DIGITAL REALITIES AND METAPHORICAL CONSTRUCTS: A MULTIMODAL SEMIOTIC AND INTERMEDIAL ANALYSIS OF *BLADE RUNNER 2049*

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Abstract

The concept of metaphor has long been explored in film in a variety of ways, from Eisenstein's experimentations to more contemporary examples. Contemporary theoreticians such as Forceville (2016) have enhanced the concept of metaphor, moving away from its purely linguistic quality and underlying its multimodal aspect. In this article, we will use Forceville's paradigm of multimodal metaphors as implemented in films. We will analyse *Blade Runner 2049* (Villeneuve 2017), focusing on its representation of digital reality through multimodal metaphors. The film, widely acclaimed for its philosophical depth (Shanahan et al. eds. 2020) and visual storytelling, is set in a dystopian future where human-like androids coexist with humans and serve as a means for exploring digital metaphors in a society dominated by artificial intelligence and augmented reality. We ex-

amine the film's use of visual, auditory, and narrative elements, in order to construct a metaphorical framework that reflects contemporary digital concerns. Through an in-depth exploration of its visual, auditory, and narrative dimensions, this analysis uncovers a dense metaphorical structure within the film. This structure mirrors pressing societal concerns regarding the evolution and impact of digitalisation, augmented reality, and artificial intelligence, providing a critical lens on contemporary technological advancements. The study aims to enrich the discourse on digital metaphors in media, highlighting the evolving interplay between human experiences and technological advancements.

1. Introduction

In contemporary cinema, the metaphorical constructs have become a powerful tool, providing insights into contemporary technological and societal concerns. This article focuses on the multimodal and intermedial aspects of Denis Villeneuve's *Blade Runner 2049*, a film highly acclaimed by critics for its philosophical depth and visual storytelling. By employing Charles Forceville's theory of multimodal metaphors, the analysis focuses on how *Blade Runner 2049* represents digital realities, exploring their implications for human identity and the nature of existence in an era dominated by artificial intelligence and bioengineered beings. The study investigates the film's use of visual, auditory, gestural and narrative elements, in order to construct a metaphorical framework which reflects the film's themes related to artificiality, digitality and technological advancements. The aim is to enrich the discourse on metaphors in media, especially cinema. Furthermore, it reflects on the influence of digital media on film, emphasizing the transformation in storytelling and digital techniques, which supports the arrival of a post-cinema era as articulated by theorists like Lev Manovich. In this sense, *Blade Runner 2049* is more than a narrative of futuristic dystopia based on extensive metaphors. These metaphors construct a crucial discussion on the nature of reality and identity in the digital age and a commentary on the evolution of cinema.

2. Theoretical and Methodological Framework

Conceptual Metaphor Theory (CMT), developed by George Lakoff and Mark Johnson in their seminal work *Metaphors We Live By* (1980), changed our understanding of metaphors by proposing that they are not

merely linguistic expressions but fundamental to human thought and action. According to CMT, metaphors allow individuals to understand and experience one thing in terms of another. This cognitive process extends beyond language into various human cognition and perception modes.

Lakoff and Johnson argued that metaphors are pervasive in everyday life, not just in language but also in thought and action. They introduced the idea that the human conceptual system is fundamentally metaphorical, meaning that abstract concepts are often understood in terms of more concrete experiences.

Charles Forceville (2006, 2007, 2009, 2016) extended the principles of CMT to visual and multimodal metaphors, asserting that the mechanisms underlying metaphorical thought apply to multiple modes of communication, including visual images, sounds, and gestures. In his work, Forceville emphasizes the notion that metaphors in films and other media are not confined to verbal language. They can be expressed through visual and auditory elements that interact to create complex metaphorical meanings. In the context of film, multimodal metaphors involve the integration of various modalities to convey metaphorical meaning.

In discussing the terminology associated with metaphors, Forceville distinguishes between the "target" and "source" of a metaphor. The target is the phenomenon being described, while the source is the phenomenon to which the target is compared. For instance, in the metaphor "life is a journey," "life" is the target, and "journey" is the source. This distinction is crucial because it highlights the directional nature of metaphorical mapping, where features from the source domain are projected onto the target domain, in order to facilitate understanding. Forceville extends the discussion of metaphors to encompass visual and multimodal contexts, particularly film. He categorizes metaphors into several types: *Contextual Metaphors*, in which the context of the target suggests the source; *Hybrid Metaphors*, in which the target and source are physically merged into a single, often non-existent; gestalt and *Simile-Type* Metaphors., where the target and source are juxtaposed without manipulation. Forceville differentiates between creative (resemblance) metaphors, which establish novel comparisons between unrelated domains, and structural (primary) metaphors, based on systematic patterns of thought rooted in sensory and physical experiences. Structural metaphors, such as "time is space", are considered foundational to human cognition and are reflected in various cultural expressions.

Forceville also notes how a film's genre influences the interpretation and effectiveness of metaphors. For example, science fiction and fantasy genres, with their propensity for hybrid creatures and transformative visuals, are

particularly conducive to metaphorical construction. In contrast, genres such as documentaries might rely more on editing to create metaphorical meanings.

Kathrin Fahlenbrach's work, and more specifically her edited volume *Embodied Metaphors in Film, Television, and Video Games: Cognitive Approaches* (2016), examines how embodied metaphors function across various media forms. Her research complements Charles Forceville's framework by emphasizing the cognitive and emotional engagement these metaphors elicit from audiences.

Fahlenbrach argues that films utilize embodied metaphors to evoke visceral responses, making abstract concepts more tangible and emotionally resonant. This is achieved by leveraging the audience's sensory and emotional experiences which is particularly evident in films like *Blade Runner 2049*. The movie's use of embodied metaphors in its characters' physical and emotional experiences aims to elicit empathy and provoke reflection among viewers.

Additionally, Fahlenbrach discusses the concept of intermediality in film metaphors, where different media forms and sensory modalities intersect to create a unified metaphorical experience. This is particularly relevant in *Blade Runner 2049*, where integrating visual art, sound design, and narrative storytelling creates a complex, multimodal metaphorical world. This blending of modalities invites viewers to engage with the film on multiple levels, aligning well with Fahlenbrach's notions of embodied metaphors.

2.1. Cinema in the Post-media Era

Bazin in his critical essay, "Pour un cinéma impur: défense de l'adaptation", written in 1951 made a call for impurity in cinema. As Nagib and Jerslev expound on his idea of impurity: "impure" for Bazin seemed to mean […] accepting reality as it offers itself to the camera with all its contingent and apparently irrelevant bits, even if this reality is nothing but a book on which a film is based" (2014: xix–xx). In the post-media age, Bazin's notion of impurity is more pertinent than ever, with all the genres, media, and new technologies that heavily impact cinema. Nagib and Jerslev (2014: xviii) explain that Bazin's "call for hybridisation" is very relevant today due to "the spiralling mixture of media that pervades our virtual space". This mixture of media challenges our concept of cinema and pushes the audience to new experiences and cinematic spaces.

As Pethö (2012: 1) notes, since the centenary of cinema, there has been heated debate about the "imminent demise of the cinematic medium" and "the death of classical cinema". She claims that words such as "media con-

vergence" or "post-media aesthetics" have refashioned the "ecosystem" of media through various "processes of hybridisation and media convergence" (ibid.). Thus, media can no longer be considered "isolated monads" (Müller 2010: 18) but hybrid forms that englobe the qualities and materiality of diverse media and genres. Casetti refers to this process as "relocation" (2008: 27), meaning that the life of a medium continues in an altered form. He informs us that a new experience is regenerated elsewhere. In a similar way, Pethö expounds that in the post-media era, one cannot refer to the medium of cinema but should rather refer to "an all pervasive "cinematic experience" (2012: 3). These experiences take new forms and are screened in a multitude of spaces to provoke various emotions in the spectator. In this multitude of spaces and genres,[1] it is crucial to ask what happens to cinema and its analogue form as we have experienced it until now.

In his book, *The Language of New Media* (2001), Lev Manovich refers to the blurring of boundaries between media in the digital age. More prominently, he notes that cinema is no longer diverse from animation since, with digital technology, directors can change anything from cinematography to lighting and thus create more dramatic or atmospheric results. He explains that cinema "is no longer an indexical media technology, but, rather, a sub-genre of painting" (2001: 250). Manovich, in fact, compares the post-cinematic to the pre-cinematic era when films were hand-painted and hand-drawn (ibid.). In exactly the same way as artists painted specific sequences of film in the first years of cinema to create a different effect on the viewer, digital artists today paint specific sequences. In the post-cinema era, films can be shot on location, and then some sequences can be digitally painted by digital artists to create a more dramatic or atmospheric effect.

Digital media have heavily impacted on film by transforming not only the notion of storytelling but also the techniques used in filmmaking. We have thus, in Manovich's words (2016),moved towards a post-cinema era. He claims that most critics equate the advent of digital technologies to interactive cinema. Nevertheless, as he argues, although it is very exciting to suggest to the audience that they can actively participate in the making of the narrative and interact with characters, this is only one possibility of digital cinema. He describes that:

> The challenge which digital media poses to cinema extends far beyond the issue of narrative. Digital media redefines the very Identity of cinema [...] what used to be cinema's defining characteristics have become just the de-

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[1] Pethö (2012: 3) lists several post-media genres, among which are web video, 3D cinema, computer games that operate through the use of moving image narratives, DVDs and television, which is adapted "to all these new forms".

fault options, with many others available. When one can "enter" a virtual three-dimensional space, viewing flat images projected on the screen is hardly the only option (Manovich 2016: 20).

3. *Blade Runner 2049* Analysis

Plot Synopsis

Blade Runner 2049, directed by Denis Villeneuve, is a sequel to Ridley Scott's 1982 classic film *Blade Runner*, based on the novel *Do Androids Dream of Electric Sheep?* by Philip K. Dick, published in 1968. Set thirty years after the original, the film focuses on themes of identity, technology, memory, surveillance and existence.

The film opens in a dystopian future where bioengineered humans known as replicants serve as slaves. The protagonist, Officer K (Ryan Gosling), is a new model replicant working as a blade runner for the LAPD. His job is to "retire" (namely to kill) old model replicants who have gone rogue. The story begins with K hunting down and retiring a replicant named Sapper Morton (Dave Bautista). During this mission, K discovers a box buried beneath a tree on Morton's farm. The box contains the remains of a female replicant who died during childbirth. This revelation is groundbreaking because replicants were not supposed to be capable of reproduction. They could only be created (and controlled) by humans. The remains are identified as Rachael[2], the replicant loved by Rick Deckard (Harrison Ford) from the original film.

Lt. Joshi (Robin Wright), K's superior, orders him to find and destroy the child, in order to prevent societal chaos. K's investigation leads him to a DNA record matching Rachael's child, leading him to an orphanage. At the orphanage, K finds a wooden toy horse with a date carved into it, which matches his memory of hiding the toy as a child. Believing he might be the child of Rachael and Deckard, K seeks out Dr. Ana Stelline (Carla Juri), a memory designer who creates memories implanted in replicants. Dr. Stelline confirms that the memory of the toy horse is real, intensifying K's belief that he might be the first replicant child born naturally.

Niander Wallace (Jared Leto), the head of the Wallace Corporation, which took over the Tyrell Corporation, is obsessed with discovering the

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[2] In *Blade Runner 2049*, the character Rachael, originally played by Sean Young in the 1982 film *Blade Runner*, appears again. For the scenes in *Blade Runner 2049*, Sean Young's likeness was recreated using CGI technology, with actor Loren Peta serving as the body double for the physical performance. This combination of advanced digital techniques and physical acting allowed Rachael to be brought back to the screen in a way that closely resembled her original appearance.

secret to replicant reproduction, in order to expand his production. Wallace's enforcer, Luv (Sylvia Hoeks), is tasked with finding the child. Luv follows K's trail and kills Lt. Joshi to protect Wallace's interests.

K's A.I. companion, Joi (Ana de Armas), plays an important role in his journey. Joi is a digital construct who provides emotional support to K. She names him "Joe," reinforcing his sense of individuality. Joi's presence highlights the theme of artificial relationships and the search for meaning in a digital age.

K's investigation leads him to Las Vegas, where Rick Deckard is isolated. Deckard reveals that he and Rachael had a child together whom he hid to protect from those who would exploit her. Luv captures Deckard and destroys Joi's emanator, effectively killing her. K, left for dead, is rescued by the replicant resistance led by Freysa (Hiam Abbass). Freysa reveals that K is not Rachael's child but was given her memory to help hide the real child, Dr. Ana Stelline. Determined to protect Deckard and give him a chance to meet his daughter, K intercepts Luv's convoy transporting Deckard to Wallace's headquarters. In a brutal fight, K kills Luv and rescues Deckard. K takes Deckard to Dr. Stelline's laboratory, where Deckard meets his daughter for the first time. The film ends with K lying on the laboratory steps, injured and gazing up at the snow, reflecting on his journey and newfound understanding of his Identity.

4. Film Metaphors

Discussing metaphors in *Blade Runner 2049* is essential, since the film is metaphorical in its totality. This aligns with Forceville's words on how a film's genre influences the interpretation and effectiveness of metaphors. One pervasive metaphor in the film is urban decay seen as societal collapse. The dystopian cityscapes of Los Angeles are depicted as bleak, rain-soaked, and shrouded in perpetual darkness, symbolizing the erosion of societal structures and human values. The omnipresent pollution, towering monolithic structures, and dilapidated buildings serve as visual metaphors for a world where technological advancement has come at the cost of environmental degradation and social disintegration. This setting reflects the consequences of unchecked industrialization and the dehumanizing effects of a society which prioritizes technological progress over ecological and communal well-being.

In contrast, the scenes set in the ruins of Las Vegas present a different environment. Once a vibrant city known for its entertainment and excess, Las Vegas is now a barren, irradiated wasteland buried under a thick layer of orange dust. This desolate environment symbolizes the destructive con-

sequences of humanity's actions and the ultimate collapse of a society built on unsustainable practices. The abandoned casinos and statues of forgotten celebrities stand as eerie monuments to a bygone era, serving as a stark reminder of the fragility of human achievements in the face of ecological disaster.

The omnipresent, harsh artificial lighting in the urban environments contrasts sharply with the natural light, which is often dim and obscured. This lighting metaphorically represents the superficiality of technological advancements that promise enlightenment and progress but deliver a cold, unwelcoming reality. The artificial lights create an illusion of vibrancy and activity, yet they fail to illuminate the deeper truths and moral ambiguities faced by the characters. This metaphor is visually reinforced through the cinematography which uses stark contrasts between light and shadow to emphasize the duplicity of the world depicted in the film.

Another omnipresent metaphor in *Blade Runner 2049* is silence as isolation. The film often employs long stretches of ambient sound or complete silence, especially in scenes involving the protagonist, K. These moments of quietude express his isolation in a world teeming with artificial life yet devoid of genuine connections. The minimalist soundscape contrasts with the overwhelming sensory input of the city's advertisements and digital interfaces, highlighting the disconnection between K's internal world and the external chaos. This metaphor is in line with the film's theme of alienation in a hyper-digital age, where meaningful interactions are scarce, and individuals navigate an impersonal, automated environment.

Below we will analyze specific metaphors closely connected with the main themes of the film. It is interesting that the target of the metaphor in many cases is the same. It has many different metaphor sources due to the interconnection of the metaphors to express the film's themes. Moreover, as the film narrative evolves, the metaphor source changes.

Memory is (false) Identity

The metaphor of *Memory is Identity* signifies the replicants' quest for identity and self-understanding. In the film, implanted memories are used to discuss the impact of personal history on one's sense of self, charging these memories with emotional significance that surpasses their artificial origins. Richard Heersmink and Christopher Jude McCarroll (2020) discuss how shared memories play a crucial role in shaping personal identities and emotional connections, emphasising their role in self-perception (Heersmink & McCarroll 2020). Through K's journey, the film reveals how memories, whether real or implanted, play a crucial role in shaping identity

and emotional connections. The audience is provoked to reconsider the essence of what makes someone "human" in a world where the lines between the "real" and the constructed, and the physical and the artificial are increasingly blurred. The scene where K discovers the wooden horse at the orphanage blurs the line between implanted and real memories, challenging K's understanding of his past. This moment is pivotal for K's emotional journey, confirming the reality of his memory while casting doubt on his identity. The orphanage symbolizes abandonment and lost potential, mirroring K's internal struggle with his perceived lack of identity and belonging (Heersmink & McCarroll 2020) The memory suggests that he might be the offspring of Rachael (Sean Young) and Deckard (Harrison Ford), positioning him as potentially the first naturally-born replicant. This crucial revelation directly ties K's sense of self to this memory, suggesting a unique identity among replicants. The wooden horse itself, symbolizing innocence and childhood, along with the curved date of birth at its bottom, becomes a tangible link to a seemingly real past, challenging the boundaries of his implanted identity (Savulescu 2017a).

Moreover, K's visits Dr. Ana Stelline (Carla Juri), a memory designer, and she confirms the authenticity of K's childhood memory. Her emotional reaction reinforces the memory's genuine impact. This scene highlights the importance of memory authenticity in establishing identity, suggesting that memories, even when implanted, can hold emotional truths. Dr. Stelline's tears while viewing the memory emphasise its emotional depth, affecting not only K but also others who encounter it. This shared emotional resonance reinforces the idea that memories contribute significantly to the construction of a shared identity (Clowes 2020).

Joi (Ana de Armas), K's holographic A.I. companion, plays a crucial role in validating his memories and sense of Identity. Her constant reassurances of K's importance and her act of naming him "Joe" (*name as Identity*) provide him with a sense of individuality, reinforcing his belief in the significance of his memories. This dynamic highlights the need for external validation in the construction of self. Joi's genuine-seeming emotions and shared memories with K underline the paradox of seeking authenticity through artificial others (Smart 2020). Joi's interactions with K complicate his understanding of his own emotions and identity, highlighting the complex interplay between artificial and authentic feelings. Their relationship brings into question the nature of memory and love, suggesting that memories, regardless of their origin, can forge real emotional bonds.

The revelation that Dr. Ana Stelline is the true source of the memory, not K, shatters his belief in his uniqueness among replicants, but also redi-

rects his understanding of self-identity. This moment underlines the shared nature of human and replicant experiences, indicating that memories, even when transferred, can create a sense of identity. K's subsequent identity crisis and acceptance of his role in the larger narrative of replicant freedom reflect a redefinition of self (Heersmink & McCarroll 2020). "It becomes evident that K's incremental embrace of his own agency becomes its central and most- important motif." (Shanahan 2020: 22). Despite the revelation, K's journey illustrates emotional resilience and growth. His acceptance of his true nature, as well as his continued pursuit of meaning, demonstrate a deeper understanding of identity beyond implanted memories (Savulescu 2017; Jangles 2023).

Artificial Intelligence as Emotional Being

The metaphor *Artificial Intelligence is Emotional being* is mainly embodied in the character Joi, K's holographic A.I. companion. This metaphor pinpoints the blurred lines between programmed responses and genuine feelings, challenging the audience to consider the authenticity of emotions as expressed by A.I. The relationship between K and Joi invites viewers to question the meaning for an artificial being to possess or express genuine emotions. As Fiona Woolard notes:

> We can see her as something that was originally a mere product, but who later developed a genuine personality and genuine emotions. This would fit with my contention that it is not how we start out that matters, but how we end up. (Woolard 2020: 58)

One of the most significant scenes which illustrate this metaphor occurs when Joi interacts with K in their apartment. Joi's ability to adapt her behaviour and express affection mirrors human emotional dynamics. Her expressions of love and concern for K seem genuine, suggesting that A.I. can mimic the depth of human relationships. This scene challenges the viewer to question whether Joi's programmed emotions can be considered authentic. The metaphor here underscores the film's exploration of whether A.I. can truly replicate human emotions and have feelings of its own, as well as the implications of forming emotional bonds with artificial beings.

K's ability to "pause" Joi, even in the middle of a kiss, emphasizes the control which humans, and by extension replicants, can exercise over A.I. This highlights the inherent power dynamics in their interactions. Despite this control, Joi's interactions with K suggest a level of emotional depth that challenges the boundaries between programmed responses and genuine feelings.

The metaphor is further expressed in the scene where Joi convinces K to take her emanator, a portable projection device, allowing her to accompany him outside the confines of their apartment. This act of leaving the safety of her fixed projection point symbolizes Joi's willingness to share K's experiences and risks. It enhances the questions concerning her genuine feelings, and raises questions about the nature of love and care in a digital age. It asks whether artificial constructs can genuinely have complex emotional lives as humans. Later in the film, when Luv destroys her emanator, Joi's last words to K are filled with authentic concern and affection. Her final moments vividly express the emotional bond they have developed despite her artificial, intangible nature. K feels devastated. Overall, the scene discusses the transience of digital relationships and the impact of losing what feels like a real emotional connection.

The sex scene between Joi, K, and the surrogate Mariette, further complicates this metaphor. Joi's desire to provide K with a physical experience of intimacy leads to the merging of her holographic form with Mariette's physical body. The scene begins with Joi's holographic form shimmering and aligning with Mariette's body, creating an uncanny blend of the two women. As Joi's image flickers and adjusts to match Mariette's movements, the synchronization process highlights the ethereal and intangible nature of Joi. The visual effect is mesmerizing and disorienting, as the two sets of eyes, lips, and hands occasionally misalign, reminding the audience of the artificial nature of Joi's existence.

This fusion of digital and physical forms raises questions about authenticity and connection in an age where digital and physical realities increasingly overlap. The scene's choreography and special effects emphasize the fragility and impermanence of Joi's holographic form, contrasting it with the solidity of Mariette's body. This visual merging reinforces the complexity and ambiguity of emotions in the digital age, suggesting that genuine emotional connections can emerge even from artificial constructs.

The delicate interplay of light and shadow on Joi's holographic projection against Mariette's physicality creates a striking visual metaphor for the blurred boundaries between the digital and the real, ultimately questioning the nature of intimacy and connection in a technologically advanced world.

In other words, Joi's interactions with K throughout the film consistently reinforce the metaphor of Artificial Intelligence as Emotional being. Her ability to display a range of emotions from joy and curiosity, to fear and love, invites the audience to reconsider the boundaries between authentic and artificial feelings.

Artificial beings are Divine Creations

This metaphor focuses on the concept of artificial life creation as an act of God-like power, critiquing the hubris and ethical implications of playing God with artificial life.

One of the most significant scenes illustrating this metaphor occurs when Wallace introduces a new replicant model. As the replicant is "born", Wallace delivers a monologue on the nature of creation and his desire to push the boundaries of what is possible. His words and actions suggest that he sees himself as a god-like figure, bestowing life upon his creations. On the visual level, the scene is clinical, with the new replicant emerging from a synthetic womb-like structure. This imagery reinforces the metaphor of divine creation, highlighting the parallels between Wallace's technological prowess and the act of divine creation in religious texts.

More specifically, the process of creating the replicant is depicted with a mix of reverence and cold efficiency. The scene opens with Wallace and his assistants in a pristine, almost sacred environment, stressing the reverence with which the creation act is treated. However, the efficiency and clinical nature of the process emphasize the dehumanizing aspect of treating creation as a mere technical achievement. The new replicant emerges from a synthetic womb filled with a gelatinous substance. This visual image evokes the natural birth process, where the womb and amniotic fluid symbolize protection and nurturing. However, the artificial nature of this womb and fluid brings out the replicants' manufactured origin, contrasting natural birth with synthetic creation. The gelatinous substance surrounding the replicant is a metaphor for (artificial) amniotic fluid, representing the nurturing environment required for life to begin. The fluid's artificiality highlights the replicants' constructed nature, differentiating them from naturally born humans. The gel symbolizes Wallace's control over the creation process, akin to a god moulding life from raw materials. This underscores the power dynamics between creator and creation, with Wallace manipulating the very environment from which new life emerges. As the replicant emerges from the gel, the water pouring over her can be seen as a ritualistic cleansing, signifying purification and the transition from the "womb" to the world. Water is traditionally a symbol of life and rebirth. In this context, it foregrounds the replicant's new beginning and the power Wallace holds to grant or deny this rebirth.

The newly-born replicant's position – naked, vulnerable, and covered in gel – mirrors the vulnerability of a newborn. This imagery evokes a sense of fragility and innocence, contrasting with Wallace's subsequent actions. Wallace's inspection of the replicant, followed by her casual disposal when

she does not meet his standards, illustrates the extent of his control over "life and death". He perceives himself as a divine creator. The replicant's fear, innocence and helplessness underscore the ethical implications of creating life with the power to destroy it so easily. The metaphor is further manifested through Wallace's obsession with creating replicants capable of reproduction. His ambition to make replicants that can procreate is driven by a desire to achieve a self-sustaining form of artificial life, mirroring the generative power attributed to divine beings.

Another key scene which expresses this metaphor is Wallace's conversation with Deckard. Wallace attempts to manipulate Deckard by offering him a new, perfect version of Rachael, complete with her original memories and appearance. This act of recreating Rachael evinces Wallace's belief in his god-like ability to control life and death. This scene's visual and auditory elements, with the eerily, almost accurate recreation of Rachael and Wallace's calm, persuasive tone, enhance the metaphor of divine creation.

The metaphor is also evident in Wallace's headquarters. The grand, temple-like architecture of his workspace, combined with the serene, almost ethereal lighting, creates an atmosphere which resembles a divine sanctuary. This setting reinforces Wallace's self-perception as a god-like figure, elevating his technological creations to the level of divine miracles. The visual grandeur and solemnity of his headquarters contrast sharply with the ethical questions and moral ambiguities surrounding his actions, depicting the tension between technological advancement and moral responsibility.

Replicants are (not) Human Surrogates

K, a replicant himself, is tasked with "retiring" older models of replicants. These scenes depict replicants as surrogates for human labour and roles, performing tasks deemed too dangerous or undesirable for humans. The visual elements, such as the replicants' realistic human appearance and their integration into society, stress how replicants are substitutes for real human beings. As notes, "while humans are not stronger, more intelligent, or cybernetically enhanced, replicants are nothing more than the slaves of the galaxy, seemingly having few to no rights" (Elyamany 2021: 6).

The auditory elements, including the cold, "clinical" language used to describe their functions and termination, further reinforce their role as mere stand-ins for humans (Shanahan & Smart 2020). Humans refer to the replicants as "skins", a semblance of human beings that do not have a soul. They are not born, they are constructed, and thus, they can do everything the humans want of them.

K visits Sapper Morton's farm, an older model replicant who lives a quiet, reclusive life as a protein farmer. The setting – a barren, desolate farm – indicates the replicants' isolation and the minimal acknowledgement they receive for their contributions. In this scene, another metaphor occurs as K finds Rachel's bones under a tree. The dead tree where K finds the buried remains of Rachael is a visual metaphor for life, memory, and growth. Trees traditionally symbolize life, continuity, and the passage of time. In this context, the barren tree, linked with the discovery of Rachael's remains, epitomizes the theme of life and death. The tree also symbolizes the roots of memory and identity that are deeply embedded in the past. K's discovery under the tree represents uncovering hidden truths and memories that shape one's identity and sense of self, which contrasts with his role as a mere human surrogate.

This metaphor is also evident in the character of Luv, Wallace's replicant enforcer. Luv's role as Wallace's surrogate in executing his will and maintaining order highlights the idea of bioengineered beings as extensions of the power and desires of their creators. Her actions, often violent and ruthless, reflect Wallace's ambitions and moral blindness. The visual elements of Luv's precise, calculated movements and her unwavering loyalty to Wallace put stress on her function as an instrument rather than an independent being.

The film's depiction of the replicant underground resistance further builds upon the metaphor. The resistance, composed of replicants seeking freedom and recognition, symbolises the surrogate life seeking its own identity and rights. The visual and auditory elements of their secret meetings and passionate speeches point to their desire to transcend their roles as surrogates and be acknowledged as sentient beings with their own purpose. This reversal of the "source" part of the metaphor implies the potential for bioengineered beings to evolve beyond their designed functions and seek self-determination.

Artificial Beings is Evolution

This is one of the most important metaphors in *Blade Runner 2049*, and is mainly embodied by the replicants' journey toward self-awareness and autonomy. This metaphor focuses on artificial beings not as human constructs but as entities capable of growth, adaptation, and self-improvement, reflecting broader themes of change, survival, and progress. For example, when K discovers the buried remains of Rachael, a replicant capable of giving birth, humans in power were shocked that replicants, originally designed as obedient servants, have the potential for biological reproduc-

tion – a fundamental aspect of evolution. The scene contains metaphorical visual and auditory elements which underline this groundbreaking revelation. The desolate, barren landscape where the remains are found is a metaphor for the dormant potential of replicants, waiting to be unearthed and recognized.

The metaphor is further embodied by the character of Niander Wallace, who seeks to unlock the secret of replicant reproduction. Wallace views this capability as the next step in the evolution of bioengineered beings, allowing replicants to proliferate independently and ensuring humanity's expansion across the stars. What Wallace wants is more instruments, and more replicants to be controlled, rather than the replicants' evolution towards an autonomous existence.

Additionally, the replicant resistance movement is another element that verifies this metaphor. Led by individuals like Freysa, a former combat medic replicant, the movement embodies the drive for freedom and self-determination. These replicants are not content with their prescribed roles and seek control over their identities and futures. The visual representation of the resistance, with its hidden networks and undercover meetings, is a metaphor for the underground nature of evolutionary change, often occurring away from the eyes of those in power. The auditory elements, such as the whispered conversations and the sounds of preparation for rebellion, enhance the sense of an impending shift in the replicants' status and capabilities.

K's journey is a major expression of the metaphor. Throughout the film, K grapples with his identity and purpose, evolving from a compliant blade runner to a self-aware individual questioning his existence. His interactions with Joi, another form of Artificial being, and his discoveries about his own past drive this evolution. K's transformation is visually marked by changes in his demeanour and actions, reflecting his growing self-awareness and autonomy. The auditory elements, such as his evolving dialogue and the changing tone of his voice, mirror his internal journey toward self-discovery and evolution. The metaphor of *artificial beings is evolution* is also evident in the replicants' ability to form emotional bonds and relationships, challenging the notion that they are mere "skins". Joi evolves from a basic program into an entity capable of complex emotions and interactions. In general, *Blade Runner 2049* is full of scenes that follow the evolution of artificial beings' journeys, constructing a multimodal metaphor.

Artificial Intelligence is Surveillance

The metaphor is evidenced by the ubiquitous presence of AI-driven monitoring systems throughout the film. This metaphor focuses on the

pervasive and intrusive nature of surveillance in a technologically advanced society, foregrounding themes of control, privacy, and autonomy. For example, during the film, K undergoes "the baseline test" in many instances. The test, designed to ensure that K remains emotionally stable and compliant, uses advanced AI algorithms, in order to analyze his responses to various stimuli. Visually, the stark, clinical setting of the test room, combined with the dispassionate voice of the AI conducting the test that continuously repeats the same phrase: "cells, within cells…" constructs a metaphor for the dehumanizing nature of surveillance. The repeated phrases and the mechanical, impersonal delivery highlight the oppressive control exerted over K's life, accenting the metaphor of A.I. as a tool of surveillance and control. As Clowes notes:

> The test appears to be designed to check for signs of cognitive or emotional (ab)normality. As with most engineered artefacts, K is designed to fulfil a function, and the baseline test ensures that he is operating within the limits of his design specification. Given the overriding concern with issues of control and obedience in BR2049 – replicants should obey their human masters – it is likely that the baseline test functions as a guarantee: it ensures that blade runners are operating in the manner of a "good angel" (to quote Wallace). As we learn from the movie, a failure to meet the demands of the baseline test is sufficiently serious to warrant a blade runner's (involuntary) "retirement." (Clowes 2020: 115)

Moreover, K's movements are constantly monitored by his superiors at the LAPD. The advanced AI systems track his location, activities, and even his emotional state, leaving him with little to no privacy. On the visual level, the use of screens displaying K's actions and the omnipresent surveillance cameras create a sense of being constantly watched. This surveillance extends to other replicants and humans in the film and illustrates the broader societal implications of AI-driven monitoring. The auditory elements, such as the background hum of machinery and the occasional beeps of tracking devices, enhance the atmosphere of constant oversight. Wallace also uses advanced AI technology to monitor and control his replicant creations, treating them as tools to be observed and manipulated. His surveillance extends to tracking and eliminating any replicants who deviate from their programmed behaviour. Wallace's headquarters, filled with sophisticated monitoring equipment and surveillance drones, reinforce the metaphor of AI as an all-seeing, omnipotent presence.

In essence, *Artificial Intelligence is Surveillance* is an omnipresent metaphor in the film. For example, the A.I. advertisement systems bombard citizens with personalized messages. These AI-driven advertisements

track individuals' preferences and behaviours, creating a tailored and intrusive experience. The towering holographic ads dominate the cityscape and stress the pervasive nature of surveillance in every aspect of life. The auditory elements, such as the constant chatter of advertisements and the ambient noise of the bustling city, enhance the sense of being surrounded and monitored at all times.

"Humanity" is a Spectrum

Throughout the film, the varying degrees of human-like qualities in replicants, from their emotions to their physical capabilities, serve as metaphors for the spectrum of humanity that can exist. This diversity challenges the binary notion of human versus machine. It poses questions of what it means to be human through the evolving consciousness and autonomy of replicants and reflecting the idea that humanity is not a fixed state but a spectrum that includes digital beings (Savulescu 2017).

5. Conclusions

Blade Runner 2049 includes a multitude of complex and intertwined metaphors which deepen the narrative and themes of the film, exploring contemporary concerns about identity, technology, and the nature of humanity in the digital age. The metaphors focused on artificiality and find their best expression through the character of Rachael, originally played by Sean Young in the 1982 film. In *Blade Runner 2049*, Rachael is brought back to life using CGI technology, with Loren Peta serving as the body double. This blend of advanced digital techniques and physical acting emphasizes the theme of artificiality, highlighting the tension between real and replicated.

Rachael's character in the original *Blade Runner* was a replicant with a strong sense of identity. She and Deckard shared common memories and a life together, ultimately resulting in the birth of their child. This groundbreaking event marked Rachael as the first replicant capable of reproduction. In *Blade Runner 2049*, when Wallace presents Deckard with a recreated Rachael, complete with original memories and appearance, the moment is laden with emotional and philosophical significance. Despite the replica having the correct eye colour, Deckard's remark, "Her eyes were green", expresses his rejection of Wallace's attempt to manipulate him. This statement signifies more than just a factual error; it is Deckard's assertion that the essence of the original Rachael – her unique identity and the shared history they built together – cannot be replicated. This scene connects deeply with Lev Manovich's notion of the post-cinema era where everything is

constructed, and the boundaries between real and artificial are increasingly blurred. The recreated Rachael represents the epitome of this construct.

In essence, *Blade Runner 2049* constructs a metaphorical framework which discusses societal concerns regarding digitality, artificiality and technological advancements. It poses questions about identity and "humanity". Ultimately, the film invites the audience to reflect on the nature of existence, reality and authenticity in a world increasingly dominated by digital constructs, poignantly summarized in Deckard's words: "Her eyes were green."

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