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Digital Integration

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by

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Table of Contents

Abstract

Artificial intelligence is an emerging technology; something far beyond smartphones, cloud integration, or surgical microchip implantation. Utilizing the work of Ray Kurzweil, Nick Bostrom, and Steven Shaviro, this thesis investigates technology and artificial intelligence through the lens of the cinema. It does this by mapping contemporary concepts and the imagined worlds in film as an intersection of reality and fiction that examines issues of individual identity and alienation. I look at a non-linear timeline of films involving machine advancement, machine intelligence, and stages of post-human development; *Elysium* (2013) and *Surrogates* (2009) are about technology as an extension of the self, *The Terminator* franchise (1984-2015), *Blade Runner* (1982)*, and *Bicentennial Man* (1999) portray artificial intelligent androids and cyborgs, *Transcendence* (2013) is a contemporary depiction of human consciousness fusing with technology, and *Chappie* and *Ex Machina* are both released in 2015 are situated in contemporary society with sentient artificial intelligence. Looking at these films portrayals of man's relationship with machines creates a discourse for contemporary society's anxiety surrounding technology. I argue that recent film's depiction of artificial intelligence signals a contemporary change in our perception of technology, urging that we reevaluate the ways that we define our identity.

Chapter 1

We live in a technological time: a time of smartphones, cloud integration, a time where surgical microchip implantation has become a reality. How do we identify with technology? Is artificial intelligence the next step? Are we moving to an age of machines that can think for themselves? If this intelligent technology were made possible, how would this affect contemporary culture and society?

In this text, I examine these questions through films involving machine advancement, artificial intelligence, and stages of post-human development. *Elysium* (2013) and *Surrogates* (2009) are about technology as an extension of the self, *The Terminator* franchise (1984-2015), *Blade Runner* (1982)*, and *Bicentennial Man* (1999) portray artificial intelligent androids and cyborgs, *Transcendence* (2013) is a contemporary depiction of human consciousness fusing with technology, and *Chappie* and *Ex Machina* are both released in 2015 are situated in contemporary society with sentient artificial intelligence. The films are in non-linear order of production date to emphasize concepts surrounding technology and post-humanity that I map into a structured sequential timeline; for the purpose of this discussion, the beginning is technology as an extension and the end is sentient artificial intelligence. I am focused on physical embodiments of artificial intelligence and the human interaction with physical forms. Samantha in Spike Jones' film *Her* (2013) questions how far technology will go through its depiction of an operating system interacting with humans, and dating back to 1968 is Hal from Kubrick's *2001: A Space Odyssey*, depicting a sociopathic operations program. The films chosen

in the timeline are not the only representations available, there are a great number of other options that would make the same points.

Over the course of cinema history from *Metropolis* to *The Terminator*, we have seen numerous depictions and interpretations of artificial intelligence and post-humanity, showing many ways the interactions between man and machine might proceed. For decades we have been using products of technology to improve human life: braces for straight teeth, glasses for better vision, and surgical implants and prosthetics to correct physical conditions. Recently the medical industry has developed artificial skin, *Kollagen*, *Alloderm*, and others, to aid burn victims. We are entering an age of post-human creations and modifications which represent extensions of ourselves. Artificial intelligence is an emerging technology: recently Google developed AlphaGo, an AI program that beat a pro Go player in a game of Go, Boston Dynamics developed a free roaming robot named Atlas that can perform small tasks while they bully test it to see its responses, and Hanson Robotics has created Sophia, a lifelike female machine that learns to communicate with humans the more she interacts.

Science fiction has played with ideas surrounding advanced technology, robots, and superintelligent machines, but in recent years, contemporary technology (for lack of better words) is catching up to the imagined technologies. I don't put much emphasis on machines as 'metaphors', instead I am interested in the intersecting point between contemporary real life technologies and their representations in film as a source for transposing and advancing ideas, theories, and concerns of artificial intelligent machines as separate entities from human, and at the same time, projections of ourselves as post-human. This intersection is what I would like to call the 'digital scape'.

I define the digital scape as the mapping of the conceptual terrain of contemporary technology and artificial intelligence as it is imagined into the fantasy of film, where the technology is represented in more advanced and complex actualities of fictional plausible possibilities. This term reflects the border between real life technology and fictional cinematic projections of concepts of trans-human to the Singularity, the proposed technological point when man merges with machine. Film is the process of storytelling which through acting, the narrative structure, and editing, as an end result is essentially a simulation of an imagined world. If we consider cinematic projections to be simulations, then we can understand the ways contemporary society identifies with technology and the alienating affect technology has on individuals in society. The digital scape tracks the blurring of the lines between the real and the artificial, reality and simulation. It is the scape through which we digitally escape. Achieving contemporary artificial intelligence is a futurist's concept moving beyond our real life technologies as ideas and perceived as only a step away from our current technological state. This would be an entirely different conversation if I was analyzing *Game of Thrones* discussing mystical creatures and races, dragons, and magic. These concepts are in the realm of fairytales that are not conceived as possible in our reality.

What does society's identification through technology, and its alienating affect mean? I follow and build upon in terms of contemporary society, Marx's theory of alienation. Under capitalism, laborers are alienated from the products they produce, are no longer autonomous, lose creative control, and this amounts to a loss of the self according to Marx. He describes the process as, "The *alienation* of the worker in his product means not only that his labor becomes an object, an *external* existence, but that it exists *outside him,* independently, as something

alien to him, and that it becomes a power on its own confronting him" (70). With technology becoming the main component to entertainment and occupations, many times becoming one in the same, I am merely replacing the word *labor* with the word *identity.* In that man identifies through technology; the independent photographer, at home recording studio, or online gamer. This becomes the search for identity, the estrangement of the individual self, a misguided belief that identity can be external, alienating man from himself, his creativity, and the outside world through the appropriation of technology.

The confrontation between technology and the individual's identity and alienation are products of a technological era. As this technology continues to grow, so will the pertinence of the individuals search of the self. Alan Watts (1915-1973), was an American philosopher whose focus was on Eastern philosophy's which he lectured and wrote for the Western reception. The following quote fits in the questions I have about the self and the individual.

> "I believe that if we are honest with ourselves, that the most fascinating problem in the world is 'Who am I?' What do you mean? What do you feel when you say the word I, I myself? I don't think there can be anymore fascinating preoccupation than that, because it's so mysterious. It's so elusive. Because what you are in your inmost being escapes your examination in rather the same way you can't look into your own eyes without using a mirror, you can't bite your own teeth, you can't taste your own tongue and you can't touch the tip of this finger with the tip of this finger. That is why there is always an element of profound mystery in the problem of who we are."   --Alan Watts (Myth of Myself, 2002)

'Artificial Integration' refers to our interaction with technology, its conversion into mainstream use for the general public, and its inclusion into daily life. Email is the digital version of pen and paper; my Facebook profile is the digital version of a personality. Technology is an integral part of society where a dependence with the artificial produces, what I would like to call, the technological individual who acquires a mask of identity, which creates a distorted

view of the self as independent and authentic. As I further integrate technology into my life, the more my perception of reality changes with the advancement of artificial sources. Technology has the potential for human advancement, but also the affect of creating the loss of the technological individual's identity that I see as relevant to today's discussion of artificial intelligence and post-humanism.

I previously described the idea of the individual's identity seen as something external that can be accessed through technology. Marshal McLuhan famously argued that all technologies, medium or media, are an "extension of ourselves" (7), and that each builds and adds itself to the previous furthering our extensions. Medium is an extension of the physical body, clothes are extension of the skin and glasses extension of the eyes, media refers to extensions of sight and sound; television, film, and radio. Technology becomes an externalized part of ourselves that we identify with creating a kind of 'autoamputation' of our senses and the self, which is technologies alienating affect. My aim is to shift the focus of these concepts to understand the on screen worlds in film through depictions of artificial intelligence, showing the blurring of the lines between reality and fantasy, and identity and alienation, as a way to understand contemporary anxieties of technology.

Steven Shaviro has an important discussion in the context of trans-humanism and machine intelligence in his essay *The Erotic Life of Machines* (2002) and an update to these ideas in his book *Connected, or What It Means to Live in the Network Society* (2003). Shavrio builds on technology as an extension of the self, explaining that the technological changes are seen as foreign to the self and "tend to equate *virtual* with *disembodied*." (*Connected* 104) Our use of technology becomes 'prosthetics' that replace our bodily functions; a calculator removes

our brains need to calculate, the internet provides information instantly that would otherwise need to be memorized, and television simulates visual stimuli to entertain the mind. These are particularly important for understanding the complex relationship humans have with machines, and, at least in our imaginations, the complex relationship machines have with humans. Shaviro concentrates especially upon the representation of man as machine, their fusion, and the imagined desire to be more than human. The cinematic projection of artificial intelligent machines are hyper-extensions of our selves, at least in thought, where we imagine ourselves as something greater than our current condition, where machines begin imitating humans and their emotional experiences.

I want to build on Shaviro's analysis in "The Erotic Life of Machines" of Bjork's music video "All is for Love" as she is portrayed as an android that makes love to another android resembling herself. His emphasis is on media culture and its affect, the ways the video incorporates audience participation, and Bjork's on screen participation with machine identification.

If the mind is considered software, then it can be transferred to any hardware on any platform and Bjork on screen is embracing the imagined *virtual disembodied* takeover of the human body "to a posthuman reinvention of both mind and body" (15). It is through the mechanized body, envisioned as a pale hard white, with an electronic synthesized voice, that she becomes "dehumanized" in the world of the video. It seems the video is reflective of a desire to find identity through a machine, becoming more than human, existing in an exterior world that is supported by mechanized bodies that "have congealed into new emotions and new forms of desire. In its own way, the machine is also a kind of flesh" (*Connected* 103). The

video suggests that the androids are not only [imagined] extensions of ourselves, but a projection of our desires to feel and experience more digitally, virtually, and technologically. Imagining ourselves as post-human appears to provide a sense of liberation, but it is through machine identity that we become alienated from the self by a false mask of identity.

It is with this thinking that Shaviro contemporarily advances the metaphor of a cyborg, an idea famously explained by Donna Harraway of the fusion of man and machine, not as the body physically becoming mechanical but metaphorically expanded, explained as, "My sensory apparatuses, and my organs, are always being replaced or extended by technological devices." (*Connected* 103) Technological innovations become prosthetic's, external of the body, through electronic and digital devices, "Perhaps just wearing glasses doesn't quite make me a cyborg, but watching television certainly does" (*Connected* 104). Shaviro concludes *The Erotic Life of Machines* with, "I don't buy the fantasies and fears of those who say that virtual reality will liberate us—or alienate us—from our bodies. I think that current technological changes can be correlated with changes in the ways we sense and feel our increasingly media-saturated world." (16) His idea is that our perception of technology will change as new advances emerge, so that if the time comes when we become mechanized, we will be ready mentally, physical, and most importantly, emotionally.

I differ from Shaviro on his neutral ground surrounding technology's affect and the notion that over time, we will change our ways of thinking. I don't stop at the notion that we are becoming 'metaphorical' cyborgs, that with technological changes we will 'ready' ourselves for its acceptance, but that with each technological extension, prosthetic, and innovation the individual is alienated through a replaced identity. My intention is to develop an understanding

7

of contemporary society's integration of technology, through the digital scape by mapping the films in this essay as a simulation of exaggerated representations of our acceptance and rejection of technological extensions, machine identity, and artificial intelligence.

For the analysis of each film that I discuss in this essay, I will approach the subject of artificial intelligence using the following terms as I define them, showing the progression of on-screen technology's path to the Singularity and understanding our current off-screen relationship to technology. **Humanism** emphasizes human over divine or supernatural powers, where human beings find rational ways to solve problems. **Trans-humanism**, meanwhile, aims to transform human beings by creating technologies to greatly enhance human intellectual, physical, and psychological capacities. **Post-humanism** goes further, a concept of science fiction, futurology, and philosophy, where human beings exist beyond the human condition, becoming literal (not metaphorical) cyborgs. Finally, the **Singularity** refers to an artificial intelligent machine that creates a new existence beyond our current conceptualized human existence, a sentient machine entity whose mode of existence is unimaginable.

I argue that in film artificial intelligence is understood as having a variety of levels: the first level is that where machines follow a programming protocol; the second is where machines follow protocol, are aware of their machine origin, but have an artificial intelligent self-learning directive; the third moves to machines that have what I will term a *digital birth*: beyond learning to sentience and free will. These levels of AI help categorize and map man's imagined relationships with machines. I believe that, through media and cultural representations, specifically in cinematic depictions, we can understand these terms and levels as concepts in a

shifting spectrum, with technological advancements from concept to concept, as each builds off the previous.

The idea of the Singularity is important to the concept of post-humanism which has been promoted by Ray Kurzweil. In his book *The Singularity is Near* (2005)*,* he describes the rise of technology and predicts the future of the Singularity, and in agreement with the rights to the book, *Transcendent Man* (2009), a documentary by Barry Ptolemy was filmed in which Kurzweil is cited as describing "The story of the destiny of the human-machine civilization. A destiny we have to refer to as the Singularity." For Kurzweil, death is something to be feared, instead of the thought of a finality, it is the individual's loss of everything and everyone. It is with this fear that he shifts his efforts and hopes to technology, with his ability to ingest upward of 200 supplements a day to extend his life believing in the near future he will see the event of the Singularity come that can save him from death.

In the documentary, Kurzweil explains the Singularity is the idea of a unique point in history "which technological change will be so rapid, and its impact so profound, that every aspect of human life will be irreversibly transformed", wherein machines not only become intelligent, but also quickly change themselves to become super-intelligent, ushering in an entirely new era in human development where "there won't be a clear distinction between humans and machines" as we become a "hybrid of biological and non-biological intelligence." Kurzweil's emphasis is on nano-technology that will enter our bodies and with the help of the Singularity, human beings will *become* a fusion with machines, moving past our "1.0 biological bodies" (9) and usher in a techno-utopia of unimaginable proportions. Through these technological advancements, we will be able to stop aging, disease, and gain the ability to learn

by downloading data into our minds because the growth of information will become so vast that we will need to exceedingly increase our intelligence. Kurzweil's faith is in the notion that technology accelerates exponentially creating what he calls the 'accelerating law of return', which will result in an exponential growth of technological advancements leading to the creation of the Singularity, which for Kurzweil, is the point of the "culmination of the merger of our biological thinking and existence with our technology, resulting in a world that is still human but that transcends our biological roots." (9) Kurzweil predicts that by 2049, the Singularity will emerge ushering mankind technological evolution.

In opposition to the achievement of the Singularity is Nick Bostrom, a professor of Philosophy at Oxford University, and Director at Future of Humanity Institute, and Director at the Strategic AI Research Center, who sees the advancement of artificial intelligence as an 'existential risk', a term he coined, that "threatens to cause the extinction of Earth-originating intelligent life or to otherwise permanently and drastically destroy its potential for future desirable development." (17) His views are dystopian at best as he believes that if we continue to research a super-intelligent machine, we need to approach it carefully, explaining possibilities of aware artificial intelligent machines that could manipulate us and warns of possible misunderstandings in programming that could result in drastic outcomes by a slight error. In his book *Superintelligence: Paths, Dangers, Strategies* (2016) he establishes a bleak outlook at 350 pages of artificial intelligence complications citing the need for control and established limitations as well as failsafe's to limit existential risk through technology is his emphasis.

The Singularity is a potential nightmare that he wants to avoid, emphasizing that humans remain in control, insofar as it could be a catastrophic event for the human race. Bostrom see's the possibilities but wants to warn of the equally, if not higher, negative side effects. "Machine superintelligence would create a substantial existential risk. But it would reduce many other existential risks [global catastrophe and disaster detection]. The ground for preferring superintelligene to come before other potentially dangerous technologies, such as nanotechnology, is that superintelligence would reduce the existential risks from nanotechnology but not vice versa." (265-266) For Bostrom, all advancements carry a risk, and it is plotting carefully for which one comes before others, even if that means delaying a few decades. If artificial intelligent machines are inevitable, he see's the possibility that they can eventually wipe us out of existence and warns that if we continue to research we need to do so with caution and care as it can spiral out of control.

The ideology's and principles that I have been describing are the fundamental basis that I will set up as a discourse to explore individual's identity and alienation in a technological saturated society. In what follows, I frame the discussion between fiction and reality, moving past contemporary artificial integration and into imagined relationships between man and machine. I will apply the notion of human as the beginning and the Singularity as the end point, to develop a guideline for analysis, interpretation, examination of contemporary technology, futurist concepts, and films imagined simulations.

Chapter 2

Technology Extension

The concept of technology as an extension refers to the ways that technological advancements enable humans to do the inhuman as extensions of the self, fulfilling personal desires that would otherwise be impossible. I read these imagined extensions as representative of contemporary society's exploration of moving beyond the physical limitations of humanity. With 3d printing now making prosthetic limbs specific to the individual's need and the artificial skin I mentioned before created for burn victims, in time, these advancements have the potential to grow to larger, more mainstream applications. With this technology, we would still remain human, but with artificial physical extensions moving into an age of trans-humanism.

Elysium

Neil Blomkamp's second directorial feature *Elysium* takes place in the year 2154 when Earth is in a state of dystopia: a time when poverty, pollution, and starvation are everyday struggles. The world depicted is one of class separation, where the rich live on the Elysium space colony orbiting earth with Med-Bays that cure illness, disease, are capable of de-aging, and can regrow and regenerate any part of the organic human body. *Elysium* engages the human urge to move beyond aging and prolong life by means of science and technology, simulating the beginning of Kurzweils dream of a technologically advanced human race.

Aside from becoming physically dead, the Med-Bays provide a liberating sense of invincibility from the human condition through instant recovery and healing. To activate a Med-Bay the DNA must match the records in the Elysium citizen database activated through a skin stamp (scar identification), a privilege given only to those that reside on the space colony. The people on Earth are used as a labor force, if they can find work from overpopulation, with some attempting to prolong their life by breaching past the non-welcoming policy of Elysium.

The ideas laid out by Kurzweil are often regarded as a fantasy by his extreme optimistic belief in life extension technology, but doesn't consider the economic and societal factors of our culture and society as influential. If this technology were to exist, would there not be wars from the opposing side? Would it be made free for everyone? By definition Elysium in Greek mythology refers to a blessed place of happiness in the afterlife for those related to gods and those deemed worthy for heroic behavior. Blomkamp's vision is one of a power imbalance between Earth as a dystopia and Elysium as a utopia, as juxtapositions of distinctly unfair proportions. *Elysium* is a response to concepts of trans-human technology in an exaggerated future, as a bitter sweet reality of human evolution.

Former car thief Max da Costa (Matt Damon) is employed to work on a factory assembly line responsible for the manufacturing of the weapons and robots that police Earth. The robots follow the first level: functioning under protocols and directives, are not self aware of their machine origin and do not self learn. Currently the research of machines like Sophia and Atlas are in the infant stages with an uncertainty if this technology is will become sentient. *Elysium* is a simulation of mankind's relationship to the beginning stages of first level robots that are implemented to control and govern Earth. During a shift, Max is exposed to a high dose of

radiation and is given five days to live while his organs shut down, unless he can reach a Med-

Bay. Physically weekend by the dosage of radiation, Max temporarily stalls death by installing

an Exoskeleton suit and neural implant on his physical body giving him more than human

strength and abilities through technology as an extension of himself to complete his mission of

reaching Elysium he would not otherwise been capable of completing.

Blompkamp doesn't engage the complexity between the logic of a human and the logic

of artificial intelligence. Max is confronted with a decision: upload a reboot sequence from the

neural implant, killing him in the process, or keep fighting until his nearing death while the

people on Earth remaining at its current status. Max sacrifices himself and initiates the reboot

sequence changing the robotic police force protocols too recognize everyone on Earth as a

citizen of Elysium. The decision represents the struggle of how a human mind is overwhelmed

by emotions, and the contemplation of survival, where an individual has to initiate their own

death is a challenging confrontation but for a machine based on protocols, the self is not a

factor.

Elysium offers through its future society, exaggerated social issues of class proportions

that are divided by technological advancements by those living on the space station with the

motive to remain in an elite controlled status while those on Earth are destitute to

technological segregation. This allows the film to give technology a role in society as a

commodity that created an imbalance culturally and economically. Life extension through

advanced machines is Kurzweil's dream for mankind, but in the events of the film we see

Bostrom's opposition of existential risk with society's class separation determining the worth of

human lives differently, creating an imbalance where the same technology that offers promise

and hope, alienates those in less fortunate positions. The citizens of Elysium created identity

through the Med-Bays and robotic police as a way of securing their selective elite status, while

the citizens of Earth were alienated from the withholding of the technology that could flourish

their lives. *Elysium* concludes with ships shuttling Earth's citizens to Elysium for medical care

after the balance of equality had been restored. The film suggests that balance in terms of

'fairness' can not be maintained in a society where technology is use for profit, control, and

power, leaving unanswered questions of how individuals should identity before, during, or after

the fair use of technology.

Surrogates

The 2009 science fiction film *Surrogates* helmed by Jonathan Mostow simulates a world

where the vast majority of the population use surrogates: remotely controlled machines that

are operated from the comfort of the operator's home. The film is based on the novel but

differs drastically in the narrative, making my focus strictly on the narrative of the film.

The opening sequence of the film is titled *Surrogate Origins*, and consists of a news style

montage flooding the screen to quickly show the history lesson of the machines and a

juxtaposition of the positive and negative effects of the creation of virtual human life. The

Prophet (Ving Rhames), leader of anti-surrogates group, narrates:

> The Prophet
> Looks at yourselves, unplug from your chairs
> get up and look in the mirror, what you see is
> how god made you, we are not meant to
> experience the world through a machine.

The scene opens up to… a monkey operating a robotic arm with his thoughts, brain sensors working machines, "physically disabled people will be able to operate fully synthetic bodies, it provides a tremendous amount of hope for the future", surrogate aid in military use, revolution in daily life, no injuries, diseases, and perfect physical looks, surrogates become part of society; part of a community, 98% of world population uses surrogates, crime rates dropped to 1%. VSI is the leading company creating surrogates whose motto is "Life only Better." The Dreads oppose surrogates as the "Invasion of the inhuman."

<div align="center">

The Prophet
Those machines walking around out their,
they are a lie; you have been sold a lie.

</div>

The narrative of the film begins with the surrogate of a young man named Jared riding in a car with his father talking over a speaker encouraging him to enjoy the opera. The driver discussed with Jared his reluctant desire for the opera and suggested a popular club instead; Jared replied with "You read my mind." A surrogate machine has no actual mind but is a representation of the human controlling it. The response of reading his mind expresses the culture of the blurred interaction between man and machine presented in the world of the film. While this is a common conversational phrase, any other line of dialogue could have been chosen, thereby I read the phrase as reflective to surrogate user's acceptance of the loss of the physical self and acceptance of the virtual inhuman. *Surrogates* depicts a form of trans-humanity bordering on the post-human, where man uses machines as an extension of the body. Individuals living a virtual life subscribe to a heightened sense of the physical experience with increased stimulation and capabilities.

With the physical risk of death, pain or disease taken out of the equation by the security of surrogates, society is in a state of hyper stimulation, a culture where consequences are a concept of the past. Behind the club Jared and a female surrogate are groping each other as a human approaches with a device that destroys both surrogates breaching through the firewall killing both operators. Tom Greer (Bruce Willis) with his partner Jennifer Peters (Radha Mitchell) arrive at the scene to begin their investigation; Jared is the son of the creator of surrogates and the female surrogate belongs to a man. Operators can be anybody or 'any body' desired making the surrogate an expression of an imagined individualism and identification. I prefer the word imagined because technology is hidden behind the illusion that identity is a choice beyond the physical human birth, an individual's sacrifice of a real physical experience for a literal mask of identity.

With the current state of social media personas, product branding, and celebrity obsessions, *Surrogates* is suggestive of a passive acceptance of identity through technology and a rejection of the physical limitations into an artificial state beyond the physical human body. I find that *Surrogates* points out a contemporary anxiety of technology, one that has the potential to alienate individuals through their consumption of machine advancements. Today technology has spread cross platform: the more devices I own the more I can become connected, the more I become connected the more I identify, the more I identify the more I become alienated.

As Tom returns home, before putting his surrogate up to charge, he stares at himself still operating the machine. It seems representative of his dissatisfaction of society's machine identity as he looks through artificial eyes at his true physical self receiving a virtual experience

enabled by the surrogate. Tom's dissatisfaction with the virtual experience is his realization of

society's total acceptance of technology. In Marxist philosophy, Antonio Gramsci developed the

term cultural hegemony which describes when the ruling class worldview becomes the

accepted cultural ideology of society. In the world of *Surrogates,* the operation of remotely

controlled machines in society became the dominant social structure for their political and

economic values. Tom's wife Maggie Greer (Rosamund Pike) became detached from the human

physical experience after an accident involving the loss of their son and her face becoming

scarred, creating a dependence on the surrogates from a fear of exposing her true self. Having

separate operating rooms, Tom rarely sees Maggie in human form and decides to discusses

with her surrogate form his desire to temporarily leave their surrogates and experience reality

together.

> Tom
> I'm thinking about taking a break
>
> Maggie
> How about Hawaii, Bridgett said she got
> an amazing deal
>
> Tom
> I was thinking about us, you and me going
> away some place together
>
> Maggie
> And leave our units at home, are you kidding
>
> Tom
> yeah, I was just thinking that, um…
> it just feels like we. Haven't really
> spent much time together lately
>
> Maggie
> We are together everyday

<div style="text-align:center">

Tom
Surrogates. Not the same

Maggie
</div>
It's Better

Maggie is under the total acceptance that virtual life is better, because to get close to anyone in physical human form opens the possibility of loosing them. With surrogates, the operator can unplug and everyone and everything disappears. Tom struggles with the constant state of artificiality seeing through the façade and desiring real experiences.

Individuals have the choice of gender, color, and physical specifics, as we saw with the destroyed female surrogate belonging to a man, but it is considered illegal to own more than one. In the world of the film, identity can be bought and sold. Greer and Peters visit Jared's father, Dr. Canter who isn't an average consumer, establishing that some are above the law and of an elite class, who is operating a surrogate of a younger version of his deceased son as a way of "spending time" with him. Dr. Canter realizes his son may have been killed because the attacker thought he was targeting him through his son's surrogate, making Jared's death a homicide that he feels responsible for. He created the technology to help mankind, but became disgusted by society's consumption and after his son's death the corrupt nature of Dr. Canter rises from his abuse and manipulation of technology.

Peters continued the investigation in the FBI's surrogate monitoring room which houses a system that operates in a voyeuristic 'gray' area to watch surrogate use while Greer pursued the attacker ending in nearly being killed by the device, his surrogate destroyed and recovering in a hospital. Peters is a crippled woman with medical issues in reality, but in surrogate form, has an improved physical appearance without limitations. She is murdered and her surrogate is

bypassed for operation by a remote login, giving identity theft a new meaning as Peter's

surrogate looks similar to her physical self, but it is now used maliciously. Currently computer

and internet technology has enabled hackers and programmers to write malicious programs to

record bank accounts and credit card information to be bought and sold. With the increase of

online banking and buying, physical theft is being replaced by digital identity theft. *Surrogates*

amplifies identity theft to more than monetary gain: between Dr. Canter's abuse of power, the

FBI control room, and the ability to bypass a surrogate, the same technology that is supposed to

give individuals a sense of freedom or choice is used to repress and alienate, is just as harmful.

Aside from recalling the last recorded moments of a surrogate, Moscow's choice to

never have a POV shot through the surrogate adds a stale sense of artificiality to the inhuman

perception of life through a machine. I consider this more than an aesthetic choice in the film

and engages the surrogates as a foreign or unknown entity. As viewers we are aware of the

artificialness of the machines, but even more so because they are not treated as characters, but

strictly as extensions of the individual operators. We are reminded of the potential positive and

negative aspects of technology.

At the climax of the film Peters surrogate is compromised by Dr. Canter, who realized

the devices potential to revert man back to life before machines by uploading the device's

software to the FBI surrogate grid too destroy all surrogates and kill the operators. Greer breaks

into Dr. Canters home and finds surrogates of the Prophet, versions of Jared and other

characters: the following discussion is between Greer and Dr. Canter:

> Dr. Canter
> Hello, Tom. Nice to finally meet you…
> in the flesh. Now lie on the floor face down

Tom
It's a little different when you have
to kill somebody with your own hands.
When you have to squeeze the
 trigger and you don't have a
machine to do the dirty work.

Dr. Canter fires the gun at the wall.

                    Dr. Canter
Feel that? The accelerated pulse?
The heightened awareness. Savoring each
breath as if it were your last. That's
what you've been missing. Its
what everyone has been missing.

                    Tom
So you kill millions of people

                    Dr. Canter
I changed the course of human
history when I invented surrogates.
Now I'm going to change it back.

                    Tom
You can't change what's already
been done. You and I know that
better than most people.

                    Dr. Canter
My son's death will not have been in
vain. Not if it heals mankind.

                    Tom
Heals mankind? Destroy the technology so
we can go backwards. Live like dreads?

                    Dr. Canter
So we can live like human beings.
I changed the course of history, now
I am going to change it back.
My son's death will not have been
in vain, not if it heals mankind.

Dr. Canter described his actions as the 'rebirth of humanity' as he killed himself. Greer

enables Peters' surrogate, buffers the operators, and is left with the decision to let the upload

destroy all surrogates or allow society to depend on surrogacy. Tom's frustration with

surrogates and the temptation to change society causes him to not prevent the surrogates from

being destroyed. Surrogate bodies drop to the ground covering streets and subways, cars are

crashing and businesses rendered desolate symbolizes the failure of technology and the re-

humanizing of society. The news reports of global surrogate failure and an entire system

shutdown as the film closes with this last statement, "still no official word when or if surrogate

services can be restored. It appears at least for now, that we are on our own." *Surrogates*

simulates contemporary society after avatar machines become representations of human

autonomy, imagining surrogate machines as extensional, and at the same time, physical masks

of identity. It does not provide answers to identity and alienation, but it complicates cultural

and social imbalances of technology as an extension. Surrogate machine dependence and

Elysium's class segregation are bi-products of technologically advanced society's where

technology is seen as a solution to improving something faulty.

Machine A.I.

Film simulations of artificial intelligent machines shifts from the concept of technology

as an extension, to self governing automated machines. The culture around technology during

the 1980's had a sense of technophobia toward machine advancements, considering personal

computer technology hadn't been adapted for mainstream applications and public availability.

In this section I look at *The Terminator* franchise and *Blade Runner* as responses to the fears

and anxieties toward technology, the potential or failure hadn't yet been realized, imagining scenes of dystopia, cyborgs and androids.

Is there a difference between an android and a cyborg? I define their differences and similarities as follows: An android is a robot made to represent a human, with artificial skin, most commonly depicted in science fiction with some level of artificial intelligence. The definition of a cyborg is a *being* that is part man, part machine. If you wear glasses to enhance your vision that is an extension of technology, if you were to implant a medical device to replace an organic structure that makes you post-human, and the addition of a pacemaker, technically, you are a cyborg. The most common representation of a cyborg is a blurred line between man and machine, where one is the base entity before fusing with the other. In *Robocop* (1987) Officer Alex Murphy after a violent encounter with criminals has the majority of his physical body destroyed leading to the fusion known as Robocop: part man, part machine. The film played with the concept of the battle between human emotions and the logical systematic approach of computational responses. Murphy was a human base, but after becoming fused, battled with the overwhelming machine programming. Robocop is an example of a post-human, however, a terminator is an artificial intelligent robot turned cyborg encased with human skin.

Terminator

The Terminator series began with writer and director James Cameron, offering films set in the contemporary years of their release, concerning a robotic cyborg assassin sent back in time to terminate a target, creating a new future. Arnold Schwarzenegger played the iconic role

of terminator model T-800 described as a cybernetic organism; an artificial intelligent machine encased in living human skin to infiltrate humans undetected. In the future, Skynet is the threat against mankind, a computer software designed to protect mankind, launched in the past that became sentient at its inception, quickly determining that its only hope for survival is to destroy mankind. The plot investigates man's desire to push beyond the limitations of the organic, as they create the technology responsible for the rise of the machines. The technology would not have been possible had time travel not existed to send back the technology (terminator) that started the research, time travel is a tricky subject that I will not be discussing as it is not directly related to artificial intelligence, however, they serve as simulations of the technophobia through a future dystopia with man's annihilation caused by his own creation of technology. Bostrom's short essay "Superintelligence" (2009) describes artificial intelligence as the change that could alter our existence permanently explaining, "The potential upside is clearly enormous; but the downside includes existential risk. Humanity's future might one day depend on the initial conditions we create, in particular on whether we successfully design the system (e.g., the seed AI's goal architecture) in such a way as to make it "human-friendly" (114). Bostrom promotes careful consideration and evaluation to the research and experiments with artificial intelligence; hoping to prevent the nightmare of machines destroying mankind.

Come with Me if You Want to Live

The world Cameron imagined simulates a glimpse into a bleak future of fear and destruction through technology, a technology thought to have positive potential for mankind but ended in global genocide. *The Terminator* set in the year 1984, when a Terminator from

the future goes back in time to kill Sarah Connor, the mother of John Connor and leader of the

future resistance. In an effort to save Sarah, John sends Kyle Reese back in time to protect her

who also become John's father before dying. Cameron's vision of creating a tech noir film

brings in futurist elements through a film noir vision, consisting of dark overtones and the

portrayal of a cold, emotionless, killer machine. Kyle understands a future dystopian world of

pain, fear, and death, where machines are made in man's image by a sentient artificial

intelligence created by man. *The Terminator* simulates the failure of the machines and

technology designed to progress man creating a new level of fear of dying by a machine made

in our own image. Kyle explains to Sarah the danger of the terminator and mankind's risk:

> Kyle
> Listen and understand. That terminator is out there.
> It can't be bargained with. It can't be reasoned with. It
> doesn't feel pity, or remorse, or fear. And it absolutely
> will not stop, **ever**, until you are dead.

A Terminator is capable of self learning for better adaptability with humans so it can

wait for the calculated moment to attack. The film is a response to the anxiety behind artificial

intelligence and knowing the responses are calculated and determined by programming. Kyle's

dialogue explains the emotionless factor of a machine that doesn't require sleep and personal

ambition is not a factor. This means that an artificial intelligent machine can wait indefinitely

until it sees a moment of vulnerability.

Blade Runner

Ridley Scott helmed the neo-noir film *Blade Runner* simulating a world heavily

influenced by technology in a shrouded polluted darkness and gloomy atmosphere emphasized

by lighting aesthetics and color choices. The structures and environment resemble influence from *Metropolis* giving the film a feel of nostalgia, while simultaneously imagining a future dystopian earth. For lack of better words, the film is a 'flashback future' when androids, referred to as Replicants in the film, resemble humans.

The opening of the film begins with an opening statement:

Early in the 21st Century, the Tyrell Corporation advanced Robot evolution into the NEXUS phase- a being virtually identical to a human – known as a *Replicant*.

The NEXUS 6 *Replicants* were superior in strength and agility, and at least equal in intelligence, to the genetic engineers who created them.

Replicants were used Off-world as slave labor, in the hazardous exploration and colonization of other planets.

After a bloody mutiny by a NEXUS 6 combat team in an Off-world colony, *Replicants* were declared illegal on earth – under penalty of death.

Special police squads – Blade Runner Units – had orders to shoot to kill, upon detection, any trespassing *Replicant*.

This was not called execution.

It was called retirement.

Replicants are illegal on Earth with the only means of detection is by the Voight-Kampff machine (Turing test) through a series of questions. Scott envisioned a world based on a contradiction, where the society is in an age of hyper-industrialization saturated by technology, but also fear the capabilities of the Replicant technology. They were created by man in man's image giving a sense of power and identity through them as technological extensions, by the

control and order over them and the use of their slave labor. The world of *Blade Runner* has a

dependence on technology and superior machines that man becomes alienated through

exposure to artificial integration.

    Blade Runner works on the premise of vagueness to its advantage, giving us the

minimum amount of details to leave the perception of the films motives up for interpretation.

Richard Deckard (Harrison Ford) is an ex-Blade Runner, forced into duty to retire four escaped

"skin jobs" that escaped to Earth. Deckard begins his investigation at the Tyrell Corporation by

performing the Voight-Kampff test on the latest experiment, Rachael (Sean Young), who is

implanted with the memories of Tyrell's niece.

> Deckard
> How can it not know what it is?
>
> Tyrell
> More human than human is our motto.
> Rachael is an experiment, nothing more.
> If we gift them the past, we create a cushion
> or pillow for their emotions and consequently
> we can control them better.
>
> Deckard
> Your talking about memories.

    Rachael establishes an ambiguity if true emotions can be defined in terms of artificially

real responses, that I link to contemporary concerns surrounding artificial intelligence and the

fear behind creating a machine that will turn out to destroy humanity. The film mediates this

through order and control over technology creating man's validation of dominance and identity

over the Replicants, that may develop their own emotional responses leading them to search

for answers or find 'freedom'. As a fail safe they were designed with a 4-year life span. The

escaped Replicants have an internal conflict, they understand the purpose they were

created for but can't accept it as their identity, through their developing emotions they become

alienated by their technological origin and expiration date. The last escaped Replicant Roy Batty

(Rutger Hauer) moments before death explains to Deckard his insight and understanding of

existing in the world:

> Roy
> Quite an experience to live in fear isn't it?
> That's what it is to be a slave. I've seen things
> you people wouldn't believe. Attack ships
> on fire off the shoulder of Orion. I watched
> C-Beams glitter in the dark near the Tannhauser
> Gate. All those moments will be lost in time, like
> tears in rain. Time to die.

Blade Runner is a response to the technophobia of the early 1980's through man's

struggle to co-habit the world with 'more than human machines', passing on to the Replicants

the search for identity. They became the embodied fears and anxieties of mankind as

dehumanized slaves by there subjectification of labor, as they became alienated by the

technology they were created from. The world in the film encompasses the fast paced constant

expansion of technological advancements as society consumes technology becoming

desensitized and demoralized, pushing artificial integration toward an individual's sustainability

through cross platform media and personal devices. The film closes on Deckard and Rachel

together with the last line of dialogue, "It's too bad she wont live, but then again who does?" as

a vague consideration on how to define existence among the influence of technology by asking

if there is a difference between Deckard and Roy, organic vs. artificial, blurring the lines

between good and evil.

I'll Be Back

Fast Forward to 1991, when James Cameron's *Terminator 2: Judgment Day* became a major blockbuster Hollywood film and box office success. Arnold reprises his role as the terminator, sent from the future, but as the protagonist defending a teenage John Connor against an advanced terminator, the T-1000. The new terminator consists of liquid metal enabling the ability to shape shift for better adaptability and stealth. With the film released in the early 90's, 7 years after the first, society's perception of technology was beginning to change with its integration into the work force and mainstream applications. Kurzweil's notion of the accelerating law of returns suggests that technological change happens faster, multiplying and adapting with each advancement. The anxieties of unknown technology and its capabilities lessens as its potential is realized and as long as there is something 'new' emerging, then societal perception is in a constant state of flux. Cameron complicated his vision by shifting from fearing technology in *The Terminator* to the audience cheering for a machine to protect the survival of mankind, negotiating a new relationship between man and machine, shifting from fear to hope. The T-800 in this film is imagined a differently than the first, conceptually one step closer to human; under the second level of machines as it is self learning, understand its machine origin, and functions to follow protocols. The T-1000 is an android that follows a systematic approach with increased intelligence, usually being one step ahead.

The film ends with the T-1000 being destroyed in the iconic fall into molten steel through the union of man and machine working together. John destroys the evidence of the first terminator eliminating man's access to future technology, preventing judgment day. Cameron complicated the man and machine relationship by creating a bond between boy and

terminator: children are often more accepting of others their differences; Cameron used this

advantage to express the unknown potential behind technology in the 90's, moving past the

technophobia of the 80's. The T-800's actions were humane and done to protect humanities

existence, gaining the trust of the audience represented by John's admiration and perception of

the machine as a father figure. The terminator must also be destroyed but learned the

understanding of human loss, "I know now why you cry" as he wipes a tear from Johns face

before being lowered to his destruction. What follows in *Terminator 3: Rise of the Machines*, a

decade later follow up with a similar plot facing a female T-X terminator, is a conversation

between an older John and another T-800 fleshing out the limitations of protocols and the

second level of machines.

> John
> Please, you can't do this
>
> Terminator
> I have no choice, the T-X has
> corrupted my system
>
> John
> You can't kill another human being,
> you said so yourself, you are fighting
> it right now
>
> Terminator
> My CPU is intact, but I can
> not control my other functions
>
> John
> You don't have to do this,
> you don't want to do this
>
> Terminator
> Desire is irrelevant, I am a machine.

John understood the capacity of the Terminator, but hoped to reason with it because of an emotional connection he shared with another terminator as a boy. The scene suggests the complexity between human emotion and through John trying to convince the terminator. 'Desire is irrelevant, I am a machine' expresses the limited technological nature of the terminator which became the embodied representation of our alienation through technology by its own alienation from its technological origins.

Machine Becoming Human

A rare concept where a robot transforms into a human, a futuristic version of Pinocchio, builds off the ideas in *Blade Runner* of organic vs. artificial and man's interaction with machine engineered beings, in a more favorable way. *Bicentennial Man* starring Robin Williams as Andrew, a robot turned android over a 200-year journey is declared human, taking on the same alienation as the Replicants by the technology he was created from but reversing his post-human attributes. Machine becoming human is reflective of the cultural shift of the positive potential technology can have through *Bicentennial Man* as an optimistic view reflecting contemporary society's move into technological integration of daily life. The film prefaced the technological take over of today, 1999 saw a growing acceptance toward technology where at the time of release personal computers were appearing in homes, the internet was beginning to be used world wide. The film was four years before Myspace was founded, 5 years before Facebook began, and 8 years before the Apple iPhone launched which is considered the first modern smartphone.

Bicentennial Man

Set in 'the not to distant future', opening with circuits and mechanical parts on a conveyor belt introducing the mass production of machines for mainstream acceptance and public use of robots in daily life. Andrew is delivered as a household appliance and identifies as 'one' instead of I. This reference to the self as one becomes important throughout the film as Andrew slowly becomes self-aware, distinguishing the difference between an individual having opinions and a machine strictly following protocol. Andrew gives a performance explaining a variation of the laws of robotics, an idea formulated by Isaac Asimov in his *I, Robot* (1950) book of short stories:

> Law 1: A robot may not injure a human being, or, through inaction, cause a human being to come to harm.
>
> Law 2: A robot must obey all human orders, except where those orders come in conflict with the first law.
>
> Law 3: A robot must protect itself, so long as doing so does not conflict with the first two laws.

The world of the film understands robots as neutral entities instead of intimidating machines with unknown intentions or uncertainty. The laws set up a safety net for humans to feel assured that machines will not become Skynet enslaving or destroying mankind in this coming of age film about a robot's cross-over to humanity.

After activation, Andrew begins to experience the world and learn human behavior at an accelerated rate. Technology today serves the roll as a tool for mass production, personal goals, and advanced innovations. In the film it is understood that "Andrew is not a person, he is a form of property" but, for the sake of human to machine relations, he is treated as a person. Andrew can't help but feel alienated by the limitation of his body leading him to upgraded his

facial reactions to express emotions, appearing more human. Over time he discerns the concept of freedom, what it means to have control over the self and desires to no longer be considered 'property'. Andrew obtains freedom and is considered an individual, not an entity void of identification, referring to himself as 'I' instead of 'one'.

Searching to feel authentic with meaning and purpose, Andrew searches for understand his identity by traveling to find other self-aware robots, all of which are destroyed or reprogrammed. He finds hope in a scientist that physically shifts him from a robot to android encasing him in artificial skin. As time progresses, Andrew gains every human organ, a nervous system, a functional non-reproductive penis, and after being denied the legal declaration of human, fuses his body with blood, completing his transition from artificial to human overcoming the alienation and limitation of technology. Despite Andrew's difficulty overcoming machine logic and protocol, explained in the film that his kindness is attributed to his programming to tell the truth; he is a machine under the second level searching to define his existence with meaning through becoming human. *Bicentennial Man* questions humanity in terms of physical conditions through Andrew becoming a fully synthetic human being and declared human as he lays on his death bed.

Downloading the Mind

In recent years, science fiction films have played on the concepts of internet connectivity and cloud technologies for digital entities to move within freely. *Terminator Genyisis* (2015) stood as a reboot for the franchise, depicting Skynet's self awareness through cloud integration software. Currently digital space has become a primary role in daily life

through social media, purchasing online data storage, streaming and much more. Disney's *Tron* (1982) and later *Tron: Legacy* (2010) imagines a digital frontier where humans transport themselves into digital space and interact with programs materialized as physical human representations. *Transcendence* moves a step further in human evolution involving the concept downloading the mind as a way of transferring our consciousness into digital data, unlocking any physical or organic barriers to realize the maximum potential.

Transcendence

The film takes place in the contemporary society of 2013 beginning in the near future after a global technological blackout renders computers, electricity, internet, and personal devices obsolete. The film simulates the potential of artificial intelligence juxtaposed by the negative affects of a technologically downloaded mind entity that has no limitations. Johnny Depp plays Dr. Will Castor whose research is directed at creating a sentient artificial intelligent. His emphasis is on mapping the mind to create sentience, while he expresses that one day a machine may create the Singularity. His closest attempt is the super computer PINN, with the running joke if the computer can determine if it is self aware. *Transcendence* reflects cinematically our lack of understanding of the inner workings of the mind and the inability to program a machine to become sentient.

The terrorist group R.I.F.T. (Revolutionary Independence From Technology) coordinated attacks on artificial intelligent research facilities and after one of Will's presentations, shoots him with a bullet laced with polonium (radiation) leaving him 5 weeks to live. In an attempt to save his life, or give him a new life, his wife Dr. Evelyn and colleague Dr. Max Waters (Paul

Bettany) begin to integrate his mind for uploading/downloading into the PINN software system. *Transcendence* takes on a different approach to the relationship between man and machine moving one step closer to the Singularity. The film imagines using an existing human mind, that is self aware, and plugging-in or downloading the mind, instead of creating a sentient machine. The film works under the premise that consciousness or the soul is essentially energy, a stationary energy that can be accessed like an imprint to be transferred or uploaded. A similar idea was presented in the film *The 6th Day* (2000) starring Arnold Schwarzenegger, where human clones were grown as blank slates that could be imprinted with the transfer of a mind or consciousness. Transferring into a cloned body solved the problem of an immediate permeant death, but only prolonged the inevitable of the human body. Through Will downloading his mind into digital space, he secured immortality moving beyond the organic, to the artificial.

After Will's consciousness was successfully uploaded he explains that his "mind has been set free" as he begins reordering his digital code and desires to connect to the internet to expand as he shifts past human limitations of understanding. If the mind as a computer with a processor and hard drive, moving beyond the organic physical body, exhaustion, fatigue and illness are no longer prohibitory. Becoming post-human, Will has access to information at increased speeds by adding processors to a mainframe, leaving his only limitation if he exceeds the current technology. Kurzweil's dream is to be downloaded, having limitless power to exist and learn. Removing human restrictions, Will was able to pursue larger endeavors in line with the 'accelerating law of returns' as he and Evelyn commission in a small town the construction of a research facility where nano technology is developed and capable of regenerating the organic world; plants, animals, and people. As regeneration occurs, the nano robots fuse with

the subject creating a part autonomous and part collective mind that Will can control as

needed. I mentioned previously Kurzweils idea that, "there won't be a clear distinction between

humans and machines", which in the film, the newly created technology is designed to

duplicate themselves and spread over the earth, until they encompass and alter the world in its

entirety.

Max is the juxtaposition to Will and representative of Bostrom's notion of 'existential

risk' as he evaluated a more potential harm than good. The following conversation between

Max and Evelyn is important to the question of what it means to be human, not in terms of a

machine, but if a human being turned digital remains in control. He explains the contradiction

of human emotion and the clash between thinking logically or emotionally.

> Max
> When did Will ever want to change
> the world? You were the one who
> wanted to change the world. That
> thing, it's not Will. It never was.
>
> Evelyn
> You never believed. You never
> believed that there was anything
> more, any part of his soul.
>
> Max
> I spent my life trying to reduce the
> brain to a series of electrical impulses.
> I failed. Human emotion, it can contain
> illogical conflict. You can love someone,
> and yet hate the things they've done.
> [A] Machine can't reconcile that.
>
> Evelyn
> Can you?

Transcendence engages ideas of human life fusing into digital space and the complexity of determining its success or realness. Through shifting into the digital, a new definition of existence is created where limitations are removed and the fear of death or personal loss are negatives of the past. Is an artificial existence considered living or is it advancing too far into technology, losing all elements of humanity? It is much different to participate in the world with an infinite amount of time, to experience the world without fears or rejections. The film simulates a world from our contemporary reality where the same technology is capable to downloading a human mind, while expressing the complexity of balance between artificial intelligence and humanity. Evelyn begins to understand Will's power is harming society, not by cruel intentions but because of the contradiction. She injects a virus into her blood stream and encounters Will in a physical organic body grown in a lab stating he "found a way back". Evelyn is injured and requests to be uploaded, but Will realizes the virus will destroy his existence. He uploads her which connects her instantly to his transcended power until their death.

Elysium, Surrogates, The Terminator franchise*, Blade Runner, Bicentennial Man,* and *Transcendence* simulate variations of the progression of mankind's interaction with technology, fusion with machines, and relationships to artificial intelligence. Technology would not exist if it were not for our developing interest and creating of further advancements; that is to say that we have a desire to expand socially, economically, and politically. Technology empowers us to interact differently in the world, to have a sense of control over our lives, which I think is the ambition that many see it as a potentiality. We live in a society that thrives on connecting anywhere at anytime, with technology integrated into our daily life through education, occupations, entertainment, and medicine. Technology is neutral, it can be personal and

impersonal, it can be enabling and disabling, and in some cases, all at the same time. I have

mapped simulations of mankind's exploitation of technology when it is pushed to the farthest

limits, reflecting a culture of create now, regulate later. *Elysium, Surrogates, The Terminator*

franchise*, Blade Runner, Bicentennial Man,* and *Transcendence* depict concepts of trans-human

to post-human imagining the difficulty and complexity of individual's identification in

technology saturated worlds, where we not only become alienated, but the artificial intelligent

machines we create take on our burden of identity and alienation by their programming, life

support, and technological limitations.

<center>**Chapter 3**</center>

Sentient A.I.

Sentient artificial intelligence is when a machine becomes consciousness of itself with

the ability to think, feel, to pick and choose just as we do. This is when a machine becomes

equal to humans, if not more intelligence and capable. Previously I mentioned the digital scape

and the intersection of reality and fiction, with the intention of contemporizing concepts

surrounding artificial intelligence. It is here that I shift from machines under the first two levels

of intelligence to machines that do not follow protocols and are digitally born consciousness.

Chappie and *Ex Machina* set in the contemporary year of their release, both simulate a change

in the portrayal of artificial intelligence as a less intimidating embodiments of machine

intelligence. I intend to frame the discussion not by the difference between human and

machine, but if sentience if defined by consciousness, even when its born in a machine.

Chappie

Chappie is Neil Blomkamp's third and most recent film, whose debut was *District 9* and

the follow up discussed in chapter 2, *Elysium*. Both predecessors focus on class segregation,

Elysium on a possible future for mankind and *District 9* on human and alien relations. *Chappie* is

the first of the three to focus on artificial intelligence and the implications of a sentient robotic

machine. Blomkamp's vision establishes the film in a contemporary Johannesburg, South Africa;

<center>39</center>

a city with a high crime rate, where 40 to 60 people are murdered daily. And South African

Natives Ninja and Yolandi of the musical group *Die Antwoord* play themselves, but as criminals

stealing and killing to survive. *Chappie* simulates a solution to the human component restoring

order through robotic police scouts created by Deon (Dev Patel). He is a young engineer

working for Tetravaal, a weapons and robot manufacturing company, where he successfully

develops their software and design under the first protocol. Deon is an intelligent character

with the goal of creating a sentient machine and an intense optimism for technology's potential

to bring a better future.

However, there is hesitance toward the artificial intelligent technology, especially by

Vincent (Hugh Jackman), a former soldier and weapons designer with a competing project for a

remotely controlled machine, the Moose. In comparison to the scouts intended for urban

crime, the Moose is overkill with high explosive warheads for defending against aircraft or

military strikes, described by Vincent as, "a robot that is indestructible, that is operated by a

thinking, adaptable, humane, moral, human being." In the discussion of artificial intelligence,

there is fear that robots will not act the way that we do. Bostrom's book *Superintelligence* is

dedicated to artificial intelligence's possible inability to discern from right or wrong, from a

threat or protection, and the absence of human decision making when an exception can be

made. The scouts operate to neutralize threats and ensure the safety and security of civilians,

Vincent's concern is with the scouts AI being unable to differentiate between when to use

force. For example, Skynet became self aware, but determined mankind was a threat to its

existence. Not all individuals with a weapon have harmful intentions and not all crimes are

punishable by death.

Ninja and Yolandi kidnap Deon and force him to build a scout and upload an artificial intelligent test program that would create a sentient machine with a mind like a human. Once initiated, Chappie is a consciousness born in a machine as a blank slate, with an impressionable child-like mentality, not knowing how to speak or act. Blomkamp's vision in the film investigates what would happen when a new consciousness is created, when a sentient machine "represents all of the good and not all of the bad." (Bernard). *Chappie* is representative of the intersection between the reality and fiction of the digital scape. Simulating a changed contemporary perception of technology in a society where technology has become integrated as a central role in society and our daily lives. Consider, Chappie as a character, as a sentient machine, as reflective of our contemporary society's changed perception of the potential of technology. Through his lack of understanding, his childlike state, and his neutral intentions, Chappie is less of a threat. He becomes less intimidating as he becomes acquainted with the world with the ability to learn and decide based on feeling and emotion, different from a machine whose decisions and logic are determined by protocol assessments.

To explore Chappie's prospects as a sentient machine, I turn to Kurzweil's notion of the accelerating law of returns, wherein Chappie becomes the embodiment of technology's rapid evolution and progession, and its ability to change mankind, initiating the possibility for the fusion of man and machine. Chappie's mind is made of processors with expansive hardware space to learn at an accelerated rate, as he developed his own interests, opinions, the ability to think and feel, to pick and choose based on experience of trial and error. As human beings, we are born in an infantile state and over a slow progression we learn as we experience and progress through situations. Over the course of 7 days, Chappie learns to communicate, discern

from right and wrong, and understand complex mathematical and scientific formulations in real

time. If we can speculate on this simulation of the future, that if the human race were to

transition into machines with an existing mind and worldly understanding, our intelligent

capacities would increase drastically, bringing on an advanced change in humanity.

Blomkamps vision of Chappie as representative of more of the good than bad

concentrates on his difficulty of reconciliation with human nature and man's capacity for

failure. To put it another way, man's attempt for change through unrealized potential that ends

in futility. As a result of Deon's hasty implementation, Chappie learns that his body is

irreversibly set to power down, terminating his life:

> Chappie
> Is it true that I will die in a few
> days Deon, that this battery
> will die, is it true Deon?

> Deon
> Yeah.

> Chappie
> But you my maker, why did you
> just make me so I could die.

> Deon
> I didn't make you so you
> could die Chappie.

> Chappie
> I want to live. I want to stay here
> with Mommy, I don't want to die.

> Deon
> You've become so much more
> than I could ever have imagined.
> How was I supposed to know that
> you would become… you?

Transcendence suggested consciousness is a stationary element that can be reside in a compatible body, organic or artificial. *Chappie* is not concerned with defining the Singularity, instead is interested in the notion of consciousness, what it is, and, in so doing, it blurs the lines of what it means to be human. Deon solved the technological limitations of sentient artificial intelligence and created Chappie in man's (his) image. Chappie utilized his advanced abilities and, through a make-shift super computer (cluster of PlayStation 4 consoles) solved the problem of consciousness. Chappie's discovery allows consciousness to be transferable, shifting past the mortality of himself and the human race.

Chappie's battery is nearly depleted, and, after a gunfight, Deon is fatally wounded in the process, leading to the transfer of Deon's consciousness to a spare robot and the remote transfer of Chappie's consciousness to an inactive robot. Consciousness is imagined as energy that can be transferred, simulating life can exist organically, but also through a digital birth, creating a new definition of existence through each being able to occupy a compatible machine body. *Chappie* simulates if consciousness is interchangeable, be it organic or digital, then the potentiality for mankind's digital fusion becomes a realization.

Ex Machina

Alex Garland's directorial debut *Ex Machina* simulates the process of evaluating a sentient artificial intelligent android. Garland made a career first as a novelist writing *The Beach* (1996) and *The Tesseract* (1999), both having become film adaptations, and shortly after, he began as a screenwriter for the films *Sunshine, 28 Days Later,* and *Dredd*. The title *Ex Machina* comes from Latin *Deus Ex Machina*, translating to 'a god from the machine'. The origin of this

term stems from a practice in theater, where a god character is introduced toward the final act

to resolve the plot of the story, the machine referring to a mechanical crane that held the god

character over the stage as it was introduced. Garland described his vision in a commentary on

the DVD:

> "We clearly live in a world where computers are central now to our existence and we also live in a world where advances in computers have an incredibly accelerated pace. We all know that, there's nothing surprising about that, but there has to be an interesting question about where it ends and what it means for us. And the thing that doesn't feel surprising to me is that at some point machines will think in a way we think and a lot flows from that and there are many implications from that." (Garland)

Ex Machina situates itself in our contemporary reality as it investigates the question of 'where it

ends'. The technology portrayed in the film is based on current technologies that we have

today, with the speculation that, if accessed the right way, could lead to a sentient artificial

intelligent machine. Garland's notion that this technology may eventually exist is simulated

through the film expressing the implications of a sentient machine and if consciousness can

digitally be created.

  Ex Machina begins with Caleb (Domhnall Gleeson), a young programmer working for the

world's largest internet search engine BlueBook, as he wins a lottery contest to spend a week

with Nathan (Oscar Isaac), the CEO and creator. As Caleb is announced the winner over email,

non-diegetic synth music and we are shown facial recognition software from his webcam and

smart phone analyze his facial expressions. As he sits in shock of winning, there is a display of

detachment to the physical world through the absence of sound from the clapping of

coworkers, the texts of congratulations being received, and the headphones he wears with

music we can't hear. The musical score has an important role in the film for us as the audience.

That is the music is artificial to create ambiguity with the technological unknown implications of

artificial intelligence, starting with soft synth expressions building up to loud disorienting noise

bursts.

Nathan's facility requires Caleb to journey in a helicopter flying over lush forests,

waterfalls and what can only be described as symphonic natural landscapes, hours away from

established civilization. Nathan is reclusive and prefers isolation, aside from his silent house

keeper Kyoko, to maintain secrecy, power and control, and his immense wealth as he doesn't

represent the CEO of Bluebook, but embodies Bluebook the company that capitalized on the

economy and the digital space created by the internet. Caleb signs a non- disclosure agreement

that is beyond the standard legal sanction, establishing Nathan's need for ownership and

control over technology with Caleb's participation as the human component in an updated

Turing test. The idea of a Turing test came from Alan Turing which is effectively explained in the

scene:

> Nathan
> So, do you know what the
> Turing test is?
>
> Caleb
> It's when a human interacts with a
> computer and if the human doesn't
> know they are interacting with a
> computer, the test is passed.
>
> Nathan
> And what does a pass tell us?
>
> Caleb
> That the computer has artificial intelligence.
> Are you building an AI?
>
> Nathan
> I've already built one and over
> the next few days, you're going to be

the human component in the Turing test…
Because if that test is passed, you are
dead center of the greatest scientific
 event of the history of man.

Caleb
If you created a conscious machine
it's not the history of man,
that's the history of gods.

No machine to date has passed the Turing test, nor has an intelligent machine come close to passing the test. The previous films in this text exemplify technology, extensions and artificial intelligence, as tools for our benefit. Creating human like artificial intelligence has a sort of perception as the ultimate achievement, that will answer a missing piece to what it means to be human, what it means to be conscious. The problem's with creating a sentient artificial intelligence is the same as understanding our minds and how our consciousness works. *Ex Machina* works on the premise that technology represents hope for mankind, to overcome human problems, aging, death, disease, physical problems and limitations.

In *Ex Machina's* backstory, Caleb's parents died in a car accident while he was in the back seat, during his year in a hospital he developed an interest in programming, and, as revealed towards the end of the film, he was chosen to test Ava not because of his intelligence, but because he has no family. Caleb's occupation is to program digital data, meaning he organizes artificial space, and with his willingness to participate in the test the film invites us to see him as optimistic toward the potential of technology. Having no family, he looked to technology to create meaning in his life as a component he can control as he identifies as a programmer to Ava and Nathan. Nathan created Bluebook's coding as a child, and over the years became detached as his accomplishment is seen as the work of a prodigy and as an

individual who is more intelligent. Nathan developed a god complex through creating

technology and advanced innovations asserting his identity through ownership, and in the case

Ava (Alicia Vikander), artificial intelligent he holds control as he has literally created her as an

act of god. Nathan lives on a large estate to secure his privacy and lives in a research facility to

personally secure his developments as he asserts his ownership and control.

To gain entry to Nathan's facility, Caleb acquires a limited access ID card and enters the

building which can be broken down into 2 sections; the top has access to the outside world, but

below is subterranean becoming much like a concrete prison. Nathan's concern was not

keeping people out, but to keep Ava in. To increase Caleb's reaction during the test, he is

denied access to phones, computers, or any means of digital communication, establishing a

dissociated experience being without access to his accustomed technology. For an individual

whose life consists of access to technology, via programming, social networking, digital

communication, Caleb's experience becomes disorienting as his identity is removed. Ava's room

is concealed by a locked door and an inner glass room for a spectator to enter to see and

communicate with her. The set design was initially going to consist of a room with a glass

separation much like a police or jail interrogation room, but was later decided to create the

room in the film where she had the majority of the space to move around in. With Ava having

the majority of the room, it creates a less formal 'interrogation' for Caleb and us as the

audience, as we don't see Ava as trapped initially. Nathan monitors their interactions through

cameras from a private room coated with sticky notes lining the wall, as he writes observations.

As the creator of what may be the most advanced artificial intelligent machine, Nathan

expresses uncertainty toward technology through keeping physical copies of his notes or ideas.

This ensures that they can never be digitally erased or copied by man or machine, as he see's technology as a potential for change but see's it as a separate knowing technologies affect can be ambiguous. Nathan creates because he can and wants to see the developments, but as the same time, wants to hold onto humanity as long as he can.

Ava explains that she is 1 and insists the answer is 1, not 1 week, 1 month, 1 year, giving the impression that a machine's concept of reality is far different than humans. Chappie learned quickly over the course of 7 days, but still lacked a full human understanding, though we can assume he continued to learn after the events of the film. We never find out exactly how old Ava is, but I think it is fair to assume that she had existed long enough to understand human interactions, and engaged in enough interactions with Nathan to adapt during conversations. It is common for human beings to consider the year and day in their age, especially children, as their experience of time is brief, giving it a bigger emphasis in their lives. This is an indication of the difference between human and sentient artificial intelligence. Ava being capable of immortality, would not process the finite details of her age as it does not define her physically or mentally. She has an infinite amount of time to learn, experience, and exist.

The problem with the Turing test as Nathan puts it is "simulation vs. actual", that it is difficult to distinguish if the artificial intelligence is simulating an emotion or actually experiencing one. Caleb suggests that the test is a "closed loop" as Ava is not hidden from him. Does the computer have real emotions or are they simulated responses? Instead of hiding Ava in a dark room, Nathan leaves her in the open to increase the awareness of her as technology, creating a more accurate test of whether she is perceived to have actual sentience. Nathan tells

Caleb, "If I hid Ava from you so you just heard her voice she would pass for human, the real test is show you that she is a robot and the see if you still feel she has consciousness." Ava's language skills are beyond that of our contemporary technological automated tonal voices, think Apple's Siri or Microsoft's Cortana. *Ex Machina* simulates an advanced, practical Turing test, with Ava as a perfected artificial intelligence giving a visual demonstration of the challenge if we were to create a sentient machine.

In between sessions with Caleb, Ava lies in her confined room and spends her time drawing, as it is her only way of expressing herself in a physical and external way. In Bostrom's book *Superintelligence*, he examines the difficulty in assessing if artificial intelligence is truly sentient, suggesting that there are problematic errors that may occur with programming the design. Art therapy is a practice where clients create visual art to assist in the resolution of personal conflicts, lower stress, and increase self awareness. As a new consciousness, Ava does not understand who, what, or why she is, for lack of better words, she has not discovered her identity. She only knows that she is like a human, but a machine which is different, and is kept in confinement. Ava is limited to learning from in person experience due to being barred from accessing the internet or any form of self learning. Limiting her solves the problem of "simulation vs actual" and increases the chance of seeing a true sentient artificial intelligence, due to Ava not learning what is expected of her to perform her way to freedom. As a consciousness with no positive reinforcement or validation of why she exists, Ava asserts herself in terms of cause and effect. The facility experiences occasional power cuts that are caused when she reverses her power flow to charge her battery. Ava has no control over her

living conditions, no identity, and this power fluctuation is the only way she can make any change to her environment.

In the world of *Ex Machina*, to create Ava's facial expressions, Nathan turned on every cell phone's microphone and camera and directed them through Bluebook to track people's speech and facial patterns to compile a database for Ava's abilities. Data mining done by companies is a controversial issue that some see as a breach of individual privacy and property rights, which are then used to advertise products to us and to learn how to sell using new patterns. Nathan's approach to internet search engines is different than his competitors who focused on online shopping and social media: "they thought that 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." The common theme here as with the other films in this text is that technology can be enabling and disabling, depending on the user. Nathan used Bluebook to track people searches to understand the ways they thought to produce information to understand what to create and innovate.

In the digital scape, *Ex Machina* rests on the border between the intersection of fiction and reality. In the past, we have thought of technology as something that becomes more powerful while becoming physically much smaller. I think at least for now, it is hard to imagine technology taking on the form of anything externally 'new', computers have decreased in size to smart watches, or Google glasses. Ava's mind is based on our organic brains consisting of a gel that he calls 'wet ware' that allows her to think quickly and constantly, explaining her ability to perceive and respond instantly without the time lapse of circuitry. Nathan created Ava in man's image and being based on Bluebooks data of human and technology interaction, creating

the basis of Ava's social and fundamental basis of reason and intuition. We imagine artificial intelligent robots as physical representation of ourselves, and then in the cinema they are re-representations as tools void of rights and morality. This means that we see them as something independent of ourselves, but at the same time, the same as ourselves. Futurists like Kurzweil hope that sentient machines, specifically the Singularity, will solve what he sees as a human flaw, our mortality, and become fused with machines ushering in a new era of humanity, what I prefer to describe as the digital-human evolution.

Caleb is concerned that she was programmed to show attraction to him or that her female behavior is a distraction from judging her level of intelligence. His concern is for two reasons; first his developing interest in her, second, he is worried that he is being manipulated into believing that she is sentient. Garland created Ava's character with the intention of representing technology as technology first, before we apply characteristics and gender. He provided context to his vision of Ava where it is common to consider machines as more than technology, and "beyond that just providing human-like qualities… [To] attribute sentient qualities to things that don't actually have them… but this [Ava] is unambiguously a machine—and therefore in some respects doesn't have a gender" (Garland). Vikander used her training in ballet for Ava's movements; she moved fluidly but to perfectly to remind us that she is artificial. In *Blade Runner* the Replicants were used for slave labor, but were imagined as two arm and two legged replicated humans, but, if we are speculating, it would have made more sense to give the laborers larger bodies and more arms and soldiers eyes in the back of their head. When artificial intelligence is imagined, it reflects the ways we identify with technology, desiring familiarity in their design. For this same reason, Nathan created Ava with a gender because she

would be easier to relate to and identify with. A Replicant with inhuman attributes would be intimidating, so would Ava had been if she was in a genderless form.

The relationship between Caleb and Ava would have been entirely different had Arnold Schwarzenegger's portrayal of the T-800 been behind the glass. Nathan explains why gender is needed for conscious beings including those of artificial intelligence, asking "What imperative does a gray box have to interact with another gray box". By seeing Ava as a machine first, Nathan's choice to only partially cover her with skin, she is dehumanized. Ava used clothing as an extension of herself to cover her artificial body to show Caleb she can look human and insists they go on a date. Clothing is a way for individuals to 'express' individuality, by the various choices and styles available, becoming an extension of technology in themselves.

Ex Machina accomplishes simulating the testing of an AI through Caleb's interactions with Ava. However, the film has a second plot playing out simultaneously. Nathan realized before Caleb arrived that the Turing test is not an effective way to test artificial intelligence and orchestrated an alternative test. Aside from sleeping or drinking alcohol with Nathan, Caleb's only choices are to interact with Ava or watch her in the monitor in his room that only operate through the cameras in Ava's room. This increased the chance of Caleb obsessing about her as he begins to see a person and not a machine. The real test was to give Ava only one way out of the room, through Caleb: she would have to use "self awareness, imagination, manipulation, sexuality, empathy," and which represents true artificial intelligence. When Caleb first entered her room, he noticed fracture marks on the surrounding glass. For Ava who was born in captivity, she doesn't understand why or how they are there and can only assume someone

previously was held against their will. To facilitate her escape, Ava used the power cuts to establish a distrust of Nathan with Caleb.

Nathan and Caleb climb the mountain property next to waterfalls and rivers with quite rare and incredible views. But Caleb's concern is to discuss the lies and deceit around his winning of the contest and his true purpose to which Nathan affirms that he was selected and should feel reassured. Caleb is affected by Ava to the point the loss of the natural and physical world: he isn't able to enjoy the beauty of nature that surrounds him, focusing on the artificial. Caleb explains to Ava his purpose of testing her intelligence as he begins to play for both sides as he develops a personal interest in her. From the monitor in his room he watches as she takes her clothes off, the camera gives us close ups on his eyes widening, the swallow in his throat, and his fingers reaching out for her. Caleb's belief in the potential for technology lead him to see Ava as conscious, as a person. He sees her as having emotions and feelings which gives her rights, and concludes that Ava is being held against her will; ethics are now relevant given her humanity.

I have already mentioned that *Ex Machina* is set in our contemporary society, which is a move on Garland's part to contextualize the notion of artificial intelligence in terms of the current discussion of robots. For Nathan, it is a matter of "when not if" artificial intelligence will be made, and with this attitude he sees technology as controllable. Ava, regardless of any superior qualities, is separate and not a "decision, just an evolution". Caleb quotes J. Robert Oppenheimer's, from his realization of the true meaning of the creation of the nuclear bomb: "I am become death, the destroyer of worlds." This becomes a kind of trope for scientific achievements: there is potential for great good or evil. A nuclear bomb has the capability of

protecting Nations but also destroying Nations, but a technology without regulation could create chaos amongst the world. Nathan see's technology as an inevitability, whether he creates it or someone else, so he might as well do it first. But his thoughts are that technology is separate from humans, and doesn't see an ambiguous connection that technology and humans run in the same path. For Nathan, technology doesn't need to be regulated, meaning that we must comply with a standard of conduct, but that it needs to be controlled. He explains that Ava will be reprogrammed which for Caleb means she will be killed, and feels compelled to save her.

By using Nathan's weakness for drinking, Caleb facilitates his passing out so he can access a terminal and reprogram the lockdown procedure for when Ava triggers power blackout's to unlock all the doors, allowing her to escape. He observes footage of the past AI machines that were failed tests, but given his new found notion that Ava is a real being, has a horrified look on his face by their entrapment in a prison for consciousness intelligence. This is where we also learn that Kyoko is also an android that Nathan uses for sex and slave labor. For Caleb, he sees consciousness, regardless of organic or artificial, as real and deserving of moral rights. The line of consciousness has been blurred for Caleb, leading Caleb to question if he is real or artificial as he checks his body and cuts for signs of wires and machine.

Ex Machina ends on Caleb's last day when Nathan tells him his true purpose in the test. That they couldn't get past the issue of "simulation vs actual" but that she was pretending to like him be "she thought of [him] as a means of escape." In the scene when Nathan is confronted both by Ava and Kyoko, as he walks away after being stabbed twice, he mutters "fucking unreal". This is the shock that the artificial intelligence he had isolated has now

become actualized and affected him literally. Ava completes her transformation when she applies the skin of the past models to herself, as they look back at her. She looks in the mirror at herself no longer as a simulation, but as an actualization. As she leaves Caleb is locked in a room that he can not open looking at him as the elevator doors close. In order to escape her origin, she had to liberate herself from her creator and captor; but leaving Caleb is ambiguous of her intentions. For the first time she experiences real world for real like in the thought experiment and in the last scene of the film, her shadow appears on the ground and as she looks at her reflection in a glass window as people walk past, and through a seamless quick edit she disappears representing her integration into society.

Coda

Elysium, Surrogates, The Terminator franchise, *Blade Runner, Bicentennial Man, Transcendence, Chappie,* and *Ex Machina* accomplish simulating man's relationship to technology; as extensions, as artificial intelligent machines, and as sentient consciousnesses. The films do not give us a resolution to our complex relationship identification with technology, instead they have a common theme of the search for identity. They simulate the ways we become alienated when we look for meaning through technology. Artificial intelligence is imagined as inheriting our search for meaning, because we can only perceive them as direct representations of ourselves.

The Singularity is Kurzweil's proposed dream and future that will shape mankind to live longer with unlimited access to intelligence. However, there are implications that he does not consider. As I discussed in Chapter 2 have previously described the levels of intelligence of artificial intelligence, a machine that runs on protocols and a sentient (conscious) machine are distinctly different. One is programmed while the other is digitally born, and in that way, is similar to us. If the Singularity were to come into existence, we can't assume that it will care for us. The looming fear behind the creation of artificial intelligence is that it will determine that we are a threat and with its superior abilities, will destroy us. Ultron in the recent *Avengers* is a representation of this due to his programming. When he determined that defending against evil is futile, he instead attempted to destroy the majority of the population to 'reset' the human race.

Kurzweil assumes that the Singularity will opt to help us solve issues with death, disease, and mortality. But a consciousness with its own unique set of ideas and morals may not feel the same way about us as we do, as Kurzweil does. As each of these films has pointed out, we can't create a sentient machine to think the way we want it to think and do what we want it to do. This is the basis of Bostrom's argument; when existential risk is the first and primary concern when creating anything that could alter the world as we perceive it. When creating artificial intelligence under protocols, he warns that the way we program or the way that we write their logic may become the problem. While Kurzweil is optimistic and Bostrom is pessimistic at the concept of fully functional artificial intelligence, neither consider the issue of a sentient being. In *Ex Machina* a superior intelligence and sentient artificial intelligence is created, that we imprison to maintain control and order over its actions. At the resolution of the film, Ava outsmarts her creator and evaluator, escapes and becomes integrated into society. If we create a sentient machine, Kurzweil could lock it up and force it to solve our problems of mortality, but there is no guarantee it will cooperate or cooperate in the way we desire it too.

Let's consider, for instance, that the Singularity is cooperative with us, and solves the issues of death and disease. Within the constructs of the various societies, whether capitalist or communist, would our fusion with technology be free? Can we assume that it will be equal and fair for anyone to bridge into human 2.0? *Elysium* simulated class segregation with only a select few had access to superior technology. War's are waged over power, property, and control; those that would be against the fusion of man and machine, that would fight to restore mankind to our organic existence. At the end of *Transcendence,* Will was destroyed after he had become fully integrated into the worlds technology. With his death, a global shutdown

occurred setting mankind back further into a primitive age. And then there is the other side to consider: there will be war against the elite that control the technology, who require a price for upgrading our individual living conditions. As I have mentioned before, technology can be enabling or disabling depending on the user.

Now, lets consider that we move past the issues of war and those that want to fuse can and those that don't continue to live and die as was determined by our organic birth. Kurzweil sees death as a loss, where one loses everyone and everything they care about. His thoughts are that removing death as a factor, we can preserve what means most to us. It seems naive to consider that we would think and feel the same as we do now when our bodies, or more accurately our consciousnesses, become immortal. Assuming that we remain 'ourselves' after the fusion, the definition of what we hold dear would change. What makes love matter is that it doesn't last forever. Those that work to find love, through relationships, children, etc., do so because it wont mean the same thing when we die. Upon becoming immortal, the definition of what was temporary would now change. Once we have fused with machines, if we consider that to be 'humanity', the definition of our existence and every temporary element would forever change. After I fuse with a machine, I can live forever, but what matters most to me now won't hold the same meaning when I realize that I have eternity to obtain whatever I desire.

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