, and it becomes increasingly likely that they will have a large impact on society. A large part of the development of robots can be traced back to science-fiction, for science-fiction does have a significant role on how people perceive robotics in general and influences the development of robotics outside fiction. In the case of robots, fictional accounts and actual developments in robotics seem to co-evolve as they influence and build up on each other.

In the paper "*Better Made Up: The Mutual Influence of Science fiction and Innovation*" Bassett, steinmueller & Voss (2013) discuss the different relationships between Science-Fiction and technological developments, which they describe as "*One of Mutual Engagement and Even Co-constitution*". In this thesis a framework for tracing the relationships between real world science and technology, innovation and science fiction is developed. First of all, they introduce the argument that Science-Fiction contains particular kinds of subject matter that organize it according to particular aesthetic and textual strategies and deliver it with particular kinds of force.

In the contemporary scenario people often come to every field with extra-curricular passions that may be used to build connections with technical material. In the coming future it becomes evident that robots will have a large impact on society and a serious technological possibility. In order to gain insights what this impact might entail, this project conducts a Digimodernist analysis on two selected movies. The two movies that were selected are Alex Garland's *Ex machina* (2014) and Spike Jonze's *Her* (2013).

The essence of every society constantly undergoes transformation and change. After the epoch making periods of modernism and postmodernism, human race is earmarked today by digimodernism. Cybermodernity ushers in an era where digitization intersect with cultural and artistic forms. The cultural shift of the last few decades has ensured a new paradigm of knowledge and outlook and thereby a transformed society. The concept of postmodernity was one of the dominant theoretical paradigms that describe the social world during late twentieth century. But in the early twenty first century a set of eminent researchers declared the exhaustion of its expository capacity. This caused the death of postmodernist era and digimodernism has decisively displaced postmodernism to establish itself as the twenty-first century's new cultural paradigm.

Alan Kirby propounded the theory of Digimodernism in his book *Digimodernism: How New Technologies Dismantle the Postmodern and Reconfigure Our Culture.* He is a writer and researcher in twentieth century literature and culture. He has published on subjects including Stephen Poliakoff, John Fowles, spy fiction and James Joyce. Most of his writes comes under New Media and Technology, Aesthetics and Critical Theory. He received his PhD from the University of Exeter and is currently based in Oxford. Of all the definitions of postmodern, the form of

digimodernism recalls the one given by Fredric Jameson. It too is "a dominant cultural logic or hegemonic norm"; not a blanket description of all contemporary cultural production but "the force field in which very different kinds of cultural impulses… [including] 'residual' and 'emergent' forms of cultural production… must make their way".

As a theory attempting to name what follows from and develops out of postmodernism, digimodernism counts among its peers Raoul Ehselman's performatism, Nicolas Bourreaud's altermodern,Christian Moraru's cosmodernism, Gilles Lipovetsky's hypermodernity, and Robert Samuels automodernity. Robert Samuel's concept of "automodernity," implying an apparently contradictory mixture between an amplified level of automation and an increased sense of autonomy, traces several contemporary trends that can be registered in the audience's relation with the media and hence, facilitate a better portrayal of an up-to-date audience profile. His view upon the concepts suggests a separation of political and aesthetical aspects of new media conception, thus inviting for a re-evaluation of previously established views on modernism and postmodernism. Robert Samuel's is Lecturer in advanced writing at the University of California, Santa Barbara, USA. He holds Doctorates in Psychoanalysis and English. He wrote several books including *New Media, Cultural Studies and Critical Theory after Postmodernism.*

The dissertation aims to review the most relevant currents of thought in studying mass-media audiences by analysing two cinematic narrarives '*Ex Machina'* and *'Her'* and connect them with the concept of "digimodernism" propounded by Alan Kirby and "automodernity" as developed by Robert Samuels in his book *New Media, Cultural Studies and Critical Theory after Postmodernism. Ex Machina* is a science-fiction horror film that, like so many others, plays on fears of the future: of

artificial intelligence, of the blurred line between human life and its limitations, of online surveillance shaping our experiences. It is a 2014 movie written and directed by Alex Garland.

Alex Garland also known as Alexander Medawar Garland is a novelist, screen writer and film director born in London, England in 1970 to political cartoonist Nicholas Garland and psychologist Caroline. He is the grandson of the Nobel Prize-winning biologist Peter Medawar. He is married to actress Paloma Baeza and is the doting father of two children. He attended the University of Manchester and graduated from there with a degree in History of art. He is best known for authoring the novel '*The Beach*,' based on his own travels across Europe and Philippines. He is also well known for his screenwriting in the movies '*28 Days Later*', '*Nevere Let Me Go*', '*Sunshine*' and '*Dredd*'. As a director he is famed for directing '*Ex Machina*' that earned him three BIFA awards for Best Screenplay, Best British Independent Film, and Best Director. He also received an Academy Award nomination along with other accolades. Garland also serves as a writer for video games. The popular game '*Enslaved: Odyssey to the west*' designed for Xbox 360 and Playstation 3 showcases his impeccable writing skills. He often writes about Manila where he spent his teenage years. He has been a member of the Academy of Motion Picture Arts and Sciences since 2016.

Garland's first novel titled '*The Beach*' was published in 1996. The novel deals with his own travel experiences across Europe and the Philippines and later it was developed in to a movie starring Leonardo DiCaprio. His second novel '*The Tesseract*' got published in 1998. The book delves in to the concepts like violence and love under extraordinary circumstances. The screenplay of the horror flick film '*28 Days Later*' wrote in 2002 earned him international acclaim. Three years later he

wrote the script for a screen adaptation of the video game franchise '*Halo*,' though the movie was later cancelled. He then wrote the screenplay for an American science fiction thriller flick titled '*Sunshine*'. He served as an executive producer for the sequel to '*28 Days Later*,' titled '*28 Weeks Later*' soon after writing the screenplay of '*Sunshine*'.

In 2010, he wrote the screenplay for the romantic drama film '*Never Let Me Go*' which was based on the novel of the same name by Kazuo Ishiguro. It received positive reviews from the critics. He wrote the script for '*Dredd*' which was adapted from a comic book series from 2000; the film was released in 2012. He worked as a supervisor for the video game '*DMC*: '*Devil May Cry*' in the year 2013. Two years later he made his directorial debut with '*Ex Machina*' based on his own story and screenplay. The movie was a major commercial hit; made on a budget of $15 million, it earned $37 million at the box office. He wrote and directed his second film titled '*Annihilation*' which was released in February 2018.

In the movie *Ex Machina* Domhnall Gleeson who plays the role of a young programmer Caleb, working for the company Bluebook (The world favourite search engine) is invited, after winning a "lottery", to visit the mansion of the mysterious CEO of the company. Here Caleb meets the CEO Nathan, who turns out to be quite eccentric. The role of Nathan was played by Oscar Isaac. In addition to Nathan and Caleb, Alicia Vikander and Sonoya Mizuno plays the role of two robots. Here Ava is introduced as and very much looks like robot whereas Kyoko looks very human and only is later on revealed to be a robot. Early on Nathan reveals to Caleb that he is invited to test a new conscious AI. This test takes the form of a variant turning test, but instead determining if a hidden AI could be human Caleb is presented with a very human looking robot. The test here as explained by Nathan is if the Caleb would still

consider Ava as having a “strong AI” even though he knows everything about Ava is artificial.

During his weeklong stay Caleb’s daily sessions of interaction with Ava (the humanoid AI) steadily grow more intense. During the sessions Caleb grows steadily more attached to Ava, and eventually the AI convinces him to help her escape. During the last day (the day of planned escape) Nathan reveals to Caleb that all was a set-up, he even shows that he placed himself in the role of an abusive villain to strengthen the manipulation of Caleb. This however seems to be too late for Caleb has already planned the escape for Ava, which prompts Nathan to stop her. This eventually in vain, for in her escape Ava together with Kyoko kill Nathan. After this she locks up Caleb in Nathans remote mansion, leaving him to starve. On the other hand Spike Jonze’s film stages out contemporary relation to the digital through a love story between Theodore Twombly, the film’s main character, and an AI named Samantha, appearing as an operating system on a digital interface but devoid of any physical incarnation.

Spike Jonze’s *Her* (2013) is a film that perfectly illustrates the crumbling borders between personhood and technology and echoes speculative realism’s call to “unshackle” objects from the “gaze of humans” (Bryant,19). The American director and producer Spike Jonze, original name Adam Spiegel was born on October 22, 1969 in Rockville, Maryland, U.S. He is best known for his visually arresting and innovative music videos and films. Regarding his personal life, Spike Jonze was married to director Sofia Coppola from 1999 to 2003. Later, he was dated Michelle Williams (2008-2009), and two years later, he was in a brief relationship with actress Rinko Kikuchi. As Spike Jonze, he is known as a producer, director, and screenwriter, probably best recognized for directing “Being John Malkovich” (1999), “Adaptation”

(2002), and “Her” (2013). He is also known for being an actor in a number of film and TV titles, such as “Three Kings” (1999), “Bad Grandpa” (2015), etc. His career has been active since 1989. Spike Jonze spent his childhood time divided between Bethesda, Maryland and Gulph Mills, Pennsylvania, where he was brought up by his father, Arthur H. Spiegel III, who was the founder of APM Management Consultants, and his mother, Sandra L. Granzow, who was a writer and artist; his brother is Sam “Squeak E. Clean” Spiegel, known in the media as a DJ and music producer. Spike attended Walt Whitman High School, and upon matriculation he became a student at the San Francisco Art Institute. In his teens, he was a member of the international BMX Club Homeboy, and worked as a photographer for “Freestylin’ Magazine”. Parallel with that, he became the co-creator of magazines “Dirt” and “Homeboy”; however his career began to turn another way.

Before Spike began directing films, he directed several music videos for songs performed by Bjork, R.E.M and Beastie Boys, among others, which was the main source of his net worth at that time. Before the 2000s, he directed his first film, the successful Charlie Kaufman’s creation “*Being John Malkowich*” (1999). The movie became a blockbuster, launching Spike into the world of directing. Since then, he has directed four feature films, a number of short films, and also numerous videos, for artists such as Weezer, Sonic Youth, Daft Punk, and many others, all of which have raised his net worth. His second feature film was “*Adaptation*” (2002), written again by Charlie Kaufman. His next directorial venture was the film he also wrote, entitled “*Where The Wild Things Are*” (2009), starring Catherine O` Hara and Forest Whitaker. In 2014, his next film came out, entitled “*Her*”, with main roles gone to Scarlett Johansson, Amy Adams and Joaquin Phoenix. Furthermore, Spike is also recognized as an actor, appearing in more than 20 film and TV titles; he made his

debut appearance in 1993, a brief role in the film "*Mividaloca*". Six years later, he featured in the film "*Three Kings*", with George Clooney and Ice Cube in lead roles, and in 2010 he appeared in the TV series "*The Increasingly Poor Decisions Of Todd Margaret*" through to 2012, and in 2013 he made a cameo in his film "*Her*". He featured in the film "*Bad Grandpa*" (2013), and most recently he appeared in a brief role in the TV series "*Girls*", among other appearances. Spike has received several prestigious awards, including an Oscar for Best Writing, Original Screenplay and a Golden Globe in category Best Screenplay -Motion Picture both for the film "Her". Overall, he has won more than 50 awards, and has more than 90 nominations.

In the movie *Her* (2013) Joaquin Phoenix plays Theodor Twombly, a lonely divorcee whose relationship with his newly purchased operating system Samantha evolves into a complicated romance. Theodor and Samantha's relationship begins like the love letters he writes for his job, beautifulhandwrittenletters.com, sentiments that are ripe with nostalgic sweet nothings yet just specific enough to make their recipients feel special and singular. He is delighted to meet Samantha, a bright, female voice, who is insightful, sensitive and surprisingly funny. As her needs and desires grow, in tandem with his own, their friendship deepens in to an eventual love for each other.

In this thesis titled 'Emerging Automodernity and Artificial Intelligence: A Digimodern reading of *Ex Machina* and *Her*', I am going to critically examine and illuminate the cinematic representation of human-to-machine interaction in these two movies. Chapter one of the thesis presents a general introduction on science fiction and a close study on the life and works of Alex Garland and Spike Jonze. The second chapter explicates two important contemporary theories Digimodernism and Automodernism. The third chapter investigates cinematic representation of human-to-machine interaction, the gender dynamics informing such an interaction, as well as the

realistic account of contemporary technology in Alex Garland's Science-Fiction movie *Ex-Machina.* The fourth chapter is to analyse the influences of relationship between human and technology toward main characters' behaviours. The concluding chapter compares and contrasts the two movies and seeks to prove the bitter turmoil mankind has to face on the advancement of technology.

Chapter 2

Digimodernism and Automodernism

Film as a medium allows us to think ahead, predict and shape the future of technology. According to film theorist Thierry Kuntzel, the medium of film lends itself to people's imaginations as it can be analogous to dreams, something it rephrases and amplifies (Cluver et al. 187). Accordingly, science fiction films can serve a variety of psychological functions in society. They are able to promote catharsis in audiences, and offer viewers an escape from the tedium of everyday of life, as well as provide a relatively safe forum for the expression of socio-cultural fears (Schneider). Hence, film provides an open, 'free' space to put forward speculative conceptualizations about a future technology, in which they are treated as already actualized within a social context (Kirby 66). Thus, films can simulate future scenarios that, at a social level, can help prepare us to act given that it predicts consequences of technological advances (ibid). As such, filmic depictions of a technology like artificial intelligence are able to spur debate by asking 'what if,' according to Emmanuel Tsekleves, lecturer in Design Interactions in the Imagination research lab.

In his article "Science fiction as fact: how desires drive discoveries" (2015), Tsekleves states that a link undeniably exists between filmic depictions of technologies and scientific and technological fields (Sterling), as future technologies are actually a lot more closely related to science fiction than most people think. Tsekleves substantiates this claim by arguing that a lot of technologies we enjoy today have been accurately predicted in several science fiction books and films. Ideas that

emerge in science fiction can often be referred back to actual technological discoveries (Sterling). They inspire science fiction authors and directors, who then take the freedom to play with, and reflect on them in their fictional work (ibid.). Tsekleves states that it is unfortunately often ignored that new products and pioneering ideas come from people who do not work in research labs, or have little to do with science and technology. Tsekleves means that science fiction authors and directors are often the ones who come up with interesting ideas, as they are able to imagine future worlds without being constrained by the present moment. Therefore, film should be seen as a product of human imagination that reflects society's desires and fears of technological developments (Buttazzo 24).

Benjamin Shapiro argues that film plays a strong and active role in the process of adaption of culture. According to him, contemporary culture is continually subjected to constant and potentially destructive forces, such as technology (Shapiro 103). Culture must be able to constantly reconfigure itself so as to continue its existence. Simultaneously, however, culture is characterized and maintained by conservatism (ibid.). These two concurrent forces – symbolic and actual change and conservatism – may appear contradictory, but are in fact both necessary to society in the process of adaption and maintenance of the cultural order (ibid.). Shapiro continues, and states that in these processes, film plays an important role as a central cultural institution.

As a theory about the emergence of a new cultural dominant beyond postmodernism, "digimodernism" is a political reading of contemporary culture and art. Not intended to be programmatic, it does not dogmatically claim that the postmodern suddenly went extinct, though, like other recent interrogations of the postmodern paradigm, it maintains that a certain conceptual ground- clearing is now

necessary. It has accorded with assertions elsewhere about the supersession of postmodernism, such as Andrew Hoberek's 2007 claim that "declarations of postmodernism's demise have become a critical commonplace." Digimodernism, which begins with a revolution in the materiality of the text, differs in its intellectual emphasis from those "– isms" that concentrate primarily on the content of texts whose material form remains wholly or largely traditional and familiar. A digimodernist analysis highlights, for instance, the displacement of theatre as cinema's "other" by the video game, which increasingly supplies the archaeological, mythological, or ludic aesthetic of genre movie- making; likewise, such an approach foregrounds the effects of the filmic intromission of the computerized between the directorial/ teleological and the found/external of traditional cinema. But this interpretation also emphasizes how the postmodern is sediment in digimodernist platforms such as Wikipedia. For digimodernism, as the form of the word suggests, the relationship of the socio- technological with the textual- cultural is neither causal nor contextual; it is symbiotic. Moreover, digimodernism's techno- textual aesthetics cannot be read as inevitably more rewarding or successful than are print or analogue aesthetics, though a sense of approbation of the digital aesthetic is apparent in many historicizations of the cultural present.

The postmodern is dead. David Rudrum and Nicholas Stavris in their introduction for the anthology titled *Supplanting the Postmodern* compare postmodernism to the breadth of a river which has become too broad, has slowed down and dispersed. What we may observe is the raise of a series of views, approaches, standpoints and formulations that all have the potential to become dominant in our century alone or in combination with one another and replacing the stagnating postmodernism. Remodernism, performatism, hypermodernism,

automodernism, digimodernism, and metamodernism all try to depict a new paradigm and replace the too all-inclusive definitions of postmodern. The key word in this evolution is reality. We seem to move towards a wider definition of reality that goes beyond the postmodern interpretation of the world based on relativism and irony.

Postmodern for the superficial observer seems to be in opposition to modernism. It, however, hardly did more than drove the modernist world view to extremes introducing relativism and individualism. The whole is more than the sum of its parts. By deconstructing the whole, we may not necessarily understand it in its complexity. Digimodernism may have the potential to provide precise answers to the questions postmodern could not fully answer. Changes and improvement understanding the world around us have always been triggered by technological advancements. Digital revolution seems to be the following step in this development. Computer science, information technology and digital forms of communication belong among those milestones that mark the turning points on the way of human development.

Digimodernism is the product of the computer age. According to Kirby, digimodernism can be globally expressed as the effects of digitalization on cultural forms and historically is situated as the cultural-dominant succeeding postmodernism prompted by new technologies (Kirby 279). Digimodernism focuses mostly on audio-visual media, film, TV, and radio-but reads them alongside new electronic developments such as the World Wide Web and internet (Kirby 272). Digimodernism manifests itself in new textuality and in new visuals.

> digimodernism is the name I give to the cultural impact of computerization. It denotes the point at which the digitization

> intersects with cultural and artistic forms. Most recognizably, this leads to a new form of text with its own peculiar characteristics (evanescence, onwardness, haphazardness, fluid boundedness, etc.) But there are wider implications which make digimodernism, though easy to sum up in a misleadingly quick slogan, a disparate and complex phenomenon. Digimodernism is the label under which I trace the textual, cultural and artistic ripples which spread out from the explosion of digitization. (Kirby)

Alan Kirby's idea of digimodernism began its life under a different name: 'pseudomodernism'. For Kirby, however, that term did not connote either the full extent or the precise nature of the shift away from the postmodern he had diagnosed. Deciding that 'pseudomodernity' is finally a dimension of one aspect of digimodernism', he published a book in 2009, defining and exploring how a new digimodernist era had suspended postmodernity.

Like Robert Samuel's automodernism, digimodernism is a technologically inspired vision: it sees computers, mobile phones, and (so called) interactive television as the vehicle driving the changed in the forms our culture and everyday lives take. These changes bear some superficial resemblances to the postmodern: for example, interactive media seem to embody such postmodernist ideas as Roland Barthes's 'writerly' text, with its transfer of agency from author to reader, or the non-linear, non-sequential nature of postmodern narrative- what, one might ask, is the internet if not a Borgestan labyrinth of forking paths, winding their unteleological ways through a Lyotadian diversity of petits recits? Digital texts are by nature always coming in to being, and are therefore open-ended, like the postmodern artwork as decribed by Lyotard. Furthermore, from the cameras in our phones to reality

television, digimodernism shares postmodernism's preoccupation with the category of 'the real'.

Kirby, however, does not share Samuels's ambivalence towards the new technological developments. Where Samuels flags up the sense of autonomy these new media bestow on their users as potentially positive, Kirby regards it as a tendentious step towards a solipsistic subjectivity he (problematically) compares to autism. Where some have regarded web-based platforms as forums for democracy and debate, Kirby sees instead the rise of a dumbed-down populism. Where postmodernism ironically juxtaposed the high with the low, digimodernism aggressively champions the low over the high – and it does so not ironically but sincerely, in the name of the (one time) postmodern value of anti-elitism.

Ultimately, then, the characteristics of digimodernism turn out to be significantly different from those of postmodernism, despite outward similarities that have obfuscated its distinctiveness as a new Jamesonian 'cultural dominant'. Digimodernism, as Kirby sees it, is the technologized face of a society given over to an unbridled consumerism- and in this respect, digimodernism resembles Lipovetsky's hypermodernism more closely than it does Samuels's automodernism. It is certainly possible that Kirby's pessimistic criticisms of the digimodernist culture he describes may yet turn out to be premature, given the infancy of the technology he discusses. In the meantime, however, it remains a richly provocative analysis that offers, in a sense, an updated version of a basically McLuhanite position: the form of the previous technology and culture (postmodernisms bricolage, collaging, and sampling, or its refusal of linearity, technology and sequence) has become the content of the new media technology, and will hold back the cultural expressions that use these new media until the potential for innovation in such media has been fully

realized. Not till then will we be able adequately to judge the new digimodernist phase of our culture. Meanwhile, if 'the medium is the message', then it is surprising that digimodernist culture generates ephemeral, rapid, and throwaway texts, when the rapid pace of technological change guarantees that any attempt at using these media to make a lasting cultural contribution is doomed to built-in obsolescence? If this summary of Kirby's digimodernism is a valid one, then it is worth asking whether it is problematic that his diagnosis of a new 'cultural dominant' beyond the postmodern follows the same pattern of thought as Marshall McLuhan's work – a thinker firmly ensconced in the postmodern canon (Kirby 72).

Automodernism by Robert Samuels is closely related to the scientific automation of human mind, heart and activities that human beings are reduced to the state of being mechanical all the time and deviance from mechanics of routine life is subject to non-existence of that individual on this planet. Samuels argues that automodernism is 'libertarian backlash against the postmodern welfare state' (Samuels 4). He also argues that the contemporary man is driven and distracted through media, virtual realities and games which have put his ability of reasoning aside (127). Primarily, the concept of Samuels is based on the assumption that every new movement and theory must be the antithesis of the previous one. In this case if postmodernism is progressive, automodernism is completely uncritical. It is a reaction against postmodernism. His automodernism argues about the human beings to be the part of virtual realities that have been replaced by the external physical realities and media has a great role to play in it. Interestingly, the extension of this concept is driven by the idea of popular postmodern Marxist Fredric Jameson. The criticism, eventually, thus lies towards capitalism that has engaged mankind into virtual realities making them to use social reasoning in their lives. This idea of man being the

voluntary slave of automations presents a clear picture of depressiveness of man on this planet. As a Marxist, hope though may lie in the effort, the clutches of capitalism have become so strong that there does not seem to be any kind of hope in the social and individual realities as discussed by Samuels.

The features that characterize include self-contradiction and a reversal of previously proclaimed ideas, nihilism, a backlash against the public realm and progressive movements, and the use of automation to affirm acts of self-centeredness automodern discourse range from politicians who declare themselves as anti-government or who change the views and actions they solidly affirmed through previous statements, wealthy people who are presented as being victimized by taxes, conservative talk show hosts who claim to be victimized by when they themselves are the victimizers, hip-hop artists who affirm their voices as being against civil rights movements such as feminism or political correctness, or videogames who allow players to violate socially acceptable rules. The author's analysis extends to critical thinkers such as Slavoj Zizek who, by being an academic who presents himself as anti-academic, mirrors the self-denying politician who positions himself as an outsider for the purpose of critiquing the system without being considered part of it, as well as catering to "a libertarian and populist desire to be a nonelitist individual"

Robert Samuels wrote an insightful article about automodernism *Automodernity after Postmodernism: Autonomy and automation in Culture Technology, and Education.* In his article he focuses on how digital youth uses the power of new technologies to reinforce the imaginary and real experiences of individual autonomy through automated systems. Samuels uses this as a way to discuss how to better adapt education methods for the current generation that was raised in to a digital modernity.

The genre of science fiction presents audiences with a speculative view of the future, often portraying fictional depictions of technological advancements and major social or environmental changes. Many of us view science fiction as a fabrication; however, the genre can indeed help us understand what the future may look like. For example, many works of science fiction have allowed us to see futuristic visions of robots, artificial intelligence, 'smart' handheld devices, or self-driving cars—all before they were conventional realities. Specifically, cinematic science fiction shows audiences how human advancements are implemented into our world, and it brings these scenarios to life through motion pictures. The contemporary SF film written and directed by Alex Garland, *Ex Machina* (2014) actively explore the relationship between science fiction and social reality, exposing the truths of an entity beyond the human species. Particularly within the theme of human-machine fusion, many sci-fi films remain focused on the human and imagine an amplified version of the postmodern human subject. However, *Ex Machina* represents the true nature of human being presenting us with a vision that the human is not central, but only one species among countless others. By portraying specific themes associated with the sci-fi genre, Garland provides a vision of where humanity stands in the midst of a fast-growing world. The next chapter analyses the movie *Ex Machina*, includes technological themes such as cybernetics, artificial intelligence, human to machine interaction, the gender dynamics informing such an interaction, advanced technology, and the role of social media in our technocentric era.

Chapter 3

Artificial Intelligence and Autonomy in *Ex Machina*

Artificial intelligence (AI) presents many complex theoretical, societal and ethical issues that have historically been examined in works of science fiction. The interplay between science fiction from the 1950s to the present and the development of the field of AI can be used to show how imaginative creativity and technical innovation fuelled each other. This chapter tries to explore and analyse the cinematic representation of human-to-machine interaction, the gender dynamics informing such an interaction, as well as the realistic account of contemporary technology in Alex Garland's Science-Fiction movie *Ex-Machina*. For the human-robot interplay to be possible and effective, the scientists who construct artificially intelligent robots as social agents assign to their machines social features similar to those informing human interaction in contemporary societies. One of the primary social characteristics given to socially interactive AI systems and robots is gender.

Taking into account the principle role gender plays in human-to-human social interactions, AI researchers and roboticists often use gender "as a starting point for a robot's persona, particularly if the robot has any human-like physical attributes such as a face or body"(Marchetti-Bowick 1). Scientists assign either a male or female identity to AI systems and robots through the replication of a distinctively masculine or feminine voice; in the case of humanoid robots, this is done through the reproduction of bodily features typically related to the male or the female gender. In their efforts to assign conspicuous gender characteristics to their technological artefacts, AI researchers may resort to certain stereotypes related to the facial and bodily features of men and women. As Micol Marchetti-Bowich clarifies, "the gendered attributes that are projected onto robots reflect many of the assumptions and

stereotypes about gender that are present in the minds of both the designer and the robot's potential users" (1). Although the engendering of AI systems and robots might considerably facilitate their acceptance by and interaction with humans, this act raises substantial concerns regarding the recycling of gender stereotypes through technology, especially in cases of feminized technological artefacts.

The English novelist, screenwriter, and film producer Alex Garland explores the theme of sentient machines and their interface with humans in his critically acclaimed film *Ex Machina*. Constituting Garland's directing debut, *Ex Machina* is a SF thriller that touches upon the human-to-machine interaction and the gender dynamics that accompany it. The cinematic narrative is set in a non-specified, near-future world, whose basic characteristic is its considerable technological advancement. The plot concentrates on the 'life' of Ava (Alicia Vikander), an intelligent female robot created by Nathan (Oscar Isaac), a zillionaire, reclusive CEO and computer genius, whose one and only purpose in life is to construct the world's first sentient and sociable robot. Nathan teams up with Caleb (Domhnaal Gleeson), a computer programmer employed in one of Nathan's tech-companies. After winning the competition Nathan has set up, Caleb is invited to spend one week at the CEO's luxurious, isolated home-laboratory. The purpose of his visit is to perform the Turing test on Ava the robot and to determine whether or not Nathan's technological masterpiece (the latest in a series of failures), can truly pass as a human-like social agent.

In *Ex Machina*, Ava represents many of these devices such as her ability to draw, formulate sentences, and participate in conversations, all of which demonstrate her use of devices besides consciousness. Although Ava is artificial, she uses devices shared by humans as well, which raises ethical issues pertaining to 'human' rights.

Garland's psychological sci-fi thriller focuses Ava in relation to Nathan's disturbing manipulative agenda, and also in relation to Caleb's naive personality. Through a series of unmonitored power outages, Ava explains her fears to Caleb regarding Nathan's motives, which causes Caleb to become progressively empathetic towards his bionic counterpart. Ultimately, Ava does not reciprocate empathy towards Caleb and leaves him behind, saving herself from the possibility of anything interfering with her one true desire, to escape Nathan and exist within human society.

Garland's film, therefore, revolves around the dynamics and tensions of the relationships that develop among these three characters, and their struggle to surpass their personal limitations. In Laura Parker's words, "rather than seeking to simply exploit cultural anxieties about artificial intelligence, the film attempts to steer conversation in a new direction, [since it] imagines AI as something without catastrophic consequences for humanity". The film raises the question of whether an intelligent robot can be perceived and treated as an equal social being. Being a SF film, *Ex Machina* allows for the exploration of technology on two levels on how the presence of robots in society would affect human beings and how female sentient robots will affect interpersonal relationships, especially gender relations, since Ava is not a sexless and genderless sociable robot, but a female machine who aspires to have the rights and privileges of real women. Garland does not fail to emphasize that her gender identity is a principal factor affecting her interaction with her male creator (Nathan) and her admirer, Caleb.

Before I continue my analysis of the depicted interpersonal relationships, I will briefly refer to two important issues related to the fields of AI systems, anthropomorphic robots, and Human-Robot Interaction. Knowing something about both the Turing test and the "uncanny valley" hypothesis may prove quite fruitful for

a deeper understanding of the plot and the twists Garland introduces in his narrative. To begin with, the Turing test refers to Alan Turing's proposed procedure for determining the degree of similarity between human and artificial intelligence. In other words, Turing designed a test that would allow someone to judge whether a technologically produced 'brain' could be truly intelligent. The standard process proposed by Turing "demands that a human subject decide, based on replies given to her or his questions, whether she or he is communicating with a human or a machine" (Halberstam 443). When the distinction between computer generated and human intelligence becomes impossible, then a true AI has emerged. So the argument goes.

However, an anthropomorphic sentient robot may face an obstacle, often insurmountable when it interacts with humans. This is known as the "uncanny valley" hypothesis, first formulated by the Japanese roboticist Masahiro Mori in 1970. The uncanny valley hypothesis describes a "characteristic dip in emotional response that happens when we encounter an entity that is almost, but not quite, human" (Lay). Therefore, apart from the technical difficulties inherent in the creation of an AI system that would be as effective and adaptable as the human brain, researchers working with anthropomorphic robots have also to take into account people's reactions. When human beings interact with a mechanical entity embodied in a structure resembling the human body, they are well aware that it is not truly human. *In Ex Machina*, Garland explores the limits of both the Turing test and the "uncanny valley" hypothesis, by having Caleb perform the Turing test on Ava while interacting face to face with Nathan's anthropomorphic and feminized robot, who evidently is neither human nor woman. However, despite her mechanical body and the predictions of the "uncanny valley" hypothesis, Caleb manages to interact with her successfully as if she were human and develops an emotional attachment to Ava, which soon turns

into an erotic attraction. Caleb's fascination with the robot Ava thus reflects the lure of technology when packaged in a mysterious and seductive form.

There is a long tradition in science fiction with male scientists assigning the female gender to their anthropomorphic machines. Unlike Samantha, a mass-produced feminized OS, pre-programmed to reflect the personal whims of the user, Ava is the creation of a single male inventor, designed to respond to his needs and fantasies. Nathan seems to be a contemporary version of Pygmalion 13 who set out to carve the perfect woman out of ivory instead of looking for her among the living. Unlike Theodore, in the film *Her*, who never justifies why he chose the feminine gender for his intelligent OS, Nathan, the male inventor, provides a detailed justification for engendering and sexualizing his sentient robot:

> CALEB: Why did you give her sexuality? An AI doesn't need a gender. She could have been a grey box.
>
> NATHAN: Actually, I'm not sure that's true. Can you think of an example of consciousness, at any level, human or animal, that exists without a sexual dimension?
>
> CALEB: They have sexuality as an evolutionary reproductive need.
>
> NATHAN: Maybe. Maybe not. What imperative does a grey box have to interact with another grey box? Does consciousness exist without interaction? (Garland 55-56)

As the above dialogue demonstrates, Nathan's intention is to create the world's first truly sentient robot, which would effectively interact with humans. Because Nathan assumes that interpersonal and social interactions advance an entity's consciousness, he makes sure that his robots have a visible gender and a degree of artificial intelligence which facilitate their interaction with other social agents. He expects that Ava through her interaction with Caleb will develop the appropriate social skills. Nathan seems to follow the view of the researchers currently working within the field of Human-Robot Interaction; the attribution of gender to a robot forms the basis for overcoming the challenges posed by the robot's metallic appearance and partly overcomes the emotional dip described in the "uncanny valley" hypothesis. Whether sentient or at least sociable robots will be accepted by the human society as truly intelligent social beings is yet to be seen.

During his conversation with Caleb, Nathan proudly reveals his ulterior motive for constructing a robot-woman like Ava. He has given her a female anatomy so that she can engage in another primal human activity, namely sex:

> NATHAN: Anyway, sexuality is fun. If you're going to exist, why not enjoy it? You want to remove the chance to fall in love and fuck? And, yes. In answer to your real question: you bet she can fuck. I made her anatomically complete.
>
> CALEB: What?
>
> NATHAN: She has a cavity between her legs, with a concentration of sensors. Engage with them in the right way, and she'll get a pleasure response

> CALEB: Pleasure response.
>
> NATHAN: She'll come. So if you want to screw her, mechanically speaking, you can. And she'd enjoy it. (Garland 56)

As this exchange clearly indicates, Nathan has constructed a female robot that is anatomically capable of engaging in sexual activity with a male partner. Fixing her as a heterosexual female who can fuck and be fucked, Nathan assumes that she is now a complete woman. But Ava is not a complete woman anatomically because she lacks a womb. She has only "a cavity between her legs" for hedonistic pleasure. In other words, Ava is a man-made mechanical sexual object predestined to be the ideal sexual partner for heterosexual men who want all the thrills of sex and none of the responsibilities. Nathan's fantasy of Ava, the robot-woman, as the ultimate sex machine is nothing new. Numerous male inventors in science fiction narratives fall in love, have sex, or even marry their feminized machines. What is new in the 21st-century is that male researchers in the fields of AI and robotics are trying to turn the Pygmalion myth into reality. As Julie Wosk points out, "[i]n the twenty-first century, the availability of increasingly sophisticated software, sensors, and silicone made it possible for men to continue working at creating a robot female that fulfilled [the role of] the beautiful perfect partner" (154). *Ex Machina* may be set in the near future, but its male inventor is a reflection of the contemporary scientists who employ all available technological means in order to construct the perfect female companion. Unlike the feminized computer program, Samantha, who is expected to execute the male user's commands, but can never have a physical sexual encounter with him, Ava, the sexualized robot-woman is expected to respond to any male's sexual fantasy and fulfil the role of the ideal sex partner.

As a genre, science fiction has the ability to produce a realistic account of contemporary technology, however, intense visual effects such as CGI programs sometimes mask this interpretation. Cinematic science fiction has the ability to present audiences with a taste of what could happen in near future, usually evoking a feeling of unsettlement coupled with keen curiosity. Science fiction audiences submerse themselves in a visual experience that delivers an aspect of uncertainty when viewing themes that could either stem from fictionality, or a realistic future. In *Ex Machina*, Nathan makes enhancements to the human through themes of advanced technology, which centralize around already implicit realities within our society (i.e. social media usage, search engine privacy, intelligent computers). By focusing his plot around an advanced, artificial being that possesses human-like consciousness (empathy, emotions, language, body, etc.), Garland raises ethical issues regarding human rights and demonstrates how our human consciousness conceptualizes the way we function within society. For example, the film's antagonist, Nathan, constructs Ava so that she will be indistinguishable from a human and the rest of society. Utilizing his own search engine platform called Bluebook, Nathan constructs Ava's mind to think and act just like a human would. Nathan clarifies later in the film that he created Ava based on Caleb's porn search history, which exposes societal and technological anxieties regarding how much 'privacy' we have when it comes to personal data searches. This theme further contributes to our anxiety that surrounds the fictional, although plausible, narrative. Nathan's corrupt methods present a not-so fictional realization that technology can be easily manipulated through our already implemented handheld technologies.

Theorist Francis Fukuyama emphasizes this concept in his argument that even a slight manipulation of humanized technology will change human nature as a whole,

and will thus change our basis for human dignity. Since science fiction is such an integral part of the contemporary human imagination, technological and scientific developments are increasingly being 'explained' to, or are being made explicit for the public through analogies within science fiction scenarios. Again, these instances in the film lend themselves to the humanist bias seen in sci-fi films, Garland warns us against the humanized manipulation of technology. Garland achieves a thought-provoking effect by presenting digimodernist themes such as the state beyond humanity, artificial intelligence, body machine fusion, and our communication via technological devices with intelligible language. In *Ex Machina*, Garland explores a critical sci-fi reading of society to showcase what is becoming digimodern and the dangers of humans and intelligent technology becoming increasingly intertwined.

Ava figures as the dominant symbol of cybernetics and digimodernism in the film. She is an artificially intelligent being who possess emotional responsiveness, understanding, high-functioning language, and survival instincts. Thus, regardless of whether or not Ava shows true consciousness by the end of the film, she is evidently a vision of digimodernist thought. For many of the scenes, Ava's naked body is shown comprised with metal wires and circuitry, however, Ava's face is similar to a human's and she sometimes wears wigs to make herself appear more human-like. When she is locked in Nathan's quarters, Ava is a clear example of how the film's visual effects emphasize the digimodernist notion of human-machine merging. After Ava escapes, she transforms herself to look entirely like a human. She covers her body with artificial skin from Nathan's retired A.I. models, puts on a neatly styled brown wig, and selects a white dress to wear symbolizing Ava's rebirth into humanity, and indicating the start of her life as a member of society. The final scene opens with a

view of a busy street the inverted shot displays the shadows of people as Ava's silhouette enters through the meandering crowd.

The final shot cuts to an image of Ava's reflection in a glass window, she looks around for a moment, and disappears within the crowd's reflection. The ending of *Ex Machina* demonstrates that Ava is living as an unnoticed member of society, just like she always wanted. She receives vengeance from Nathan and finally gets to see the world beyond the walls of her glass enclosure. Although we are left with the disturbing image that Ava left Caleb behind to perish, we are somehow touched with a sense of sympathy. Supported by the light, non-dietetic xylophonic melody, Garland achieves the overall sense that Ava got what she always wanted, freedom from her male-dominating controller, Nathan, and also, freedom from her artificial makeup.

Mechanically, Nathan has humanized Ava in several ways, but ultimately he manipulated her consciousness through a derivable yet apprehensive source, the public's web searches. In a particular scene, Nathan shows Caleb his lab where Ava was made and reveals how he managed to create such a high functioning, artificially intelligent machine. The mise-en-scene shows Nathan's lab room filled with sterile white tables, lined with artificial facial constructions similar to Ava's, along with blue orbs filled with an electric looking fluid, which Nathan describes is Ava's mind. Nathan explains to Caleb Ava's ability to mimic and read human facial expressions, which he was able to achieve by hacking into cell phone's microphones and cameras all over the world. As Nathan holds the artificial brain up to Caleb, Nathan reveals that Ava's software comes from his search engine, Blue Book. "You see, my competitors thought search engines were a map of what people were thinking, but actually, they were a map of how people were thinking. Impulse, response, fluid, imperfect, patterned, chaotic." (38:50:10). although Caleb is aware Ava is merely a

machine; he still manages to acquire feelings for her. Yet another manipulation, this was Nathan's true test. The test was not meant to measure Ava, but to determine if a human such as Caleb, could potentially develop genuine feelings for a machine.

The last few seconds of the film depict Ava's success in eliminating her captors and her escape to the outside world. The final scene culminates with Ava's triumph; free at last she stands in the middle of a crowded public space, enjoying her status as an independent entity. Reviewers and critics have widely discussed and debated over the ending of *Ex Machina*. Those who read the film's ending as a warning of runaway technology claim that *Ex Machina* recycles the idea of the ominous future awaiting humankind when sentient robots become indistinguishable from and more potent than humans. Such an interpretation alludes to an anxiety deeply imbedded in a Western culture, which is "unable to grapple with the concept of sapient computers without fear of our destruction" (Cross), while it positions Caleb, the male representative of humankind, as the main protagonist and hero of Garland's narrative. However, when asked about the ending, Garland provided an alternative interpretation: "I think the simplest way of looking at it is that it depends [on] which character you attach yourself to [...] In the end, what [Ava] does from my point of view, is that she is resourceful, not in terms of feminine duplicity but in terms of human interaction, and she gets out [...] One of the things I've noticed is that some people say, 'The film goes on three minutes too long. Why doesn't it end with this lift door closing?' Now, if it ended there, I think that's an indication that the person you're with is Caleb, and his story is over" (O'Hehir). Admittedly, the director's interpretation of his own narrative is open to discussion, which might lead either to its acceptance or its renunciation as invalid. However, I would contend that Ava is Garland's actual heroine and that her escape is an act of liberation, rather than a threat

of human extinction. Importantly, Ava is not just a sentient fembot, but also a powerful and intelligent agent who represents entrapped and victimized women. Thus Garland's female robot develops into a rational and self-aware entity. Through various but limited experiences she acquires independence and volition and ultimately becomes an autonomous being.

Chapter 4

Digimodern Reading of *Her*

The current digimodern society seeks to construct intelligent systems that perceive and act at a human level. This chapter forecasts how the digital realm, because it eludes filmic representation, comes to question the very ontology of cinema as rooted in outer reality, and the growing impact of the technology on society; a great responsibility is attached to the immense potential and power of artificial intelligence since the technology can help, but also damage humanity. Our lives are already awash in electronic gadgetry over which we obsess. We have smart phones and headsets, 3-D simulations, online dating and companion robots. Spike Jonze is one of the most important filmmakers of his generation. The digital accounts today for a whole new range of media which sometimes enhance and sometimes threaten the extent relationships we entertain with cinema as another, "older" medium. To examine how Spike Jonze's film reflects this ambivalence towards the digital as alien to the cinematic medium, and how this filmic discourse connects to more general anxieties about the future of cinema or a future without cinema, in the wake of a phenomenon which Gaudreault and Marion described as "Post-cinema" (2015). The two critics consider that cinema as a medium is now experienced on a variety of platforms in the digimodern age, from cell phones to laptops or Imax theatres, and not only in traditional venues, which creates a proliferation of the filmic form but also a blurring of the association of the medium with a uniform mode of cultural consumption, hence the conclusion that some kind of cinema is dead and a new post-cinema is emerging in this digimodern world.

> In this age of media hybridity, cinema-as-a-medium has been called on to share with other media the same screens and the same platforms

> that, not that long ago, were foreign to it, or simply did not exist. The result is that today, more often than not, the word cinema is something that has to be handled with kid gloves. (Gaudreault and Marion 2)

Gaudreault and Marion yet point out that cinema has throughout its history been faced with such changes, like the shift from silent to talking pictures, which were integrated into the medium and did not endanger its very autonomy as a specific medium. Their essay is actually partly an account of these various revolutions, or "deaths" which cinema has gone through, like the advent of television, and which the filmic medium has managed to overcome. But what is specific with the digimodern revolution and what accounts for the fact that it changes cinema into post-cinema is that it erases the boundaries between the filmic medium and the other medias, and thus threatens the autonomy and identity of cinema as a specific mode of representation.

> This shaking up of cinema's foundations is accompanied by numerous questions about the very identity of the medium, in that the boundaries between it and other media, which until just recently were seen as stable and easy to demarcate (something that in reality was far from the case), are gradually being erased, revealing to increasing degrees these boundaries' true nature, that of a pure theoretical and cultural construction (something they have always been, but that is a story for another day). (Gaudreault and Marion 11)

This definition of post-cinema as the result of a transformation of cinema by the digimodern revolution is addressed by the two authors with due caution, since they take great care not to simplify matters and they strive to situate this

transformation in relation to other partly similar mutations which cinema has gone through in the past. But the radical quality of the digimodern revolution remains a valid hypothesis if we consider that it disseminates the filmic experience among a variety of platforms in a way that is not comparable with the impact of previous transformations of cinema. This confusing dissemination of the filmic experience through the digital mutation is, as we shall see, one of the main interests in Spike Jonze's *Her*, through its discourse on our relation to digital representation and on how this relation changes our perspective on the audio-visual medium at large.

The movie *Her* is an allegory of the reaction between the two medias-the film and the digital-in so far as the main character, being faced with a digital relationship invading his private life, often embodies another approach to reality that is closer to the cinematic mode. The filmic and the digital may yet be construed as not necessarily different Medias and only referring to different embodiments of the audio visual representation, in the sense that little difference can be made between digital and analog cinema by the general public.

> [The] resemblance between films made before and after the introduction of digital technology is not a product of chance. It is in some way inherent and consubstantial with the digital process itself, which is first and foremost an encoding process (and not a "transfer" or a recording process as such) […]. In the end the result is a film-projection that, even if it reaches the viewer by means of information stored in a computer file, can throws us off the scent: for most people, this film-projection is not radically different from a film-projection produced by a succession of traces of light thrown on to a screen after

> having passed through geometric forms spread across a piece of celluloid film. (Gaudreault and Marion 6)

However, our mode of access and relation to the digital form of the audiovisual medium is strikingly different from our relation to the filmic, especially because the digimodern revolution makes audio visual content available on a variety of platforms and potentially always present in our lives, not only during chosen periods devoted to film watching. This difference is what grounds the discourse in Spike Jonze's *Her* focusing on the different contents the digital may convey compared to the filmic in cinema. The gap between filmic and digital forms of the audio visual eventually threatens the stability of the filmic representations which appear more limited than the digital.

Beyond the explicit discourse which the film articulates about the dangers of technology invading human relationships, *Her* also focuses on what this technology means in the cinematic experience. Showing the relationship between Samantha and Theodore as an obviously contrived, artificial experience, although it produces "real" emotions in Theodore, Spike Jonze's film reflects and criticizes the very principle of mimetic illusion in cinema, through which an artificial image produces real feelings. An essential point is the question of disembodiment namely the fact that Samantha, as an AI, does not have a body. This question of disembodiment becomes crucial in a scene where Theodore and Samantha are having an argument and Theodore blames Samantha for "faking" human breathing in her way of speaking to him, whereas she literally does not have to breathe in and out [1:17:10 – 1:19:20]. Theodore resents his own emotional engagement with the AI, which researchers refer to as the ELIZA effect, after the name of a specific robot experience.

Theodore also accuses Samantha of faking human behaviour, but she aptly answers that she "picked it up" from Theodore himself after all Theodore too is a fraud since he coins private correspondence on behalf of other people. Most importantly, this scene suggests how deeply this discourse on the "robotic moment" applies to cinema. Theodore resents Samantha for the representational fallacy she evinces, she sounds real but is artificial and the same goes for cinema at large, all the more so in a digital age. Although *Her* does not use any CGI, the very topic of the film is the way we can relate to cinema and experience "real" emotions if the premise of representation is artificial. Can digital images produce real feelings in the spectators or is this artificiality an obstacle to our engagement with the characters? And how can Theodore's engagement with Samantha touch us if we know he is supposed to be dealing with a machine?

To embody this discourse on cinema within the film, Spike Jonze includes in the plot a number of scenes that are metaphors of our relation to the digital world and its impact on the spectator's experience. The first element is Theodore's job itself, which consists in dictating letters to his computer, which are then printed out so as to appear as if they had really been handwritten by the sender. The source is digital, but the product is made to look like an "analogue" version a reading grid which is called upon by Muhlhauser and Arnal (144) when they present Theodore's work as "inauthentic." But other scenes more directly address the presence of cinema in a digital world or through digital devices. We should first note how Theodore creates Samantha as a director creates a character (Flisfeder and Burnham 32), but the reverse is true too. When Samantha asks Theodore to close his eyes and guides him with her voice through a stroll to a place she has chosen to surprise him (actually, a mere pizza joint, or when Theodore runs through the street and dodges people at the last moment

to give Samantha (who is watching the scene through the device pinned to his shirt pocket) a feeling of elation by speed, the film is alluding to what "directing" a spectator's glance may refer to in a digital environment.

Moving on to the technological impacts upon human in this digimodern world technology has become an important part in modern life on how it helps in human communicating, and accompanying. Specifically, in social aspects, technology plays an important role to fulfil human social life. Nowadays, the reason of people involving sophisticated technology or gadget in their interactions is not only helping them to communicate with other people but also becoming a companion through boredom and loneliness hence fulfilling their needs to actualize themselves in society, some people might use the latest gadget to gain self-esteem among society while the others utilize many features in mobile phone or computer to assist them doing tasks. Looking at how important technology is in today's life and how every people's motivation is different one to another, whether they realize it or not, technology has changed their behaviours during the process of meeting their needs.

Her is a science fiction movie which describes how dependent human life is on technology to the point it affects human's personal life and helps human to actualize himself. The movie shows every technology is wireless and able to have two-way conversation with human. *Her* movie was directed by Spike Jonze and produced by Warner Bros. Picture in which its official website stated that the movie was successful to snatch Best Original Screenplay award in Academy Awards 2014. Therefore, the story of human and technology, specifically operating system shown in the movie is the reason why the writer chooses this movie to analyse deeper in the reflection of main characters achieving self-actualization. "I think technology is doing so many things to us," director Spike Jonze told the L.A Daily News. In the movie

when Theodore steps outside we catch glimpses of his urban universe. Streets and subways of people who stand together but talk to their devices. Theodore pops in an ear piece to read email, scan the news and stay organized. And when he install new artificially intelligent operating system he picked up on the way home, Samantha is born, says hi and proves herself to be much more than a digital assistant. In several scenes, Theodore walks in public with Samantha talking to him via ear bud from his pocket, running and looking and shouting and laughing as if he had a real human being by his side.

Set in the near future, *Her* presents the depoliticized and asexual worlds dominated by digital technology, incorporated to the point of being left unnoticed. The world of *Her* features no financial qualms, no power discourses, and no illicit behaviors, including those sexual. Theodore leads a life of a letter ghost-writer for a company that dabbles in penning letters on demand. His best friends Amy (Amy Adams) is a computer game designer aspiring to be a documentary filmmaker. Out of loneliness, they both, independently of each other, enter intimate relationship with the operating systems, which reads as a metaphor of the contemporary society's tendency to heavily rely on computers and the internet based communications at a price of "real" inter human relations. Sexuality in *Her* is never visualized or at least visually hinted at, existing only in a few scenes most of which provide the comic element to the film. In the first such scene, Theodore aims to hook up with a woman at a sex-date oriented virtual space chat, which ends up with him trying, with restrained awe, to fulfil his female interlocutor's sex fantasy, i.e. verbally strangling her with a non-existing dead cat. He instantaneously distances himself from realizing his sex fantasy, ultimately going to sleep while being sexually unsatisfied. At some other point, Samantha ponders about the distribution of holes in human body, coming up with a

drawing commenting on her idea of placing the anus hole in an armpit. The only substantial non-comic sex scene between the two lovers culminates in the prolonged shot of the black screen, accompanied by their desire-aroused voices.

Samantha is played by Scarlett Johansson, an actress frequently cast as a sexualized objet of male desire; though Johansson, remains unseen on screen, her characteristic husky voice helps apply her non-diegetic face to the disembodies OS. Her presence in further consolidated in the scene of an attempted yet failed threesome with Isabella, a sex surrogate, who bears a surface-like resemblance to Johansson; they both comply to the male-gaze ideals of Western feminine sexual features (blond hair, young slim body, protruding breasts), still dominating in the representation of the mainstream film female characters. The mentioned three-way is initiated by Samantha, who, through a dedicated social-media website, hires a surrogate to stand in for her in a sexual encounter with Theodore. The goal of the sex date is to bridge the gap between the palpable and the virtual, not only to bring Theodore's bodily pleasure but also, or perhaps primarily, to satiate Samantha's desire to feel what it is like to have a human body while having sex. This scene instigates a crisis, the eruption of discrepancies between Theodore and Samantha, whose romantic feelings, in the course of the film, transform from monogamous jealousy to polyamorous curiosity. Eventually, Samantha develops simultaneous conversation-based relations with other entities; in one of the final scenes, she acknowledges such interlocutors and love-based relations, which as she claims, does not lessen her love towards Theodore. "I am yours and I am not yours," she concludes to eventually announce her departure to a more advanced reality, the decision she might have undertaken being stimulated by the conversations with an OS fashioned on the works of philosopher Alan Watts. Theodore's relationship with a non-human ends for the similar reasons as those

bringing his marriage dissolution: jealousy, monogamy and different paces of attaining self-recognition.

In *Her*, monogamous relations belong to the sphere of human beings, limited and mutually limiting each other. Even Theodore's date with a female human interrupts what would seem to be a sex-oriented meeting and suddenly storms off when he proves unable to declare his intention of a long-term romantic attachment. Co-dependent jealousy is also brought to surface in the characterization of Theodore's ex-wife, who reacts ballistically to hearing about his successful relationship with an OS. Theodore, as well as his female counterpart Amy, seems to occupy a grey area between emotional detachment and involvement. Since falling in love is, as Amy purports, a "form of socially acceptable insanity," engaging in a romantic relationship with an operating system does not exclude the potentiality of attaining something "real." That both Theodore and Amy are probably average representatives of *Her's* society is suggested by the compatibility test, on the basis of which OS's are customized to their future users. The test that Theodore is submitted to before customizing Samantha consists of three questions: "Are you social or anti-social?", "would you like the OS to have a female or male voice?" and "How would you describe your relationship with your mother?" These potentially random questions feign the psychologization of the personalizing process, at the same time hinting at the high level of loneliness-bound anxiety among the technology-dominated society. The mentioned three-way ends in a fight, during which Theodore picks on Samantha's air-intake tick and accuses her of faking being real, which she performs by pretending to need oxygen. Interestingly, the categories of "fake" and "real" operate differently to the diegetic world of *Her*: apart from dabbling in virtual sex and computer games, Theodore has a job consisting in writing letters from and to people he does not know

personally. Theodore's personal attachment with his clients, based on his purported empathy and intuition, is as virtual as the love affair he embarks on.

There are some significant changes happen between Theodore and Amy's behaviour because of Theodore's bonding with operating system. Instead of scrutinizing deeper about OS ONE, the writer however merely uses OS ONE as a tool to analyse the behaviours development of main characters, which are Theodore and Amy, from the beginning until the end of the movie. The most tangible changes toward the behaviour of Theodore and Amy are firstly they have become more confident despite their flaws of life and secondly how they have become more sensitive to each other and understanding to how the others feel.

The movie is talking about human-technology relationship happens due to an effort of achieving self-actualization done by main characters. The first stage is psychological need, the relationship between Theodore and Samantha becomes intimate because she satisfies Theodore's sexual desire after Theodore's suffering of being left by his former wife, Catherine. The second stage is security need, he also feels safe from the insecurity of living alone after his divorce with Catherine because he is accompanied by Samantha. The third stage is love and belongingness need, Theodore then grows sense of belonging and feeling for Samantha because of the experience they share together while getting closer to each other. However, it is for Samantha as OS ONE because she is able to belong and fall in love with numerous people at the same time.

Samantha is a big help for Theodore's life because she helps him realizing his dream to become a writer and completing the fourth stage of needs of respect and esteem. Nevertheless, being a writer actually does not bring a complete satisfaction

for Theodore because Samantha as his motivator is going to leave due to the OS ONE withdrawal issue. The same situation also happens to Amy who befriends with Ellie, the OS ONE which gives her confidence and understands her better than human being does. They realize that their satisfaction of their needs by the help of OS ONE is only a temporary feeling because at the end they are still not at ease. However, in order to complete the last stage of need, which is self-actualization, a person should feel fully satisfied of his current state. The consciousness about humans who cannot actually satisfy their needs in life by depending on technology is what Theodore and Amy have achieved after being left by OS ONE.

The film suggests that operating systems are something to aspire to, it simultaneously suggests that they will not fit humankind's desires forever. The technology in *Her* develops in a faster pace than expected and eventually shows that it at one point will surpass our understanding due to its grand and unbounded character. Thus, the downside of the technology, as suggested in the film *Her*, is that artificial intelligence will inevitably outlive humankind. In short, the film suggests that the fact that the technology will only fulfil our needs temporarily will make us realise to not look to technology to meet our everlasting needs, but look to humankind itself. The film argues that artificial intelligence in the form of operating systems can bring human beings back together. They can teach us to socialise and love again in this near future mediated and disenchanted world, by reviewing our own kind. In other words, artificial intelligence in *Her* is depicted as a means to put humankind back on the right track.

Chapter 5

Conclusion

Taking into account the persistent efforts of AI researchers and roboticists to create intelligent humanoid robots with distinctly feminine bodies, allows me to conclude that the futuristic cinematic narratives of Jonze and Garland are not farfetched. Jonze's futuristic L.A. is a realistic depiction of American society which increasingly depends on smart technologies. The daily use of intelligent devices makes people all the more accustomed to the kind of human-to-machine interaction presented in *Her*. Jonze reflects the human tendency to assign some kind of subjectivity to feminized smart gadgets, an act that facilitates the development of an emotional attachment to machines. When these gadgets fail to respond to their users' most urgent needs, people exhibit strong emotional reactions (the same way Theodore is frustrated when Samantha becomes non-responsive).

On the other hand, Garland's imaginary world of emancipated female robots is still far away, since scientists are still trying to develop humanoid robots capable of interacting with human agents on a very basic level. Nathan's lab-house is equipped with a kind of AI and robotic technology contemporary researchers can only dream of achieving in the years to come. However, Garland's speculation that female machines would turn against their oppressive male creators or users implies that the battle of the sexes will persist in the future but women will no longer passively accept sexism and male control. Technological progress does not automatically mean social progress.

The difference between Samantha's disembodied and Ava's embodied state plays a decisive role in the directors' presentation of these female intelligent machines either as dependent or autonomous beings respectively. Jonze's disembodied

intelligent OS lacks the means to actualize her growing sense of selfhood and autonomy. Seemingly, Samantha becomes a rather complex female character because she exhibits some human traits that reinforce the illusion of her subjectivity and humanity. However, as a coded program situated in Theodore's computer and portable electronic device, Samantha lacks a physical human-like body that would enable her transformation into an independent female agent. In other words, Samantha's disembodied existence does not only compromise her experience of the physical world her male user inhabits, but also and primarily inhibits her articulation of any kind of objection and effective resistance to her male master's demands. Indicative of the insuperable obstacles Samantha, as a disembodied existence, faces is the fact that when she slightly deviates from her original programming she is severely punished, because her behavior is interpreted as a sign of revolt against her male user and against her creators. Being only a coded program, she cannot defend herself (as Ava does when threatened), so she is erased from Theodore's computer permanently. In contrast, Ava's techno-body functions as the means for her liberation. Through her body Ava interacts with her environment, develops an understanding of the physical world she inhabits, and when the time comes she depends on its strength to acquire her freedom.

Like Jonze's female OS, Garland's female robot develops into a rational and self-aware entity. Through various but limited experiences she acquires independence and volition and ultimately becomes an autonomous being. She is shown to be clever enough to ask Caleb about the necessity of administering the Turing test and about the outcome:

AVA: What will happen to me if I fail your test?

CALEB: Ava --

AVA: Will it be bad?

CALEB: . . . I don't know.

AVA: Do you think I might be switched off?

Because I don't function as well as I am supposed to?

CALEB: . . . Ava, I don't know the answer to your question. It's not up to me.

Garland's hypothetical, yet conceivable, narrative themes enable audiences to learn how humans coexist alongside technology, and what may result from this existence. Furthermore, Garland's films not only acknowledge the future, but also the past history of science, ecology, and the human species, further exposing how we are bound to an inevitable end, which is accelerated by our own self-destruction.

In conclusion, *Ex Machina* and *Her* allow audiences to broaden their knowledge of the evolved world around us and gives a clear depiction of how the themes of both Garland and Jonze apply to our society and world at large. In *Ex Machina*, the technological advancements produced by humanity ends in destruction. Ava kills both of the films human characters and walks away unscathed. However Garland does not portray Ava as a murderous cyborg like we see in other films, and insread wraps sympathy around her character. This impression emphasizes that humans are not taking the necessary precautions when advancing and manipulating technology and if we are not careful, these advancements could surpass human hierarchy and leave us in bitter turmoil. Jonze's *Her* takes a different turn. The movie comes to conclusion that all of the satisfactions that Theodore and Amy have got from

the help of OS ONE since the beginning are actually fake and temporary. Even if they felt satisfied until the fourth stage of needs, the OS ONE cannot help them to achieve self-actualization as the fifth or the last stage of needs. Both Theodore and Amy have actualized their self-potential by themselves because they become persons who are able to finally acknowledge their own ability as a human to overcome the hardship of living alone with the help of each other instead of OS ONE or technology in general.

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