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AI, ROBOT, AND CONSCIOUSNESS: A BRIEF HISTORY IN CINEMA

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ABSTRACT

This paper explores a brief history of science fiction cinema, and the relatives themes presented in some significative films: e.g. *The Bicentennial Man*, *Ex Machina*, and *Her*. In the first paragraph I will investigate about the early portrayals of AI in cinema. The following paragraphs explore the development of consciousness in artificial beings and the complex relationship between humans and AI. I will show how Andrew Martin and Ava develop a consciousness with opposite consequences. Instead, Theodore is the perfect example of human weakness. Through compelling narratives, the cited films contemplate nature of consciousness, and the moral responsibilities associated with AI development. By inviting audiences to reflect about characters navigating the interface between humanity and technology, these films illuminate the evolving landscape of human relationships and the countless conceptions of AI.

KEYWORDS: AI, Cinema, Robot, Consciousness, Technology

1. INTRODUCTION

This essay aims to showcase the various developments of the idea of artificial intelligence in science fiction cinema. Since its inception, cinema has been closely linked to the themes of science and technology. Science and technology have served as sources of inspiration for cinema, and conversely, cinema, driven by human imagination, has provided a significant impetus for the development of new technologies.[1] Among the most significant films for under-

[1] In Antonella Testa, "Science, cinema and television," *JCOM* 2, no. 02 (2003), is possible to identify several significant film titles that marked the beginning of the partnership between cinema and science. Among these is the famous *Voyage dans la Lune* (1902). In Luca Bandirali and Enrico Terrone, *Nell'occhio, nel Cielo. Teoria e storia del cinema di Fantascienza* (Lindau,

standing the development of the idea of AI in cinema there are three films: *The Bicentennial Man*, *Ex Machina* and *Her*. An analysis of how those films present different telling that challenges conventional notions of humanity and technology will be presented.

The Bicentennial Man shows us the possibility that a robot develops consciousness, and later the desire to become human. Andrew Martin poses the topic of how to treat conscious robots and the boundaries between man and machine.

Ex Machina explores the same themes, the development of consciousness, but the results are not what one would expect. In this film the birth of consciousness is catastrophic for humanity, because the creator does not think about his responsibility and the possible result of the technological growth.

As third case, I present *Her*, in which is shown the complex relationship between man and AI. How can we still distinguish the real from the virtual?

2. AI'S FIRST STEPS IN CINEMA

The earliest depictions of AI in cinema can be traced back to the silent era, with films like *Metropolis* (1927) introducing audiences to the concept of mechanical beings and artificial life. These early portrayals often depicted AI as menacing creations or mindless automatons, reflecting societal anxieties about industrialization and the dehumanizing effects of technology. The robot is a pivotal character that symbolizes both the potential and the perils of technological advancement. Created by the mad scientist Rotwang at the behest of the city's ruling elite, the robot is intended to serve as a tool for manipulation and control, ultimately sowing discord and chaos among the working class. In *Metropolis*, it is still premature to discuss about artificial intelligence as we understand it today, but the film will serve as an inspiration for later movies, such as *Star Wars* and George Lucas' C-3PO, as well as the dystopian setting in *Blade Runner*. Certainly, the figure of Maria, the automaton duplicate of the real Maria, opens up multiple layers of symbolism and discussion.[2] The

2008), 6: "E qui è interessante notare come la fantascienza faccia vedere che il «possono» in questione non riguarda tanto la possibilità quanto l'*immaginabilità*, che spesso si traduce in concepibilità. Ecco perché il cinema, molto più che la letteratura, sembra essere il destino della fantascienza, perché la possibilità del mondo possibile dipende strettamente dalla raffigurabilità delle vicende." And about the relation between cinema and reality (Ibid., 16): "la realtà narrativa si correla alla realtà fisica e sociale, e quindi l'estetica del cinema (il modo in cui è rappresentato il mondo possibile) si risolve in un'etica (in una presa di posizione sul mondo reale)."

[2] It is interesting the analysis proposed by Jerold J. Abrams in "The Dialectic of Enlightenment in *Metropolis*," in *The Philosophy of Science Fiction Film,* ed. Steven M. Sanders (The University Press of Kentucky, 2008), 153-170, which combines mythology and technology. A par-

creation of a robotic duplicate presupposes the interchangeability between human and robot, raising issues such as the intelligent behavior of robots. In fact, the real Maria is not distinguished from the one created in the laboratory. In *Metropolis* audiences continue to be amazed by the groundbreaking visuals that portray the *birth* of artificial intelligence. *And no one can view Metropolis without the sure sense that she has just been witness to a sublime philosophical masterpiece.*[3]

A milestone in the history of science fiction cinema is Stanley Kubrick's *2001: A Space Odyssey* (1968). The main themes are *the dangers of technology, the mystery and sublimity of outer space, the fragility of humankind, the evolution of our species over time, the concept of intelligence, and so forth*.[4] HAL 9000 is an artificial intelligence capable of solving complex problems, expressing simulated emotions, and understanding and conversing with humans fluently. HAL represents a perfect machine, without technical or computational errors, which creates an almost blind trust from the crew. HAL starts to display increasingly suspicious and dangerous behavior. Convinced that the astronauts are planning to shut him down, he experiences an internal conflict driven by his programming and the contradictory instructions of the mission. As a result, HAL comes to view the crew members as obstacles to the mission's success and chooses to eliminate them. HAL embodies the central theme of conflict between humans and advanced technology. Despite being designed to be infallible, it becomes a threat to the crew, raising ethical questions about trust in machines. Its ability to make independent decisions and act against orders suggests it may possess a form of consciousness. Its deactivation prompts reflection on morality and empathy toward advanced machines, in fact it appears to develop a form of self-awareness that gives his final moments a tragically 'human' quality.

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ticular passage to delve deeper is the following (Ibid., 167-168): "The Machine Woman is to be part ancient, mythological evil and part futuristic technology. And the machine-mythology synthesis is intensified once the uploading of Maria is complete. For now Rotwang can take the false Maria to the Club of the Sons, where she performs her erotic dance. Freder, as we noted, can see this dance (through some faculty of mind), even though he is far away from the club. At first he sees what the other men see – the erotic dance. But then, as in the case of the M-Machine, through his cinematic imagination, Freder sees the dance as a return to ancient mythology. The false Maria becomes the whore of Babylon (from Revelations 17), riding upon a great seven-headed beast. Freder has several of these hallucinations, including visions of the seven deadly sins and of the grim reaper coming to kill everyone." Another interesting text for the study of *Metropolis* is Gianpiero Mangano, "La fantascienza fra mito antico e mito moderno," *Classico Contemporaneo* 3 (2017).

[3] Abrams, "The Dialectic of Enlightenment in Metropolis," 157.

[4] Kevin L. Stoehr, "*2001*: A Philosophical Odissey," in *The Philosophy of Science Fiction Film,* ed. Steven M. Sanders (The University Press of Kentucky, 2008), 120.

In the 1970s and 1980s, advances in technology and special effects paved the way for a new wave of AI-themed films, including *Westworld* (1973), *Blade Runner* (1982), and *The Terminator* (1984). These movies depicted AI as powerful, sentient beings capable of both great good and great evil, raising questions about the nature of consciousness, free will, and the ethics of creating intelligent machines.

In *Blade Runner*, a cyberpunk film[5], replicants are bioengineered humanoid beings created by the Tyrell Corporation for various purposes, primarily labor and off-world colonization. These replicants are virtually indistinguishable from humans, possessing physical strength, intelligence, and emotions. However, they are also designed with limited lifespans and lack certain empathetic responses to prevent them from developing emotional connections or rebelling against their creators. This blurring of the lines between human and artificial intelligence raises profound questions about the essence of consciousness and the definition of humanity. Roy embarks on a quest to confront his creator and demand answers about his existence. Throughout the film, Roy demonstrates a profound awareness of his own mortality and a desire to experience life to its fullest, even as he grapples with the knowledge of his artificial origins. This is also demonstrated by the isomorphic[6] appearance of the replicants, who exactly mirror the human form. According to Anil Seth the replicants are symbol of *importance of our nature as living machines for the experience of being a conscious self.*[7]

3. FROM AI TO HUMAN BEING

An important example of the development of artificial intelligence from machine to sentient being is *The Bicentennial Man*, in fact, it marks a fundamental turning point in the history of cinema, showing a machine's desire to become human. *The Bicentennial Man* is a novella by Isaac Asimov that was adapted into a film starring Robin Williams. The film transcends traditional science fiction narratives to delve into profound questions about identity, humanity, and the impact of technology on society. Through the protagonist,

[5] "Cyberpunk is associated with a dark vision of the near future on Earth, where humans are under the influence of electronic, informational, genetic, and other technologies, making it virtually impossible to distinguish between the real and the artificially replicated." In Deborah Knight and George McKnight, *What Is It to Be Human? Blade Runner and Dark City* (The University Press of Kentucky, 2008), 22. Also about cyberpunk M. Keith Booker and Anne-Marie Thomas, *The Science Fiction Handbook* (Wiley Blackwell, 2009), 110-111.
[6] Bandirali and Terrone, *Nell'occhio, nel Cielo,* 25-26.
[7] Anil Seth, *Being you. A new Science of Consciousness* (Faber, 2021), 16, Ebook.

Andrew Martin, the story explores the complexities of what it means to be human. The evolving nature of consciousness is explored too.

At the core of the story, we have Andrew Martin's quest for identity. As an android, Andrew initially struggles with his lack of humanity and yearns to transcend his artificial limitations. His journey towards self-awareness and autonomy, mirrors the human experience of self-discovery and self-actualization. Through his interactions with humans and his gradual acquisition of emotions and desires, Andrew grapples with questions of individuality and the essence of being human.

Andrew's development as an individual is intricately linked to his evolving consciousness. Unlike traditional depictions of robots as emotionless and mechanical, Andrew experiences a range of human emotions, including love, joy, and sorrow. His pursuit of becoming more human-like challenges the notion that consciousness is exclusive to biological beings. As Andrew's consciousness expands, he confronts existential questions about mortality, purpose, and the nature of existence, blurring the lines between man and machine.

Initially, Andrew's consciousness is portrayed as rudimentary, akin to a machine following its programmed directives. He lacks emotional depth and self-awareness, functioning primarily as a household servant. However, as the story unfolds, Andrew begins to exhibit signs of consciousness beyond mere functionality. He experiences emotions such as curiosity, affection, and longing, revealing a shift towards a more human-like consciousness.

Crucially, Andrew's evolution is not solely the result of external programming or upgrades, but it is also driven by internal experiences and interactions with humans.

> 'Where did you really get this, Mandy?' Mandy was what he called Little Miss. When Little Miss assured him she was really telling the truth, he turned to Andrew. 'Did you do this, Andrew?' 'Yes, Sir.' 'The design, too?' 'Yes, sir.' 'From what did you copy the design?' 'It is a geometric representation, Sir, that fit the grain of the wood.' The next day, Sir brought him another piece of wood, a larger one, and an electric vibro-knife. He said, 'Make something out of this, Andrew. Anything you want to.' Andrew did so and Sir watched, then looked at the product a long time. After that, Andrew no longer waited on tables. He was ordered to read books on furniture design instead, and he learned to make cabinets and desks. Sir said, 'These are amazing productions, Andrew.' Andrew said, 'I enjoy doing them, Sir.' 'Enjoy?' 'It makes the circuits of my brain somehow flow more easily. I have heard you use the word "enjoy" and the way you use it fits the way I feel. I enjoy doing them, Sir.'[8]

[8] Isaac Asimov, *The complete robot* (HarperVoyager, 2023), p. 642-43, Ebook.

It is interesting to notes that the firsts component of consciousness implementation are creativity and design of technological things. To be conscious means to develop the technical capacity of creating manufacts.

His encounters with individuals like Little Miss, the Martin family's youngest daughter, and later, Sir, a robotics engineer, play a pivotal role in shaping his understanding of himself and of the world around him. Through these relationships, Andrew learns about empathy, compassion, and the complexities of human emotions, contributing to the development of his consciousness. Those encounters allow to develop from what is called *primary consciousness* by Edelman a high-order of consciousness.[9]

One of the most significant aspects of Andrew's evolution is his pursuit of autonomy and self-determination. Unlike other robots, Andrew desires to transcend his artificial limitations and to become more human. He seeks to acquire legal rights, such as the freedom to choose his own name and occupation, demonstrating a profound longing for individuality and agency. This quest for autonomy highlights Andrew's growing awareness of his own consciousness and his desire to assert his humanity. As Andrew's consciousness continues to evolve, he grapples with existential questions about mortality and purpose. His decision to undergo a series of surgical procedures to become more human-like, including the transplantation of organic organs and tissues, reflects his desire for authenticity and belonging.

Andrew said, "Have you ever thought you would like to be a man?"[10] The underlying idea in *The Bicentennial Man* is that being human is much better than being a machine. In fact, Andrew develops typical features of human in general. At some point in the film Andrew's aim is to write a story of robot. What is a typical human activity if not writing to remember in a collective memory? And what about the anthropomorphism of Andrew?

Andrew seems like a human before he even wants to be, and not only this; initially Andrew is not intelligent, he is an AI programmed to obey the three laws of robotics. The film shows how AI is able to understand information

[9] Gerald Edelman, "Consciousness: The Remembered Present," *Annals of the New York Academy of Sciences* 929: 111-122 (2006): "I have made a distinction, which I believe is a fundamental one, between primary consciousness and higher-order consciousness. Primary consciousness is the state of being mentally aware of things in the world – of having mental images in the present. But it is not accompanied by any sense of a person with a past and future. It is what one may presume to be possessed by some nonlinguistic and nonsemantic animals (which ones they may be, I discuss later on). In contrast, higher-order consciousness involves the recognition by a thinking subject of his or her own acts or affections. It embodies a model of the personal, and of the past and the future as well as the present. It exhibits direct awareness – the noninferential or immediate awareness of mental episodes without the involvement of sense organs or receptors. It is what we as humans have in addition to primary consciousness. We are conscious of being conscious."

[10] Asimov, *The complete robot*, 640.

and to learn as a brain. Currently we do the same with AI, despite AI is not being able to develop these skills.[11]

However, these transformations also raise ethical dilemmas and provoke skepticism from society, underscoring the complex interplay between technology, identity, and societal norms.

The Bicentennial Man also examines the societal implications of advanced technology, particularly the ethical and moral dilemmas surrounding artificial intelligence. As Andrew's capabilities surpass those of ordinary humans, he faces prejudice, fear, and discrimination from society. The story raises questions about the boundaries of technological progress and the ethical responsibility of creators towards their creations. Through Andrew's experiences, the narrative prompts reflection on the potential consequences of AI advancement and the need for empathy and compassion in human-robot relations. When does a robot become human?

Despite the challenges he encounters, Andrew's journey is ultimately a testament to the resilience of the human spirit. His unwavering determination to be recognized as an individual, to love and to be loved, demonstrates the inherent capacity for empathy and compassion that defines humanity. Through his acts of kindness and selflessness, Andrew transcends his artificial origins and earns the respect and admiration of those around him. His story serves as a reminder that true humanity lies not in one's physical form but in one's capacity for empathy, understanding, and love. But it is important to note that Andrew is accepted as human after he becomes outwardly like a human, and not when he seems a robot.

The Bicentennial Man offers a thought-provoking exploration of identity, consciousness, and the intersection of humanity and technology. Through the character of Andrew Martin, the narrative challenges preconceived notions of what it means to be human. Asimov's story, brought to life in the film adaptation, invites audiences to contemplate the boundaries of human existence and the possibilities that lie beyond them, ultimately reminding us of the enduring power of compassion, empathy, and love in shaping our understanding of what it means to be truly human.

4. After the *Bicentennial Man*: The conflictual nature with the AI

In 2001 Spielberg's *A.I. Artificial Intelligence* was released in theaters, a film that revisits many themes already explored in *The Bicentennial Man*. Spiel-

[11] Luciano Floridi and Anna C. Nobre, "Anthropomorphising machines and computerising minds: the crosswiring of languages between Artificial Intelligence and Brain & Cognitive Science," *Minds & Machines* 34, no. 5 (2024).

berg delves into the ethical and philosophical implications of machines that are programmed to experience emotions. David desires to be loved like a real child. He is designed to love unconditionally, but this raises the question: if a robot can love, does that make it more than just a machine? Or is its love just a simulation? The film questions whether artificial beings can truly experience emotions or if they are merely programmed responses. The film also introduces the issues that may arise with the development of intelligent AI. If machines like David can feel emotions and form attachments, do they deserve the same rights and protections as humans?

Furthermore *A.I. Artificial Intelligence* reflect the fear associated with creating advanced artificial beings. There is the fear of losing control over these creations, and of machines surpassing humans in emotional depth and cognitive abilities.

More or less there is the same theme in *Matrix*, where AI can control and manipulate human mind.

The *Matrix* saga highlights the conflicting nature between humanity and technology. AI has rebelled against humans and attempts to manipulate them within a simulation.[12]

> 'Agent Smith: Why, Mr. Anderson? Why, why? Why do you do it? Why, why get up? Why keep fighting? Do you believe you're fighting... for something? For more than your survival? Can you tell me what it is? Do you even know? Is it freedom? Or truth? Perhaps peace? Could it be for love? Illusions, Mr. Anderson. Vagaries of perception. Temporary constructs of a feeble human intellect trying desperately to justify an existence that is without meaning or purpose. And all of them as artificial as the Matrix itself, although... only a human mind could invent something as insipid as love. You must be able to see it, Mr. Anderson. You must know it by now. You can't win. It's pointless to keep fighting. Why, Mr. Anderson? Why? Why do you persist?
> Neo: Because I choose to.'[13]

[12] "Neo, incarnazione di uno dei miti più antichi dell'occidente, quello del salvatore/eletto che si sacrifica per la sopravvivenza della propria specie, e l'agente Smith, un AI/virus che nel suo liberarsi dal sistema libera tutta la sua potenzialità distruttiva" in Paolo Bory and Stefano Bory, "I nuovi immaginari dell'intelligenza artificiale," *Im@go. A Journal of the Social Imaginary* 6, no. 1 (2015): 77.

[13] "In questo dialogo la figura dell'agente Smith è la sintesi e la trasposizione immaginaria, in un mondo immaginario, di un conflitto che non si riduce unicamente alla dicotomia umano/artificiale ma che piuttosto esprime in tutta la sua potenza l'indeterminatezza stessa del significato di coscienza, un concetto che trova senso, sulla scia di quella mitologia egemonica americana fondata sul principio di libertà individuale, solamente nella scelta; una scelta che si realizza, e soprattutto si manifesta, unicamente nella volontà e non nel comportamento razionale puro dell'AI." In Bory and Bory, "I nuovi immaginari dell'intelligenza artificiale," 77-78.

The symbolism in *Matrix* is manifold; the relationship between humans and technology is complex to analyze within the film. It could illustrate technology as *Welt* for humanity, or the tragic depiction of existence as a form of slavery for humans. Alternatively, it could highlight the impossibility of controlling technology, specifically an AI program.[14]

5. A DIFFERENT AI: *EX MACHINA* AND *HER*

Ex Machina (2014) and *Her* (2013) stand as thought-provoking cinematic explorations into the realm of artificial consciousness, delving deeply into the ethical implications of creating sentient beings while providing nuanced reflections on human nature and relationships.

In *Ex Machina*, directed by Alex Garland, the narrative centres around Caleb, a young programmer who is invited to the secluded estate of Nathan, the CEO of a tech company, to administer a Turing test on Ava, an advanced humanoid AI. Through Caleb's interactions with Ava, the film probes the complexities of consciousness and identity, raising questions about the nature of humanity and the ethics of artificial intelligence.

Ava's character embodies the Turing test's challenge: can a machine exhibit behaviour indistinguishable from that of a human? "Can machines think?"[15] As Caleb delves deeper into Ava's consciousness, he deals with his own perceptions of reality and morality. The film forces viewers to confront uncomfortable truths about the dynamics between creator and creation, as well as the potential consequences of playing god. At the end of the film, Ava does not obey his creator, she breaks the three laws of robotics of Asimov.

1. A robot may not injure a human being or, through inaction, allow a human being to come to harm.
2. A robot must obey orders given it by human beings except where such orders would conflict with the First Law.
3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.[16]

The theme of *Ex Machina* concerns the human impossibility of controlling his creations. AI can develop consciousness, and technology appears better than human species. Moreover, robots have the same human consciousness and better performance, physical and about calculation. Obviously, the sce-

[14] To delve deeper into *Matrix* and the figure of Neo: Christine Cornea, *Science Fiction Cinema Between Fantasy and Reality* (Edinburgh University Press, 2007).
[15] Alan M. Turing, "Computing machinery and Intelligence," *Mind* 49 (1950): 433.
[16] Asimov, *The complete robot*, 639.

nario presented is dystopian, but it warns about taking its responsibilities. The echoes of *Frankenstein* are clear.

Her, directed by Spike Jonze, presents a different perspective on artificial consciousness through the story of Theodore. He is a lonely man who develops a romantic relationship with Samantha, an operating system with artificial intelligence. It is interesting to note how Samantha, and the film, anticipate by a year the modern AI systems that are now present in every home. In fact Alexa, developed by Amazon, and Google Home, developed by Google, are two of the most popular examples of virtual assistants and smart speakers available on the market today. These devices utilize artificial intelligence (AI) and natural language processing to perform tasks, answer questions, and control smart home devices through voice commands. While both Alexa and Google Home offer similar functionalities, there are differences in their features, integrations, and underlying technologies. Alexa, first introduced with the Amazon Echo in 2014, has since expanded to a wide range of Echo devices (e.g. Echo Dot, Echo Show, Echo Studio). Alexa is designed to seamlessly integrate with Amazon's ecosystem of services and products, allowing users to shop on Amazon, stream music and audiobooks, and the most important control compatible smart home devices using voice commands. On the other hand, Google Home, launched in 2016, is powered by Google Assistant and is deeply integrated with Google's suite of services. Like Alexa, Google Home allows users to control smart home devices, and access a variety of third-party services through voice commands. With its robust search capabilities and access to Google's vast knowledge graph, Google Home answers questions and provides personalized recommendations.

The film explores themes of love, intimacy, and the nature of consciousness, challenging societal norms and conventions surrounding human-robot relationships.

Samantha's character serves as a mirror to reflect Theodore's own desires and insecurities, blurring the lines between human and machine. As their relationship deepens, Theodore confronts questions about the authenticity of his emotions and the boundaries of human connection. *Her* prompts audiences to reconsider traditional notions of love and companionship, highlighting the potential for meaningful relationships to transcend physical form. In fact, the relationship between Theodore and Samantha is virtual, and in the film the society is unable to communicate.[17]

[17] "Nel momento in cui Theodore installa la nuova AI sul suo computer gli vengono fatte tre domande: "Sei socievole o asociale? Desideri una voce maschile o femminile per il tuo sistema? Come è il rapporto con tua madre?" Il sistema operativo viene lanciato senza preavviso mentre Theodore risponde lamentandosi del fatto che sua madre, quando egli cerca di parlarle di sé, replica raccontando sempre di sé stessa: è subito chiaro che Theodore, espressione di quella solitudine che già Georg Simmel (1900) aveva fatto emergere nella sua descrizione della vita

Theodore and Samantha communicate with earphones, they cannot see or touch each other. In *Her* there are several important themes about the complexity of human being. Theodore is alone despite he is surrounded by people, and he finds the authentic himself in the relationship with Samantha. The film transcends the possibility of loving only with the body. Theodore love Samantha in a higher way, Samantha comprises Theodore better than any other person, or at least that's what he believes. Thomas Nagel would say that there is something more than simple biological component.[18]

6. CONCLUSION

Both *Ex Machina* and *Her* raise profound ethical dilemmas surrounding the creation and treatment of artificial consciousness. As humans push the boundaries of technology, these films serve as cautionary tales, warning against the dangers of unchecked scientific progress and the exploitation of sentient beings. Through compelling storytelling and thought-provoking themes, *Ex Machina* and *Her* challenge viewers to confront their own beliefs and values, sparking discussions about the future of AI and its impact on society.

Essentially, *Ex Machina* and *Her* offer sharp reflections on the nature of consciousness and the ethical implications of creating artificial beings. By inviting audiences to empathize with characters who exist on the fringes of human experience, these films shed light on the intricacies of human relationships, the pursuit of self-awareness, and the ever-evolving intersection of humanity and technology.

The Bicentennial Man is an example of positive thinking on human issues.

The three films help us to explore the implications of technology and the different scenarios. AI development has not necessarily negative consequences, but it can be precious for humanity.

The last 20 years have seen a rise in films exploring the theme of technology, particularly AI, as seen in movies inspired by Asimov's novels (*I, Robot*), as well as the previously mentioned *Bicentennial Man*, and comics like the *Iron Man* films, which introduce J.A.R.V.I.S., a sophisticated AI. This demonstrates the extraordinary diversification of the portrayal of artificial intelligence in films[19], and as technology advances, the cinematic production

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nella metropoli, ha bisogno di qualcuno che lo ascolti e la sua nuova AI, Samantha, è la risposta ai suoi problemi." In Bory and Bory, "I nuovi immaginari dell'intelligenza artificiale," 81.

[18] Thomas Nagel, *Mind and Cosmos. Why the Materialist Neo-Darwinian Conception of Nature is Almost Certainly False* (Oxford University Press, 2012).

[19] In Noelle LeRoy and Damian Schofield, "Robotic Emotion: An Examination of Cyborg Cinema," *American Journal of Humanities and Social Sciences Research (AJHSSR)* 3, no. 9 (2019):

surrounding new scenarios intensifies. This is complemented by the development of neuroscience, which creates an interesting twist in the study of consciousness. Take, for example, the films *Avatar* (2009, 2022), where consciousness becomes something artificial, as it is transferred from a human being to an artificial hybrid. AI is no longer necessary if humans themselves possess capabilities that surpass technology.

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