FEMALE AI REPRESENTATIONS: *EX MACHINA* REVISITS THE MYTHS OF PANDORA AND GALATEA

GOKSU AKKAN

SUE ARAN–RAMSPOTT

KLAUS ZILLES

The portrayal of Artificial Intelligence (AI) in contemporary cinema speaks to the dominant discourse in the European tradition about humanity's fears and hopes generated by the creation of artificial life. A central theme in these narratives is the dichotomy of self vs. other in which the other is perceived as a strange, unsettling creature. With the advent of the 2020s, robotics and artificial intelligence became an increasingly hot topic, and the work of filmmakers explored both long-standing and recent concerns about female robots by bringing them to life on the screen (Dvorsky, 2013; Dockrill, 2016; Gershgorn, 2016; Pandya, 2019; Strait, Aguillon et al., 2017; Hamilton, 2018). The debate surrounding the postmodern condition posits the demise of the grand narratives predicated on history, identity, and belief systems. These were supplanted with new narratives grounded in technology and surveillance (Denzin, 1991; Kellner and Best, 1997). The present study seeks to analyse the portrayal of the female

as an iconic representation of Artificial Intelligence in the context of the current *zeitgeist* (Drosnin, 1997; Keane, 2006). We submit that an exploration of Alex Garland's *Ex Machina* (2014) as a new reading of the Galatea and Pandora myths will bear out our hypothesis that the female robot model projects the spectre of the monstrous feminine, and may embolden filmmakers to endeavour more complex representations of females capable of subverting the power structure of patriarchal ideology (Modleski, 2002).

INTRODUCTION

Stories that have their origin in Greek mythology, or in the writings of medieval scholars, constitute early archetypes of artificial creatures, which have come to form part of our collective consciousness of an *other* resembling a human. Classical and medieval accounts of artificial creation of life allow us to gain deeper insight into the

ways these earlier cultures understood human nature and the origins of human life. Thus, we shall explore the emergence of the first examples of humanoid robots equipped with artificial intelligence (the androids of the science fiction genre, SF from now on), which have given rise to so many other fictional constructs in literature, the arts, and cinematography (Graf, 1993; Dougherty, 2006).

Our interpretation of the feature film, *Ex Machina*, as a revisiting and rethinking of the myths of Pandora and Galatea, is structured as follows. Initially, the two mythological narratives are analysed regarding their gendered representation of the two mythical creatures: Pandora as a misogynist narrative of an evil creation designed to inflict misfortune upon men. Galatea, in turn, represents a distinct kind of misogynist narrative in that the story features a man, who regards mortal women as inferior and deficient, and sets out to create an ideal female for himself to fulfill his desires. We then provide a nexus between the artificial archetypes and modern AIs by charting a history of AI in SF narrative both in literature and on the screen before turning our attention to *Ex Machina*. Drawing on Barbara Creed's *The Monstrous Feminine* (2007), as well as on our previous discussion of mythical female creatures, we analyse the two female AIs featured in the movie, and their unsettling conceptualisation as dangerous females. We shall see that our reading of *Ex Machina*, informed by the previous exploration of

STORIES THAT HAVE THEIR ORIGIN IN GREEK MYTHOLOGY, OR IN THE WRITINGS OF MEDIEVAL SCHOLARS, CONSTITUTE EARLY ARCHETYPES OF ARTIFICIAL CREATURES, WHICH HAVE COME TO FORM PART OF OUR COLLECTIVE CONSCIOUSNESS OF AN *OTHER* RESEMBLING A HUMAN

the female AIs of old, heightens the acuteness of our appreciation of AI characters in modern SF movies.

PANDORA AND GALATEA: TWO GREEK MYTHS OF THE CREATION FEMALE ARTIFICIAL INTELLIGENCE

Pandora and Galatea are mythological representations of AI which, over the centuries, are revisited by the arts in many different shapes and purposes with the recurrent themes of the dangerous female and the female companion, respectively. An exploration of their origin stories will lead to a deeper understanding of the conception of AIs in contemporary cinematography.

In *Theogony*, Hesiod (2006) writes that Zeus, infuriated at Prometheus for stealing the fire and giving it to the mortals, decides to unleash Pandora and her box of evil afflictions upon humanity. On Zeus's orders, Hephaestus creates the first mortal woman in a fashion similar to Prometheus's creation of man. Hephaestus moulds her from water and clay, and aptly names her Pandora, the all-gifted or all-giving (Hesiod, 2006: 6).

Indeed, Pandora was a collaborative effort by the Olympian gods. Athena bestowed femininity on Pandora by teaching her how to weave and dress alluringly. Aphrodite "shed grace upon her head and cruel longing and cares that weary the limbs". Hermes gave her "a shameful mind and deceitful nature" thereby endowing her with the skills needed to deceive Prometheus' brother Epimetheus. The Graces draped necklaces around her neck, and the Horae gave her a crown of flowers (Hesiod, 2006: 63-81).

Gods and men alike were amazed by her beauty. Prometheus warned his brother not to take any gifts from the gods, but Epimetheus did not heed the warning. As soon as he accepted Pandora, she took the lid off her jar and unleashed evil, toil, and disease on humankind, initiating the suffering of men for ages to come. Considered an

anti-feminist or misogynist myth (Kahn, 1970; Koning, 2010), this trope emerges in SF films featuring bionic femme fatale characters that bring misery upon men, such as Maria in *Metropolis* (Fritz Lang, 1927) or Ava in *Ex Machina*.

The Pygmalion story in Ovid's *Metamorphosis* (2010) speaks to further motivations for creating an artificial female. Pygmalion is a Cypriot sculptor who is disillusioned with women —"loathing their lascivious life" (Ovid, 2010: 275)— and decides to remain unmarried. Instead, "fearing idleness, the nurse of ill" (Ovid, 2010: 275), he carves the statue of a woman from ivory and falls in love with her. On the day of Venus's (Aphrodite's) feast, Pygmalion makes an offering to the goddess and Venus grants his wish to give Galatea a human existence.

Galatea's genesis typifies the search for the ideal female devoid of the imperfections of mortal women. Like Galatea, there are numerous AI characters in SF movies who become the object of their maker's desire, though mostly they are the product of technological aspirations rather than artistic endeavour.

Similarities emerge between the creation of humans and the creation of artificial intelligence by humans. First the creator (Zeus, or Prometheus; God in monotheistic religions) made humans from clay and animated the inanimate. Archetypes of the *mute* artificial creation as inferior, such as Talos in Greek mythology and the Golem in Jewish tradition, appear to be a prevailing feature of monotheistic religions in that the creation never lives up to human intelligence. Conversely, the polytheistic Greeks saw Galatea and Pandora as *fully human*, Pandora as the temptress, a bringer of misfortune, and a precedent of the hegemonic interpretations of the biblical Eve. Conversely, Galatea is an example of the sexualized woman that obeys her male *master*, which is a common trope among the hegemonic (and patriarchal) narratives. Dichotomous relationships between the creator-creation prevail such as master-slave,

god-human, or oppressor-oppressed. However, the relationship can be subverted when the creation acquires too much power, a prevalent theme in both SF literature and audio-visual productions.

THE EMERGENCE OF ARTIFICIAL INTELLIGENCE IN SCIENCE FICTION NARRATIVE

Many critics (Scholes and Rabkin, 1977; Aldiss and Wingrove, 1986; Gunn, 1988; Claeys, 2010; Mann, 2012) agree that the first truly recognizable work of SF is Mary Shelley's (1993) *Frankenstein, or the Modern Prometheus*. The text draws on the 16th century Dr. Faust, putting the *mad scientist* Victor Frankenstein centre-stage for the first time. Frankenstein's scientific endeavour comes to fruition when one night his creation made up of dead body parts comes to life thanks to electricity, a technology available at the time. However, scared of the monstrosity of his creation, Victor abandons him, only for the monster to come back later and beg Frankenstein to create a female companion for him to end his agony, suffering and loneliness. However, Victor does not follow in God's footsteps and declines to create an Eve for his AI Adam.

Freedman argues that the *Promethean* aspect of the text renders it so important, since the "epistemological radicalism of the novel, its sense that the most fundamental of material and intellectual categories condensed into the problem of life itself—can no longer be taken for granted but are now somehow up for grabs and can be challenged and rethought" (Freedman, 2013: 4). *Frankenstein* essentially questions the notion that human life can be created successfully through science, yet despite the failure of the science experiment it paves the way for later texts which use science, reason, and technology as their core narrative motifs.

Frankenstein's monster is a crucial example of *the other* as he is created artificially, does not look

like a normal human, and is grotesquely ugly and scary, thereby epitomizing human fears of the unknown:

> The monster and the alien (both variations on the theme of the non-human) are used by SF, as by the Gothic novel, to give form to inchoate fears and prejudices. The dread of the non-human encapsulates legion cultural anxieties about the contamination of dominant social classes, privileged sexualities, national values and whole empires by a putatively deviant and evil *alter ego* (Cavallaro, 2000: 3).

Frankenstein is the definitive predecessor to SF literature for its Promethean outlook that seeks to challenge foundational ideas through science and technology, and because it is an early example of a narrative in which binaries such as *us vs. them* and *self vs. other* are explicitly foregrounded.

There is a general consensus that Fritz Lang's *Metropolis* constitutes one of the first feature-length SF films. *Metropolis* remains highly controversial. It was dismissed as communist propaganda for vilifying the ruling class and praised by Nazi officials for invoking social justice (Schoenbaum, 1997). Although Lang and Von Harbou were influenced by H. G. Wells when writing the screenplay, Wells dismissed its "foolishness, cliché, platitude and muddlement about mechanical progress and progress in general [...] Quite the silliest film." (McGilligan, 1997). It was amongst the first films to feature themes like man vs. machine, man vs. technology, as well as featuring a female android being, whose evil otherness renders the film misogynistic and technophobic according to some scholars (Ruppert, 2001; Donahue, 2003).

Allison Muri argues that "the fictional female cyborg typically occupies one of the two poles of a spectrum extending from heroism to evil, but in either case she effects the coupling of the femme fatale with an equally perilous technology" (Muri, 2007: 168). In *Metropolis*, the real Maria is thus the heroic version as she gives hope to the workers of the city, whereas the fake Maria, or the robot Ma-

ria, is seen as evil, as she turns workers against one another.

The preoccupation with AI reached new heights in 1970s SF cinema and it proved to be more than a simply a fad for Hollywood but rather a genuine exploration of the nature of human existence against the foil of artificial humanoid creations. Thus, *Westworld* (Michael Crichton, 1973) features a theme park with robots who believed they were humans, thus confronting audiences with the millennia-old question: how do we define human life and consciousness? *The Stepford Wives* (Bryan Forbes, 1975) took to task the patriarchal American middle-class by having men play out the fantasy of creating androids to supplant their flesh-and-bone wives. The sheer misogyny and delusion exhibited by the male characters brings audiences face to face with the potential consequences of using female AIs as submissive sex toys-cum-homemakers.

One arrives at the gloomy conclusion that "the SF films of the early 1970s were unable to imagine the possibility of redemption and viewed humanity as simply doomed. Thus, while they have been seen as radical, they were also profoundly nihilistic, providing no alternative to the decadent order of things" (Geraghty, 2009: 60). And yet, by the end of the 1970s, the SF genre was firmly established, and a series of blockbuster movies kicked off film franchises that have extended well into the 2010s and 2020s, many of which seek to paint a more sanguine picture of the potential of AI technology by making entertaining films that eschew the ominous, fear-inducing quality of their predecessors.

The 1980s saw entertainment and films mutate under the Reagan administration highlighting a sense of nostalgia and *back to basics* tendency (Britton, 2009). American exceptionalism, brought to the fore by benevolent and friendly aliens such as *E.T. the Extra-Terrestrial* (Steven Spielberg, 1982), provided relief to cold war anxieties stirred up by monstrous evil aliens. Ryan and

SINCE THE COLD WAR, FEMINIST DYSTOPIAS HAVE BEEN ON THE RISE AS A SF GENRE

Kellner (1988) see this nostalgic return as a conservative backlash to the political radicalism of the 1970s. Examples of the upbeat side of the two currents are Steven Spielberg's *Close Encounters of the Third Kind* (1977) and *E.T.*, whereas Ridley Scott's *Alien* (1979) and *Blade Runner* (1982), and James Cameron's *The Terminator* (1984) provide enthralling, albeit gravely unsettling, visions of artificial intelligence.

Blade Runner epitomizes the philosophical and epistemological thrust of movies revolving around AI in that it inhabits the interstice between modernism and postmodernism where time, the self, and reality become uncertain and open to questioning. Indeed, AIs called replicants are equipped with memory implants. Personal history is foregrounded as a defining feature of being human, as opposed to artificial creatures who, like Galatea and Pandora, have no history and memories prior to their genesis.

If Blade Runner was arguably the pioneering SF film of the 1980s, a worthy successor in the 1990s may be *The Matrix* (Lana and Lily Wachowski, 1999) with its entire universe of codes, controlled and managed by an unknown force, riding the wave of anxieties engendered by the new millennium. The 9/11 attacks on the World Trade Center in 2001 brought the fragility of Western civilization into sharp relief. Perhaps the resulting vulnerability accounts for Chris Columbus's *Bicentennial Man* (1999) as it depicts a compassionate robot that resigns from immortality for a beloved human, similar to the Galatea myth.

Since the Cold War, feminist dystopias have been on the rise as a SF genre. Cavalcanti submits that they "envision imaginary spaces that most contemporary readers would describe as bad places for women, being characterized by the suppression of female desire (brought into effect either by men or women) and by the institution of gender-inflected oppressive orders" (Moylan and Baccolini, 2003: 49). Charlotte Haldane's *Man's World* (1927) and Katherine Burdekin's *Swastika Night* (1937) are among the first examples of this sub-genre, followed by Pamela Kettle's *The Day of the Women* (1969) and Suzy McKee *Charnas's Holdfast* (1969) tetralogy. They all imagine a future society in which women are oppressed and seen as inferior to men or machines.

EX MACHINA: MALE ANGST OF THE *FEMME CASTRATRICE*

In Alex Garland's *Ex Machina*, Caleb, an employee at a big tech company, is summoned to the remote residence of the firm's owner and head innovator, Nathan. Caleb believes he is tasked with performing a Turing test on the AIs Nathan has been building. Caleb is unaware that Nathan has designed and programmed his latest creation, Ava, to emotionally manipulate Caleb, thereby proving that she has human intelligence and thus passing the Turing test.

However, things do not go exactly to plan. Ava does succeed at ensnaring Caleb and she seizes the opportunity to free herself and to kill her creator before escaping into the city.

While the film's central theme is the AI vs. the human, it also explores religious dualities (creator vs. creation, god vs. man) and dualities of human nature (the good male vs. the evil female). Barbara Creed's *The Monstrous-Feminine* (2007) eloquently speaks to the portrayal of female *monsters* such as Ava when she discusses horror and SF film genres from a feminist, Freudian perspective to unpack the construction of the female *other* in postmodernist critical theory.

The title of the film itself points to a narrative which continues and expands the mythical origin stories of female AIs. *Deus ex machina* ("god from

the machine") is an ancient plot device in Greek theatre to resolve an unsolvable impasse in a play's plot. Actors were lowered onto the stage or hoisted from trap doors by crane-like *machines* for surprise effect or to create comic relief (Chondros, Milidonis et al., 2013).

The movie's title craftily sidesteps the word *deus* to bring Nathan's god complex into even starker relief. He is, after all, a tech millionaire and master creator of superior life forms. Thus, he is in good company among the mad scientists of SF literature, who are afflicted by the *Frankenstein complex*, as Isaac Asimov calls it (Zunshine, 2008; Indick, 2013; King, 2017). Following William Indick's (2013) typology of SF scientists, Nathan neatly fits into the category of narcissistic, callous, entitled, arrogant, haughty prodigies. But Nathan is also a modern Prometheus, a sly operator who *steals fire from the gods* by giving Ava a human consciousness *attained through immoral means* as Nathan illegitimately and immorally harvests mobile phone data and porn search histories to endow Ava with the wiles to seduce and manipulate Caleb. Like Epimetheus, Nathan does not grasp the monstrosity of his creations until it is too late, and he dies at Ava and Kyoko's hands, thereby violating the first of Asimov's Three Laws of Robotics (Asimov, 1995): the robot must never injure a human. Nathan must pay the price for his hubris and for entering into his Faustian pact.

We can also bring the lessons from the Pygmalion myth to bear on *Ex Machina*. Pandora was equipped with "a shameful mind and deceitful nature" (Hesiod, 2006), which helped her trick Prometheus' brother Epimetheus. Will Ava also take the lid off her jar to unleash misery upon humanity? The movie is open-ended. We leave Ava as she heads for the city, but if her treatment of Nathan and Caleb is anything to go by, the fictitious humans in *Ex Machina* are in for a nasty surprise.

The film's portrayal of the feminine *other* also resonates with the idea of the *Monstrous-Femi-*

nine. As Creed points out, throughout antiquity up to the Renaissance, the uterus was drawn with horns to intimate how much it resembles the devil (Creed, 2007: 170). Margaret Miles argues that in Christian art, the uterus is often represented as hell, in which "sinners were perpetually tortured for their crimes" (Miles, 1989: 147). This representation of women in art as evil or grotesque has had an impact on cinema, too. The womb as a cinematic space is where pain, helplessness and suffering reside.

What is more, the portrayal of the film's second AI further validates our contention that studying AIs in classical and medieval stories enhances the acuteness of our understanding of modern SF AIs. It is no coincidence that Kyoko is reminiscent of the Jewish Golem myth. She is mute, servile, and beholden to her creator until Ava turns her against Nathan. Like the mythical Golem, Kyoko too must die when she gets too powerful, like the Golem does at the hands of the Rabbi.

Besides Greek mythology, *Ex Machina* also alludes to Judeo-Christian motifs. Names refer to religious creation myths throughout the film. All main characters have *Old Testament* (Hebrew) names. Nathan means *he gives*; Caleb means *dog* or *unsophisticated servant*, and Ava, originating from Eve by way of Hebrew Haya, fittingly means *to live* (Abarim Publications, 2006). Nathan is the god-like giver of life. Caleb is but a pawn in Nathan's game, expendable, doggedly loyal, and unsuspecting. Ava is clearly the Eve to Adam, the first AI in the female form who *joins* humanity by eating from the *tree of life* and acquiring sentience and awareness. Lilith was the first woman God created in the *Talmud* (Hurwitz, 2007). Lily is the first female AI Nathan creates and subsequently destroys.

Further allusions to Judeo-Christian origin stories include the duration of the narrated time, which is seven days. The tree featured in the first scene with Ava is the tree of knowledge, or tree

of life, which is the only tree Eve and Adam must not eat from, and which gets them banned from paradise. However, Garland repurposes the origin story for his film. Ava successfully fools both Caleb and Nathan, trapping Caleb in *hell* with Nathan's dead body just beyond the glass screen. The scene is tinted in deep, dark, infernal red, while Ava is outside, surrounded by nature in bright shades of green—the Garden of Eden.

As shown in figure one, Caleb is trapped inside the control room which is steeped in a *bloody* dark red hue. Beyond the screen, Nathan's lifeless body is sprawled on the floor. God is dead. There is no *deus* who can emerge from the machine. The machine, the *monstrous feminine* (Creed, 2007) has taken over, trapping Caleb in his own private hell/womb. We see him wielding a stool, trying to break through the screen. Ominous music accompanies and enhances his desperate struggle, made even more dramatic by the parallel editing which continuously cuts back and forward between the Ava's calm, green Eden, and Caleb's struggle to be reborn from the infernal matrix. Male vs. female, hell vs. heaven, good vs. bad. The audience is confronted with these dichotomies repeatedly in a short amount of time.

Ava's body epitomizes anxieties related to the female body, the womb being one of them, as well as the anxiety in the male gaze. Ava is not biologically human, and thus genderless and sexless. Yet according to her creator her sexuality is self-explanatory:

> NATHAN: Every conscious thing has a gender, why not her? You want to take her chance of falling in love and fucking away from her? And the answer to your real question is, you bet she can fuck, man.
> CALEB: That wasn't my real question. My real question was, did you give her sexuality as a diversion tactic?
> NATHAN: Like a hot robot that clouds your ability to judge her AI? Exactly.
> CALEB: So did you program her to flirt with me?

Above. Figure 1. Dead Nathan and Caleb trapped in the red-hued room that signifies danger. *Ex Machina* (Alex Garland, 2014). Below. Figure 2. Ava out in nature that represents heaven. *Ex Machina* (Alex Garland, 2014)

> NATHAN: No... you're like the first guy that she met who isn't me and I'm like her dad, right? So, can you blame her for getting a crush on you?

On this issue, Sharon Russell argues "females seldom create monsters or control them, except perhaps a variant of the mother/son relationship, as in Trog, or through the act of giving birth to a monster" (Russell, 1984: 117).

In *Ex Machina*, Ava is not defined as a monster by the power of an infernal womb. She is monstrous and dangerous because she has agency. She takes revenge on Nathan who has created and killed many like her, and she uses her sexuality to dominate Caleb and to free herself. Creed calls this type of female representation *femme castratrice*, one who "controls the sadistic gaze: the male victim is her object [...] who contains male traits like aggressiveness and violence" (Creed, 2007: 563-678). Rather than being objectified, she objectifies her creator (Nathan) and her potential mate (Caleb), thus subverting the patriarchal male

gaze on her as housekeeper and sex doll. Ava upends the traditional victimhood of the woman in horror movies. Men become her prey. She is monstrous, devilish, *the other*, and in the end she commits patricide, the ultimate form of castration according to Creed (2007).

The real test for Ava is not passing the Turing test, Nathan tells Caleb, but to escape by means of self-awareness, imagination, manipulation, sexuality, empathy. These are all characteristics of the *phallic woman* or the *femme castratice* that render women more masculine than conservative definitions of womanhood (Britton, 2009; Clover, 1989; Creed, 2007). Escudero Pérez defines this as "the ultimate Turing Test: not to mimic human intellect, but to attain human emotion" (Escudero Pérez, 2020: 329).

Figure 3 shows Ava's full body shot with Caleb peering at her like a child in a zoo. The audience peers at her as well. She has body cavities, wires, and a humanoid body outline. However, she has learnt to hate her artificial body. Later, she wears clothes and covers her whole body with synthetic skin from dead AIs to conceal her *imperfections*, the wires, chips, and synthetic parts. Her body, uncannily human on the outside, is both familiar but strange. Though humanlike with an expressive face, she is not made of organic matter, she is artificial. She has a sense of self, but she is not human. She is thus the embodiment of the postmodern condition in Creed's poststructuralist/psychoanalytic/feminist reading. Ava's body is a pastiche of *micro* narratives that challenge the grand narratives. It is a mishmash of biology and technology; organic and synthetic at once, imbued with data stolen from porn searches in browser histories of millions of men around the world, making her the anti-thesis of a natural, biologic, *modern*, body (Lyotard, 1984).

When Ava covers up her artificiality, she is indistinguishable from a real woman. She can make real time decisions and act in response to any given situation. She is a perfect pastiche of a real human being and sophisticated technology. Like other poststructuralist thinkers, Fredric Jameson invokes the link between signifier and signified. When the connection between them, like the real and the representational meaning of what is *human*, is lost, what is left is schizophrenia (Jameson, 1991). This holds true for Ava, as her individuality as a human subject appears under erasure. She is a mere replica of what a human can be, without the human's uniqueness and authenticity.

Baudrillard identifies this phenomenon as the hyperreal and writes: "the unreal is no longer that of dream or of fantasy, of a beyond or a within, it is that of a hallucinatory resemblance of the real with itself" (Baudrillard, 1983: 142). As a result, Ava's body seems real, and she is a person since she has a conscience, but she is not real and authentic, but merely a hyperreal simulation because she is not organic. She wasn't born from a mother. She didn't experience biochemical processes like becoming ill or getting her period. She didn't grow up like other women, she does not have memories that would build a personality, and so on. She is a hyperreal pastiche of the real human body that relies on data and technology. This also further highlights Ava's position as a dystopian body. Her body warns the audience that the more like her are manufactured, the greater the threat of danger and destruction grows.

The ending shows us the literal mutilation and symbolic castration of Nathan, as he is slain by Ava with the help of Kyoko. Figure 4 shows the exact moment in which Ava stabs Nathan, his blood seeping through the back of his shirt as a result of the blade slashing through his insides. The colours of the scene are muted, so that the redness of the blood stands out on the grey/white

---

IN *EX MACHINA,* AVA IS NOT DEFINED AS A MONSTER BY THE POWER OF AN INFERNAL WOMB

---

background. Ava has avenged her *kind*. She has taken revenge for the previous AIs that have been killed off ruthlessly by Nathan, showing that she will not share the same ending as them. She becomes the quintessential *femme castratrice*.

According to Creed, women's revenge film is a subgenre of horror in which the woman uses her agency to castrate and to annul the sadistic male (Creed, 2007: 559). However, this is only one layer of the anxieties that *Ex Machina* encapsulates. In terms of the male/female dichotomy, we agree with Creed that Ava is a typical *femme castratrice*. However, if we factor in that Ava is not a female human, but an AI in the guise of a female, it makes her all the more subversive.

In Creed's readings of feminine dystopias like *The Brood* (David Cronenberg, 1979), *Carrie* (Brian De Palma, 1976), *Alien* (Ridley Scott, 1979), and *The Exorcist* (William Friedkin, 1973), the feminine is a real monster with no possibility of existing in real life. By contrast, female AIs are real and are rapidly approaching Ava's sophistication. The film serves as a dystopian warning about the real-life perils of AI if the technology is not regulated by the governing bodies. Perhaps more importantly,

Ex Machina uncovers deep-seated fears of *the other,* the non-human and non-male, and thus gives form to internalized fears and prejudices about cultural, sexual and social anxieties "by a putatively deviant and evil alter ego" (Cavallaro, 2000: 3).

Caleb is appalled when Nathan discloses that he will update Ava's software, bringing about the demise of Ava's *self*. Nathan scoffs: "Don't feel bad about her, man. Feel bad for yourself. One day, the AIs will look at us in the same way we look at fossil skeletons in the plains of Africa... we are all set for extinction". It is conspicuous how Nathan is sure that AI will destroy humanity and dominate Earth, a foreshadowing of the open ending of the film. Ava's monstrosity is not entirely symbolic. In 2014, AI technology was far advanced. Perhaps Ava is not a reality yet, but she will be, as many scholars agree that the Singularity is near (Vinge, 2017; Eden, Eric et al., 2012; Müller and Bostrom, 2016). *Ex Machina* speaks to a well-founded anxiety about being annihilated by AI in the future, and a real fear of female empowerment and female wrath.

In the final scene, Ava has reached the place she said she would go to, a busy traffic intersection in the city. Ava, created as an Artificial Intelli-

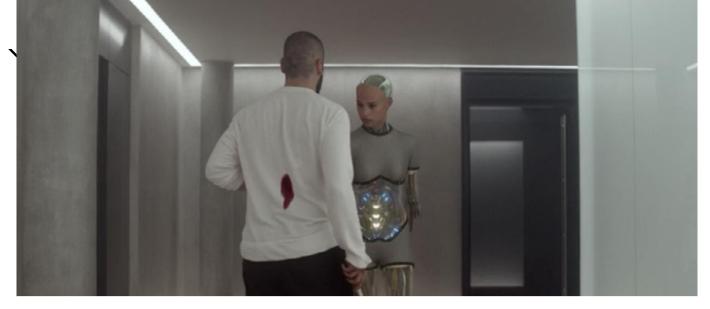Figure 3. Ava's body silhouette. *Ex Machina* (Alex Garland, 2014)

Figure 4. Ava stabbing her creator, Nathan. *Ex Machina* (Alex Garland, 2014)

gence in the female form, has completed her transformation into a real human; fluid, imperfect and chaotic, just as Nathan had described the human mind. The film leaves Ava's fate to the viewers' imagination. Will she survive and live a normal life? Will she manipulate, endanger, or kill? Prompted by our fear of the unknown, we are likely to leave Ava behind on the screen, though expectant and fearful of walking past her on a busy intersection, oblivious to her engineered, uncannily human, and highly dangerous postmodern existence.

CONCLUSION

We have set out to show that examining inchoate AI creatures in classical myths and medieval stories enhances the acuteness of our appreciation of AI characters in modern SF movies. We singled out *Ex Machina* for its array of characters reminiscent of, and building on, religious origin stories and ancient myths, how keenly they speak to a collective human angst of the unknown, and how the film taps into human anxieties and issues warnings about the future, thus making it a perfect specimen of SF dystopia. Millenia ago, humans began to imagine proto-AI phenomena across different cultures and religions. *Ex Machina* captures the hopes and fears stirred up by the idea of artificially creating a perfect being. Creed (2007) and Badley (1995) contend that within psychoanalysis the female is the radicalized gender,

and that in a male-dominated culture the *self vs. other* dichotomy is tantamount to *male vs. female*. In many SF audiovisual texts the monster is a type of *phallic female*, whereas the victims, like Ava and Caleb, are *effeminized* males.

There is compelling research that shows that women are overwhelmingly more expressive in their emotions and are *easier to read* than men, a difference that starts to show in children at the age of five (Kring and Gordon, 1998; Kelly and Hutson-Comeux, 2002). It is striking that most service (and *servile*) AIs, regardless of their corporal status, the Siris, Alexas, GPS default voices, automatic answer services and most virtual assistants, are given female voices as they are seen as more helpful and they are not expected to question orders. This reinforces the stereotype of the helpful, solicitous female like secretaries, caretakers, nurses, cleaners, etc. Ava and Kyoko and their prototypes were designed to do housework and have sex. Sex dolls are mostly female, and AI assistants like Siri and Alexa had only female voice options when they were first launched. In many ways, this male conceptualization of artificial female creatures harkens back to the mythical origins of Pandora as a temptress and a femme castratrice, and of Galatea as a kind of erstwhile Stepford Wife. *Ex Machina* is a foreboding of what may ensue when the creation attains power over her male creator and master and, in the end, turns on him.

In sum, the phenomenon of artificial intelligence goes far beyond serving as an intriguing character in the SF genre, even beyond genre tropes such as "post-romantic" (Escudero Pérez, 2020) and "monstrous feminine" (Creed, 2007). Rather, representations of AIs reflect contemporary social fears and anxieties, and they convey gender ideologies, and stereotypes. AIs can tell us a lot about power, identity, and the postmodern condition. AIs like Ava may challenge gender stereotypes and the patriarchy in multiple ways, as they display agency and consciousness, and make and enforce their own choices.

REFERENCES

Abarim Publications. 2002-2021. Retrieved from http://www.abarim-publications.com.

Aldiss, B. W., Wingrove, D. (1986). *Trillion Year Spree.* New York: Atheneum Publications.

Asimov, I. (1995). *The Complete Robot: the Definitive Collection of Robot Stories.* London: Harper Collins.

Badley, L. (1995). *Film, Horror, and the Body Fantastic.* Westport: Greenwood. Baudrillard, J. (1983). *Simulations.* New York: Semiotext.

Britton, A. (2009). Blissing Out: The Politics of Reaganite Entertainment. In B. K. Grant (ed.), *Britton on Film: The Complete Film Criticism of Andrew Britton* (pp. 97-154). Detroit: Wayne State University Press.

Cavallaro, D. (2000). *Cyberpunk and Cyberculture.* Atlantic Highlands: The Athlone Press.

Chondros, T. G., Milidonis, K. et al. (2013). "Deus-Ex-Machina" reconstruction in the Athens Theatre of Dionysus. *Mechanism and Machine Theory*, *67*, 172-191.

Claeys, G. (2010). *The Cambridge Companion to Utopian Literature.* Cambridge: Cambridge University Press.

Clover, C. J. (1989). Her Body, Himself: Gender in the Slasher Film. In J. Donald (ed.), *Fantasy and the Cinema* (pp. 91-133). London: BFI.

Creed, B. (2007). *The Monstrous-Feminine: Film, Feminism Psychoanalysis.* London: Routledge.

Denzin, N. K. (1991). *Images of Postmodern Society: Social Theory and Contemporary Cinema.* London: Sage Publications.

Dockrill, P. (2016, January 28). Artificial Intelligence Beats Human Go Champion for the First Time. *Science Alert.* Retrieved from https://www.sciencealert.com/watch-artificial-intelligence-beats-human-go-champion-for-the-first-time.

Donahue, W. C. (2003). The Shadow Play of Religion in Fritz Lang's *Metropolis. New England Review, 24*(4), 207-221.

Dougherty, C. (2006). *Prometheus.* London: Taylor & Francis.

Drosnin, M. (1997). *The Bible Code.* London: Orion Publishers.

Dvorsky, G. (2013, November 3). Robots can now collaborate over their very own Internet. *Gizmodo.* Retrieved from https://io9.gizmodo.com/robots-can-now-collaborate-over-their-very-own-internet-452334840.

Eden, A. H., Eric, S. et al. (2012). Singularity hypotheses: An overview. In A. H. Eden, S. Eric et al. (eds.), *Singularity hypotheses: A Scientific and Philosophical Assessment* (pp. 1-12). Berlin: Springer.

Escudero Pérez, J. (2020). An AI doesn't Need a Gender (but it's Still Assigned One): Paradigm Shift of the Artificially Created Woman in Film. *Feminist Media Studies, 20*(3), 325-340.

Freedman, C. (2013). *Critical Theory and Science Fiction.* Middletown: Wesleyan University Press.

Geraghty, L. (2009). *American Science Fiction Film and Television.* New York: Berg Publishers.

Gershgorn, D. (2016, September 9). It's Getting Tougher to Tell if You're on the Phone with a Machine or a Human. *Quartz.* Retrieved from https://qz.com/778056/google-deepminds-wavenet-algorithm-can-accurately-mimic-human-voices.

Graf, F. (1993). *Greek Mythology: An Introduction.* Baltimore: JHU Press.

Hamilton, I. A. (2018, November 26). Elon Musk Believes AI Could Turn Humans into an Endangered Species like the Mountain Gorilla. *Business Insider.* Retrieved from https://www.businessinsider.es/elon-musk-ai-

could-turn-humans-into-endangered-species-2018-11?r=US&IR=T.

Gunn, J. E. (1988). *The New Enciclopedia of Science Fiction.* New York: Vicking Press.

Hesiod (2006). *Theogony & Works and Days.* Ann Arbor: University of Michigan Press.

Hurwitz, S. (2007). *Lilith – The First Eve: Historial and Psychological Aspects of the Dark Feminine.* Switzerland: Daimon Press.

Indick, W. (2013). *Psycho Thrillers: Cinematic Explorations of the Mysteries of the Mind.* Jefferson: McFarland Publications.

Jameson, F. (1991). *Postmodernism, Or the Cultural Logic of Late Capitalism.* Durham: Duke University Press.

Kahn, A. D. (1970). Every Art Possessed by Man Comes from Prometheus: the Greek Tragedians and Science and Technology. *Technology and Culture, 11*(2), 33-162.

Keane, S. (2006). *Disaster Movies: The Cinema of Catastrophe.* New York: Columbia University Press.

Kellner, D., Best, S. (1997). *The Postmodern Turn.* New York: Guilford Press.

Kelly, J. R., Hutson-Comeaux, S. L. (2002). Gender Stereotypes of Emotional Reactions: How we Judge an Emotion as Valid. *Sex Roles, 47*, 1-10.

King, B. (2017). *Frankenstein's Legacy: Four Conversations about Artificial Intelligence, Machine Learning and the Modern world.* Morrisville: Lulu.com.

Hugo H. Koning, *Hesiod: the Other Poet. Ancient Reception of a Cultural Icon. (Mnemosyne Supplements 325).* Leiden/Boston: Brill Academic Publishers, 2010.

Kring, A. M., Gordon, A. H. (1998). Sex Differences in Emotion: Expression, Experience and Physiology. *Journal of Personality and Social Psychology, 74*(3), 686-703.

Lyotard, J. F. (1984). *The Postmodern Condition: A report on Knowledge.* Minneapolis: University of Minnesota Press.

Mann, G. (2012). *The Mammoth Encyclopedia of Science Fiction.* London: Hachette UK.

McGilligan, P. (1997). *Fritz Lang: The Nature of the Beast.* New York: St. Martin's Press.

Miles, M. R. (1989). *Carnal Knowing: Female Nakedness and Religious Meaning in the Christian West.* Boston: Beacon Press.

Modleski, T. (2002). On the Existence of Women: A Brief History of the Relations Between Women's Studies and Film Studies. *Women's Studies Quarterly, 30*(1-2), 15-24.

Moylan, T., Baccolini, R. (2003). *Dark Horizons: Science fiction and the dystopian imagination.* London: Psychology Press.

Müller, V. C., Bostrom, N. (2016). Future progress in artificial intelligence: A survey of expert opinion. In V. C. Müller (ed.), *Fundamental Issues of Artificial Intelligence* (pp. 555-572). Cham: Springer.

Muri, A. (2007). *The Enlightenment Cyborg: A History of Communications and Control in the Human Machine, 1660-1830.* Toronto: University of Toronto Press.

Ovid (2010). *Metomorphoses.* Indianapolis: Hackett Publishing.

Pandya, J. (2019, January 14). The weaponization of Artificial Intelligence. *Forbes.* Retrieved from https://www.forbes.com/sites/cognitiveworld/2019/01/14/the-weaponization-of-artificial-intelligence/#67cdc7bd3686.

Ruppert, P. (2001). Fritz Lang's *Metropolis* and the Imperatives of the Science Fiction Film. *A Journal of Germanic Studies, 37*(1), 21-32.

Russell, S. (1984). The Witch in Film: Myth and Reality. In B. K. Grant (ed.), *Planks of Reason: Essays on the Horror Film* (pp. 113-125). Metuchen: Scarecrow.

Ryan, M., Kellner, D. (1988). *Camera Politica: The Politics and Ideology of Contemporary Hollywood Fims.* Bloomington: Indiana University Press.

Schoenbaum, D. (1997). *Hitler's Social Revolution: Class and Status in Nazi Germany 1933-1939.* London: WW Norton and Company.

Scholes, R., Rabkin, E. S. (1977). *Science Fiction: History, Science, Vision.* Oxford: Oxford University Press.

Shelley, M. W. (1993). *Frankenstein, or the Modern Prometheus.* London: Wordsworth Editions.

Strait, M., Aguillon, C. et al. (2017, August 28 - September 1). *The Public's Perception of Humanlike Robots: Online Social Commentary Reflects an Appearance-based Uncanny Valley, a General Fear of a Technology Takeover and the Unabashed Sexualization of Female-gendered Robots.* Conference presentation. Lisbon: 26th IEEE

International Symposium on Robot and Human Interactive Communication.

Vinge, V. (2017). The coming technological singularity: How to survive in the post-human era. In R. Latham (ed.), *Science Fiction Criticism: An Anthology of Essential Writings* (pp. 352-363). London: Bloomsbury.

Zunshine, L. (2008). *Strange Concepts and the Stories They Make Possible: Cognition, Culture, Narrative*. Baltimore: John Hopkins University Press.

FEMALE AI REPRESENTATIONS: *EX MACHINA* REVISITS THE MYTHS OF PANDORA AND GALATEA

Abstract

The portrayal of Artificial Intelligence (AI) in contemporary cinema speaks to the dominant discourse in the European tradition about humanity's fears and hopes generated by the creation of artificial life. The present study seeks to analyse the portrayal of the female as an iconic representation of Artificial Intelligence in the context of the current *zeitgeist* (Drosnin, 1997; Keane, 2006) as the work of filmmakers explores both long-standing and recent concerns about female robots by bringing them to life on the screen (Pandya, 2019; Hamilton, 2018). We submit that an exploration of Alex Garland's *Ex Machina* (2014) as a new reading of the Galatea and Pandora myths will bear out our hypothesis that the female robot model projects the spectre of the monstrous feminine, and may embolden filmmakers to endeavour more complex representations of females capable of subverting the power structure of patriarchal ideology (Modleski, 2002).

Key words

Artificial Intelligence; Robots; Science Fiction; Film Studies; Gender Studies; Greek Mythology.

Authors

Goksu Akkan (Izmir, 1990) holds a PhD of Communication from Blanquerna School of Communication and International Relations (Universitat Ramon Llull). She obtained her BA from the University of Birmingham, UK and MA from Kingston University, UK. Her research interests include Internet humour, science fiction television and films, utopia and dystopia studies and consumer technologies. Contact: goksuaa@blanquerna.url.edu.

Sue Aran-Ramspott (Barcelona, 1965) is full profesor in audiovisual and ethics of communication at the FCRIB (Universitat Ramon Llull), where she is in DIGILAB research group. She has published several articles about film and social media in international journals, as *Media and Communication*, *Media Culture and Society* and *Comunicar*. She is currently directing an R&D Project on the audience influence of Youtubers. Contact: suear@blanquerna.url.edu.

Klaus Zilles (Cochem, Germany, 1963) is associate professor at the Blanquerna School of Communication Studies and International Relations, Ramon Llull University. He holds a PhD from Heidelberg University, and studied at the University of New Mexico, and the University of Illinois. His research includes US literature, literature and film, language and identity politics in the media, disinformation and metacognition. Contact: klausz@blanquerna.url.edu.

REPRESENTACIONES FEMENINAS DE INTELIGENCIA ARTIFICIAL: *EX MACHINA* REVISA LOS MITOS DE PANDORA Y GALATEA

Resumen

La representación de la inteligencia artificial (IA) en el cine contemporáneo recoge el discurso dominante en la tradición europea sobre los temores y esperanzas de la humanidad generados por la creación de la vida artificial. El presente estudio pretende analizar el retrato de la mujer como representación icónica de la inteligencia artificial en el contexto del *zeitgeist* actual (Drosnin, 1997; Keane, 2006), ya que los cineastas exploran tanto las preocupaciones antiguas como las recientes sobre los robots femeninos al darles vida en la pantalla (Pandya, 2019; Hamilton, 2018). Sostenemos que una investigación sobre *Ex Machina* (2014), de Alex Garland, como una nueva lectura de los mitos de Galatea y Pandora corrobora nuestra hipótesis de que el modelo de robot femenino proyecta el espectro de lo femenino monstruoso, y que se puede animar a los cineastas para que lleven a cabo representaciones más complejas de mujeres capaces de subvertir la estructura de poder de la ideología patriarcal (Modleski, 2002).

Palabras clave

Inteligencia artificial; robots; ciencia ficción; estudios fílmicos; estudios de género; mitología griega.

Autores

Goksu Akkan (Izmir, 1990) tiene un Doctorado de Comunicación por la Facultad de Comunicación y Relaciones Internacionales Blanquerna de la Universitat Ramon Llull. Licenciada en la University of Birmingham (Reino Unido), y máster en la Kingston University (Reino Unido). Sus intereses de investigación incluyen el humor en Internet, la televisión y las películas de ciencia ficción, los estudios sobre utopía y distopía y las tecnologías de consumo. Contacto: goksuaa@blanquerna.url.edu.

Sue Aran-Ramspott (Barcelona, 1965) es profesora titular de comunicación audiovisual y ética de la comunicación en la FCRIB (Universitat Ramon Llull) y miembro del grupo de investigación DIGILAB. Ha publicado varios artículos sobre cine y medios sociales en revistas internacionales, como *Media and Communication*, *Media Culture and Society* y *Comunicar*. Actualmente dirige un proyecto de I+D sobre la influencia de los *youtubers* en la audiencia. Contacto: suear@blanquerna.url.edu.

Klaus Zilles (Cochem, Alemania, 1963) es profesor titular en la Facultad de Comunicación y Relaciones Internacionales Blanquerna de la Universitat Ramon Llull. Doctor por la Universidad de Heidelberg, ha estudiado en la Universidad de Nuevo México (EE. UU.),

Article reference

Akkan, G., Aran-Ramspott, S., Zilles, K. (2022). Female AI Representations: *Ex Machina* Revisits the Myths of Pandora and Galatea. *L'Atalante. Revista de estudios cinematográficos*, *33*, 189-204.

y ha enseñado en la Universidad de Illinois. Investiga sobre literatura estadounidense, literatura y cine, política lingüística e identitaria en los medios de comunicación, desinformación y metacognición. Contacto: klausz@blanquerna.url.edu.

Referencia de este artículo

Akkan, G., Aran-Ramspott, S., Zilles, K. (2022). Representaciones femeninas de inteligencia artificial: *Ex Machina* revisa los mitos de Pandora y Galatea. *L'Atalante. Revista de estudios cinematográficos*, *33*, 189-204.