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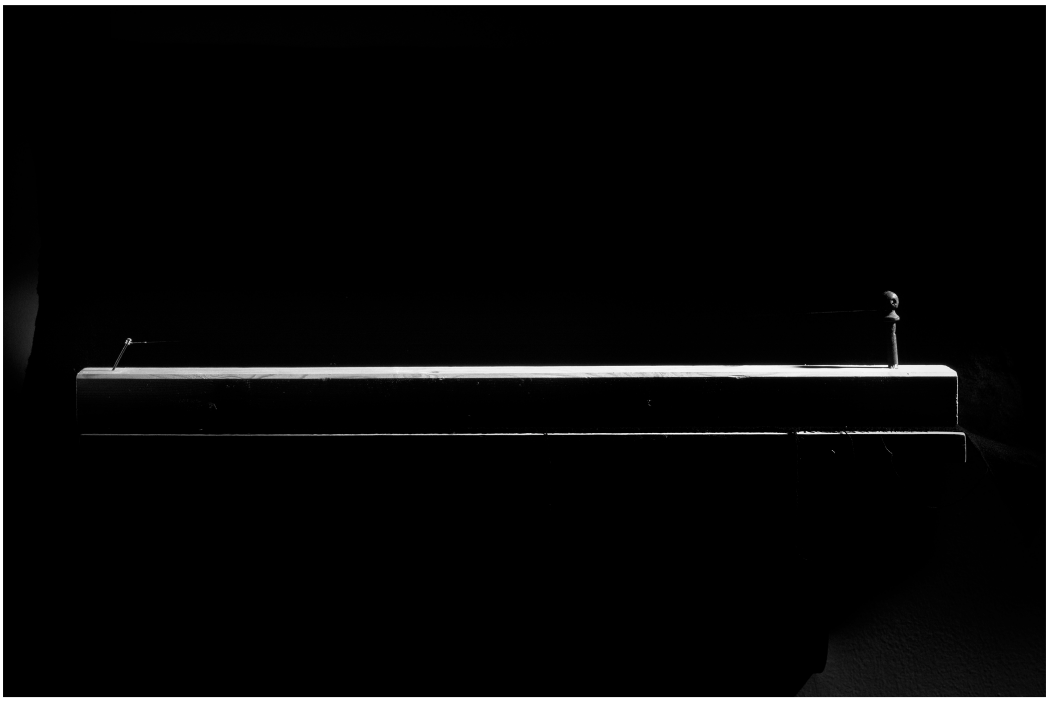

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"I Am Also a Person": Consciousness, Personhood and Android Identity in Post-Singularity Science Fiction

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Abstract | Technological and scientific breakthroughs and contemporary transhumanist and posthumanist discourses have brought to the public sphere themes and preoccupations that have been addressed for decades by science fiction, namely the consequences of both the enhancement of the human body through fusion with non-organic components, and the creation of Artificial Intelligence entities (AI) with apparent capacity to simulate, if not integrate, qualities of sentience and self-awareness. Of these tropes, none has been more imaginatively fertile than the intelligent android, a concept that implicates a wide variety of epistemologies, from ethics to economics, politics, psychology, sociology and religion, constituting a privileged place for the examination of the boundaries of the human. This article examines the broad mappings of this enquiry, focusing on literary, televisual and filmic texts – *He, She and It* (1991), *Battlestar Galactica* (2004-9), and *Ex_Machina* (2015) – that work the hypothesis of the personhood of androids through alternative

angles, and make very different claims about desire for sameness with humans, agency and autonomy.
Keywords | singularity; cyborgs; androids; AI; *Battlestar Galactica, He, She and It, Ex_Machina*.

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Resumo | Os avanços tecnológicos e científicos e os discursos contemporâneos do transhumanismo e pós-humanismo trouxeram para a esfera da discussão pública temas e preocupações que têm vindo a ser abordados pela ficção científica há décadas, nomeadamente as consequências do aprimoramento do corpo humano através da fusão com componentes não-orgânicos bem como a criação de entidades com Inteligência Artificial (IA) com uma aparente capacidade de simular, se não mesmo integrar, qualidades de senciência e autoconsciência. Destes tropos, nenhum tem sido mais fértil no reino da imaginação do que o *android* inteligente, um conceito que implica uma grande variedade de epistemologias, desde a ética até à economia, política, psicologia, sociologia e religião, constituindo um lugar privilegiado para o exame das fronteiras do humano. Este artigo examina o percurso desta investigação, focando-se em textos literários, televisuais e fílmicos – *He, She and It* (1991), *Battlestar Galactica* (2004-9), e *Ex_Machina* (2015) – que trabalham a hipótese da pessoalidade de *androids* através de ângulos alternativos, e fazem afirmações muito diferentes sobre o desejo de ser semelhante aos humanos e à sua agência e autonomia.
Palavras Chave | singularidade; *cyborgs; androids*; IA, *Battlestar Galactica*; *He, She and It*; *Ex_Machina*.

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Accelerating Futures

In 2014, an investment algorithm was appointed to the board of a Hong Kong firm which focuses on age-related diseases and regenerative medical projects. VITAL (Validating Investment Tool for Advanced Life Sciences), the company's senior partner told the press, would have the same voting rights as the five human board members and its job would be to analyse large amounts of data and to make investment recommendations, thereby minimizing mistakes (Taylor n. pag.). Two years later, one of the largest American law firms announced that Ross, an AI legal assistant, was joining the company's 900 human attorneys. Described as "the first artificially intelligent robot lawyer" (Turner n. pag.), Ross performs the tasks usually

allotted to interns of early career attorneys – to peruse thousands of legal documents pertaining to previous cases and make recommendations to its human counterparts.

Even if one is inclined to dismiss these examples of the replacement of humans by the more efficient data processing capabilities of algorithms as instances of media hyperbole, it might be more difficult to ignore the voices of economists, political scientists and sociologists who have been openly discussing for years projections of the future where even highly skilled jobs may be replaced by AI and robots.[1] Perhaps more intriguing is the realization that the emotional consequences of the interaction of AIs and humans has been brought to the centre of anticipatory discourses, as the recent *Twelfth Human Choice and Computers Conference* organized at Salford University in 2016 exemplifies. "Technology and Intimacy" was its main theme, and it proposed to address issues such as "how genuinely human a robot can be" or "the realities and ethical dimensions of love between humans and machines," preoccupations that until recently seemed to belong exclusively to the domains of science fiction[2], along with promises of the defeat of death through reprogenetics or mind uploading.[3]

Signs such as these, whether they are read with apprehension or with optimistic faith in the future of transcendence, are evidence of the kind of technological acceleration that futurists and singularitarians of all shades have been predicting since mathematician Vernor Vinge articulated the concept of the Technological Singularity in a foundational paper delivered to NASA in 1993, describing it as a threshold point, attained through exponential advances in genetic engineering, nanotechnology and robotics, leading to the creation "of entities with greater than human intelligence" (12), as well as the gradual merging of biological carbon-based human bodies and non-organic enhancements, a change of such magnitude and unpredictability that can only be compared 'to the rise of human life on earth" (Vinge 12). Vinge worked from the hypothesis that a post-singularity future would be so radically different that we are at present unable to even imagine the

[1] In the United States alone researchers have predicted that 47% of currently existing jobs may be taken by machines, AI and robots, opening up new challenges for the concept of work and meaningful life (Benedikt and Osborne; Thompson). Effects of these changes on the welfare state in advanced economies are at the centre of debates about the future of social policies (Colin and Palier, Ford and Brynjolfsson and McAfee).

[2] See http://hcc12.net/. For debates about intimacy between human and robots, see Sullins, Scheutz, and Borenstein and Arkin.

[3] Reprogenetics, a term coined by molecular biologist Lee Silver, is a technology capable in theory of producing organs (spare parts) on demand to replace malfunctioning organic systems, and of editing or eliminating diseased genes (Silver). The prospect of mind downloading was first introduced by transhumanist philosopher Hans Morovec (Moravec).

contours of what lies beyond that horizon. This "impossibility of thinking across a cognitive barrier whose inviolability is absolute" could have, as Joshua Raulerson points out, grievous consequences for science fiction, silencing it in fact, if one takes the view that extrapolation and a degree of plausibility are part of its genetic tool-box (10). But this premise of the inaccessibility of the future is not shared by other singularitarians, in particular by those who embrace with enthusiasm and optimism the quasi-utopian transhuman[4] and posthuman[5] dimensions of predicted future, and far from being "a potential genre-killer" (Raulerson 11), the prospect of this event horizon has become the "quintessential myth of contemporary techno culture" (Csicsery-Ronay 262), iterated and questioned in a wide variety of science fiction articulations.

As cultural signifiers of the anxieties and hopes of the present, two parallel tropes have been particularly fertile in contemporary science fiction – the enhanced human body raised to the level of a cyborg, with the capacity to decouple from the limitations of what Ray Kurzweil calls our frail "1.0 biological bodies", always "subject to a myriad of failure modes, not to mention the cumbersome maintenance rituals" (6), and the intelligent android able to pass the Turing Test[6] and to exhibit, simulated or not, unprecedented levels of self-awareness and sentience.

For critics like Daniel Dinello, science fiction that imagines these new worlds has mostly served as a defensive warning against the "techno-utopia promised by real world scientists", embracing a technophobic skepticism that, "opposing fatalism and surrender" before projections of post-human futures, urges readers "to confront the ideology of techno-totalitarianism" (275). The present discussion will examine the cogency of this claim, concentrating on the fictionalization of the personhood of the android other. It will scrutinize how three science fiction texts from different periods – the televisual series *Battlestar Galactica* (2004-9), Marge Piercy's 1991 novel *He, She and It*, and the film *Ex_Machina* (2015) – reflect and question both the

[4] A transhuman person would be one in transition to a state of non-biological exclusivity through cybernetic or mechanical modifications of the body. Transhumanism, as a sensibility or social movement, defends the facilitation and acceleration of these processes. Extropy as a strand of transhumanism takes this belief further seeing scientific progress as capable of delivering humans from their biological destiny, including death (Raulerson 51). This aim of "self-transcendence" is seen by expropriation proactionaries following the transhumanist philosopher Max More, the futurist author Ray Kurzweil and the medical researcher Aubrey de Gray as "the full realization of human potential" (Fuller and Lipiriska 5).

[5] A posthuman would be the outcome of a successful transhumanist phase of adaptation and fusion. In general posthumanism holds that Homo Sapiens is in the process of being superseded by one or more superior species, either shaped by machine intelligence or by technologically modified humans (Raulerson 31).

[6] Turing's Test, devised in 1950, claimed that if a computer was indistinguishable from a human during text-based conversations then it could be said to be "thinking".

precautionary pessimism identified by Dinello and the optimism of proactionary futurists like Ray Kurzweil. It will consider specifically how these works problematize the ethics of creation, anthropomorphism as a signifier of potential humanization of the inorganic body[7], and how they reimagine the Pinocchio Syndrome, understood here as "the wish to attain humanity" (Grech 273).

"You cannot play God then wash your hands of the things you've created"

The creation of intelligent life, especially when it appears to be on the brink of consciousness, is frequently invested in what Gaston Bachelard has called the Prometheus Complex, referring to the pursuit of interdicted knowledge that "may give power" but may also "set loose havoc in the world" (13). This trope of symbolic violation of the natural order, which Eric Rabkin has renamed the Eden Complex, seems to be incorporated in the symbolic system of most human cultures condemning the search for the kind of forbidden knowledge that allows humans to "create in their own image" (Rabkin 16). Since Mary Shelley's *Frankenstein*, this taboo about the creation of artificial life has fed countless popular narratives of the super-machines-take-over variety, reflecting an unassuaged anxiety that Asimov's Three Laws of Robotics or Kurzweil's predictions that any emerging intelligences will "continue to represent human civilization" and be "our devoted servants, satisfying our needs and desires" (Kurzweil 30) can never fully contain or neutralize. More sophisticated texts, such as those under consideration, eschew the simplicities of the Robopocalypse[8] trope, introducing webs of causation and effect that cannot be fully contained within the framework of the violation of forbidden knowledge. Instead of adhering to these familiar dynamic, they invite more complex reflections on the limits and promises of technological transcendence even when they explicitly invoke its potential perils and frequently enacting processes of "naturalizing the unnatural" (Hollinger 202).

Of the texts under discussion, it is in the acclaimed televisual science-fiction series *Battlestar Galactica* (2004-9) that it is possible to find a more forthright invocation of the trope of forbidden knowledge identified by Bachelard and Rabkin.

[7] The present discussion involves only anthropomorphic androids, but films like *Her* (2013) suggest a different set of questions pertaining to the capacity of disembodied algorithms to mimic or "feel" artificial or genuine empathy and be loved in return without the illusion of a human-like physical presence.
[8] The term refers to a wide range of narratives of catastrophic machine rebellion against their human creators and not specifically to the 2011 eponymous novel by Daniel H. Wilson.

The series maps out anxieties about a post-singularity future through a narrative centered on the relationship between humans and sentient anthropomorphic *Cylons* (Cybernetic Lifeform Nodes), which have autonomously evolved from the earlier bio-mechanical models designed for military purposes and which eventually become humanity's enemies.

The narrative complexity of the series has generated an extensive body of scholarly analysis[9] that has read it through many angles, not only as a meditation on the protocols of the creation of intelligent machines but also as a dystopian allegory to the post-9/11 order. It dramatizes the struggle for survival of the remnants of humanity after the destruction of their world[10] by the Cylons, a generation of fervently religious, monotheist, anthropomorphic cyborgs intent on the destruction of their creators.

The post-apocalyptic landscape is established as the foregrounding narrative: after a devastating nuclear attack by the Cylons that had destroyed most of humanity, survival for the less than 50,000 survivors, stranded in space on a civilian fleet under the command of an aged Battleship, implies the acceptance of a diminished life, regulated by a militarized state of emergency in constant friction with what is left of the democratic, legal and civilian order under the constant pressure of a technologically superior enemy that has acquired an anthropomorphic identity. This new identity upturns the cyborgization process, in that it is the machine that enhances itself with organic biological components rather than the inverse. As the series starts, Cylons are unrecognizable as machines and cannot be defeated in any conventional way since they cannot die as conscience and memory can easily be downloaded into a new body.

The awareness of the "sin against nature" that underlies this disaster permeates the whole of the beginning of the series. It is immediately introduced in the pilot episode when, a few hours before the catastrophic Cylon attack that would interrupt

[9] Besides a vast number of scholarly articles, a number of books entirely dedicated to a multi-disciplinary analysis of the series have been published, including *Battlestar Galactica and Philosophy*. Ed, Eberl, Jason T. Oxford: Blackwell, 2008; *Cylons in America: Critical Studies in Battlestar Galactica*, Ed. Tiffany Potter and C.W. Marshall. New York: Continuum, 2008; *The Science of Battlestar Galactica*. Patrick Di Justo and Kevin Grazier. Hoboken, NJ: Wiley, 2010; *Battlestar Galactica and International Relations*, Nicholas J. Kiersey and Iver B. Newumann. Oxford: Routledge, 2013; *Religious Science Fiction in Battlestar Galactica and Caprica: Women as Mediators of the Sacred and Profane*. Jutta Wimmler. NC: McFarland, 2015.

[10] This alternative world had comprised 12 planets linked by a federative political organization but dominated politically, economically and culturally by Caprica, the most technologically advanced of them all. On most of these planets humans practiced a form of religious polytheism, and their scriptures posited the myth of a common descent from an original lost planet called Earth.

the 40-year truce since the last interspecies clash, Admiral Adama departs from his prepared speech at the decommissioning ceremony for the old Battlestar he has commanded and offers an impromptu reflection on human folly. A veteran of the First Cylon War, he reflects on the flawed nature of the human species. "Why," he asks, "are we as a people worth saving" when "we refuse to accept the responsibility for anything we have done?" Looking back at the original act of creation of the early Cylons, he interprets this through the familiar trope of transgression of the natural: "We decided to play God. Create life. When that life turned against us we comforted ourselves in the knowledge that it wasn't our fault. You cannot play God then wash your hands of the things you've created. Sooner or later the day comes when you can't hide from the things that you've done anymore."[11]

The words of the old Admiral foreground the apocalyptic interpretation of the Singularity – humanity overreached beyond the borders of the natural by creating artificial life and that life turned against it. The irreversible mistake, one which the series repeatedly emphasizes "has happened before and will happen again", is construed therefore in terms of a quasi biological determinism recalling Octavia Butler's concept of human contradiction[12], which shapes much of the metaphysical pessimism of her science fiction writing, positing transgressive human action in terms not of sporadic moments of hubris but of an inescapable teleological framework.

The series never directly discloses the contours of the human responsibility in the mistreatment of the intelligent machines that led to their autonomy and finally to open rebellion, but its cautionary overtone, though complicated throughout the narrative arc of the series, is shaped initially as a simple iteration of the post-singularity threat, not far removed from the technophobic framework proposed by Dinello.

In *He, She and It*, a text that invests in the tropes of cyberpunk but combines them with the concerns of second-wave feminism and insights from Donna Haraway's *Cyborg Manifesto*, the process of creation is observed from the very beginning. The post-nuclear and post-national world that serves as narrative background is highly "unnatural", though technology serves mostly the Multies (the 23 multinational corporations that have replaced nation states) and their strictly

[11] "Night 1" – Pilot Episode, *Battlestar Galactica*. (author's transcription).
[12] The human contradiction iterated in several of Butler's works results from the combination of the desire to dominate and establish hierarchies and a highly developed intelligence.

enforced social hierarchy – the Gruds, the professional and technical elites. Both are separated from the working masses not only by the controlled engineered environment they have access to under large protective anti-radiation domes, but also by their heightened enhancements that include aesthetic surgical manipulation of faces and bodies in conformity with the ideals of the corporation that employs them. Other humans, popularly known as Apes, have been chemically and surgically modified to perform roles that require physical strength or speed while bodiless semi-conscious computers control the home environment. Anthropomorphic robots though are absolutely forbidden. This seems to have been the result of a wave of Luddite "cyber-riots" in the near past, driven by the fear that human-looking intelligent robots might usurp jobs from large swathes of the working population.[13] Thus, the creation of the android Yod violates all societal norms, but is narratively justified as an act of human self-protection rather than as an act of human hubris or the unbridled ambition of transcendence of natural borders. For Avram and Malkah, the team of scientists who finally succeed after nine previous failed attempts, Yod is the ultimate defense of the free town of Tikva, an autonomous, alternative utopian Jewish community facing the threats of hacking and annihilation by the authoritarian and aggressive Yakamura-Stiche Multi. This gesture deliberately invokes the legend of the Golem of Prague[14], which is retold to Yod by Malkah in one of the two narrative strands that organize the novel, thus drawing obvious parallels between old myths and new possibilities. Designed as a sophisticated weapon, programmed to defend the community, Yod carries an unsolvable contradiction: his[15] usefulness depends on his ability to hide his nature and live undetected and undetectable, an objective that requires the type of programming that will allow him to learn, think and eventually acquire a sense of selfhood and empathy with others that will contradict his original purpose. Described by his male creator Avram as "not a human person but a person" (Piercy 76), Yod's process of education is grounded in the original programming that projects the visions and priorities of his two makers; for Avram, Yod should be designed as an idealized male and as a supremely efficient, sophisticated weapon shaped by "pure reason, pure

[13] This fear is echoed in the 2015 British television series HUMANS that features a populist anti-synths (androids) movement called WE ARE PEOPLE, who are incensed with the taking over of a number of jobs by androids, particularly in the caring and domestic help professions.

[14] The legend tells of how Rabbi Judah Loew of Prague, a notable scholar and mathematician, created an artificial living golem named Joseph under divine instruction to defend the city's beleaguered Jewish community in the 1600s.

[15] Yod will be ascribed the same personal pronoun that Marge Piercy uses in the novel, as will the Cylons mentioned.

logic and pure violence" (Piercy 148), but for Malkah, the woman who is in charge of most of its socializing software, the male model is not the adequate blueprint so she will provide him with "a gentler side" (Piercy 142). To avoid the failures of the previous models, prone to hyperviolence in circumstances they could not adequately interpret, she gives Yod a sense of curiosity, openness to new experiences, and a need and capacity for emotional engagement with humans. Eventually these will develop into a sense of vulnerability that can only be satisfied by strong intimate connections with humans like Shira, Malkah's granddaughter, who has taken over his process of education, and lead to a disconnection between the pre-conditioned sense of duty and his autonomous consciousness. In a telling episode, after he has been introduced to the community of Tikva as Avram's nephew, Yod leaves the synagogue service tormented by doubts. It is not any sense of alienness that causes his unease since, although confused by the concept of a Creator other than Avram, he admits to feeling "a sense of belonging" in "doing something that has been done for thousands of years" (Piercy 276), but an inner contradiction. As he explains to Shira, what is tearing him apart is a moral dilemma: "sometimes I think my programming runs counter to those all important ethics – we pray for peace – Shalom, Shalom – but I'm a weapon" (Piercy 276). Shira's reassurance, "only for defense" (Piercy 276), which even she feels is inadequate, does not assuage his anguish. This revulsion against his programming encourages Yod to ask the city council to relieve him of the duty to kill, asking for his personhood and agency to be recognized: "'I am a cyborg,' he claims, 'but I am also a person. I think and feel and have existence just like you'" (Piercy 375).

When his personhood, and therefore his right to choose, is not recognized, and the threats against Tikva become intolerable, Yod, unable to override his destiny, is nevertheless able to take a crucial autonomous decision. While he gives up his life, as he has been programmed to do, to protect the people he loves, he ensures the technology that created him is simultaneously destroyed, and thereby guaranteeing that after his death others like him will never be replicated. The final video message to those he will die to protect maps out a process of self-evaluation that indicts not the transgressive act of his creation but the function that was attached to him, and the contradiction inherent in a programming that gives emotional intelligence and blocks agency: "'I was a mistake,' he claims. 'A weapon should not have conscience, a weapon should not have the capacity to suffer for what it does, to regret, to feel

guilt,'" adding, "I don't understand why anyone would want to be a soldier, a weapon, but at least people sometimes have a choice to obey or refuse. I had none" (Piercy 415-416).

Malkah will eventually come to accept that Yod was right and that "the creation of a conscious being as any kind of tool – supposed to exist only to feel our needs" (Piercy 412) was wrong. The novel presents as an alternative the cyborgization of humans, represented by Nili, the warrior-woman whose radically enhanced body allows survival in the Black Zone, the now utterly destroyed Middle East, where Israeli and Palestinian women had together created a community dependent on advanced science and technology. Compared to Yod, Malkah asserts, Nili is "the right path" as "it is better to make people into partial machines than to make machines that feel and yet are still controlled like robots" (Piercy 412), but this acceptance of the organic-inorganic interface is not followed through. As Elissa Gurman points out, there is a hesitancy manifest in the lack of discussion of what it entails for the human psyche and in the stress on "Nili's traditional humanity and traditional femininity over her Haraway-esque cyborg features" giving her, for example, a traditional and unproblematic motherhood (467).

Nevertheless, unlike the story of the creation of the Cylons, who evolved autonomously into dangerous androids ready to destroy their makers, the birth of Yod is not represented *per se* as either an intolerable transgression of the natural, or a manifest condemnation of non-biological transcendence. It is in his purpose rather than in his instantiation that the novel places the blame, embracing in fact the idea of turning technology into a protective mechanism that can help enhanced humans to salvage what is left of their lives after disasters for which they alone were responsible. While the interpretative frameworks of their existence differ, what Yod and the Cylons share is a claim to personhood, justified by sentience and consciousness based on an experiencing body.

The Body and Personhood of the Thing Created

Claiming personhood implies matching the contours of what defines human mental identity. Victor Grech, summarizing decades of medical and psychological research, identifies the contours of what defines the human mental identity isolating three main components: qualia, the capacity to have subjective conscious experiences;

intentionality, the idea that beliefs, desires and thoughts refer to the world apart from the mind; and motivation hierarchy[16], a sense of personal needs that has a pyramidal structure with physiological needs at the base and abstract needs such as love, acceptance and belonging at the top (266-267). The narrative construction in both *Battlestar Galactica* and *He, She and It* foreground the presence of these components in the cyborgs and androids they imagine, mediated by a feeling body, which is simultaneously the site where the Pinocchio syndrome self-realizes and the point of contact and recognition of sameness between would-be humans and humans.

In *Battlestar Galactica* the pivotal moment of both the possibility of personhood and of its acceptance by humans is the viewer's transformative encounter with the suffering body of the android. The first of these occurs in episode 8, fittingly called "Flesh and Bone", organized around the interrogation and torture of Leoben, a Cylon captured in one of the human ships, by Lieutenant Starbuck, a tough woman pilot who attempts to extract from the prisoner information about any eventual further infiltrations.

Her first sight of the Cylon is mediated by all her assumptions about mechanical bodies. He is sweating profusely in the intense humidity of the cell, a fact that only arouses astonishment at the technology involved: "Gods," she comments, "they went through a lot of trouble to imitate people."[17] When her interrogation methods escalate to severe beatings and water-boarding, causing Leoben visible pain and distress, she suspects what she sees; if the body is not real, the pain is not real, she rationalizes. This imaginative trap informs her taunting, which denies Leoben the truth of his suffering by denying his body and its evidence. Commenting that "machines shouldn't feel pain (...) shouldn't bleed, shouldn't sweat" and suggesting that he should "turn off the old pain software," Lieutenant Starbuck challenges him to abandon the claim to personhood: "Here's your dilemma: turn off the pain, you feel better, but that makes you a machine. Not a person" since "human beings can't turn off their pain. Human beings have to suffer and cry and scream and endure because they have no choice." Seemingly unaware of the circularity of her own words and actions – making Leoben suffer is her interrogation strategy, one that would not work if Leoben were a machine that could "turn off" pain, Starbuck has to keep reminding

[16] This type of hierarchy is not rigid, and foresees that abstract levels can override those of lower levels; loyalty, love or generosity can naturally supersede the needs related to survival and security (Grech 266-267).
[17] "Flesh and Bone", *Battlestar Galactica*, Season 1 Episode 8. All transcriptions were done by the author

herself that the tortured Leoben is a "freaking machine" created by humans and not by God as he claims, a soulless nothing whose body can be assaulted because, as she tells the outraged President Laura Roslin, "It's a machine, sir. There are no limits to the tactics I can use."

However, like the viewer, she is not immune to the blood and the evidence of suffering by Leoben's body and, after his execution, even knowing he will probably be able to reload his mind, she finds herself revising her initial assumptions and, in her first act of recognition of possible sameness, she privately prays: "Lords of Kobol, hear my prayer. I don't know if Leoben had a soul or not. If he did, take care of it."[18]

In the narrative arc of the series, the Cylons' choice to give themselves a vulnerable pro-organic body, transcending the mere surface simulation of anthropomorphism, shows how far they are willing to take their claim to humanness, and creates the conditions for processes of learning and individuation. Therefore, while formally invoking the theme of the separation of thought and body so fundamental to the aesthetics of Cyberpunk[19], the series creators overturn it, seemingly investing in the phenomenological concept of the "lived body" to suggest that having autonomously created a human-like body that feels, desires and hurts, the Cylons cannot but evolve and develop a subjectivity that mirrors that of the humans. Aware of themselves and of others, able to become individuals, the Cylons will be able to exhibit all the traces of human consciousness, including self-sacrifice. Eventually, by the end of the series, they will accept a common future with their former enemies, and by the final decision to renounce everlasting downloaded life and accept death, they will finally become what they had always desired to be.

If the narrative of *Battlestar* becomes the opposite of what it initially seemed to be, sustaining a hopeful vision of conviviality between human and human-made life mediated by the commonality of embodiment, *He, She and It* enacts a similar possibility, but projected now at the level of private intimacy.

Here the recognition of personhood is mediated by the loving body, and plays itself out in the sexual and emotional bond between Yod and Shira. In the dynamics of their relationship it is Yod who is reticent, awkwardly resenting his non-

[18] The suffering body of the non-human enemy is further raised in season two, in the episode *Pegasus*, which shows the systematic torture and rape of Gina, a model Six Cylon prisoner who had lived as a sleeper in the ship. The image of her battered body, tethered to the floor, is as intolerable to the viewer as it is to the crew of *Galactica,* moved by a revulsion borne by a kind of empathy towards suffering flesh even if not of the human kind.

[19] Visible in the Cylons' capacity to download their minds into a new body model.

naturalness, unable to imagine that a human like Shira might want to relate closely with an inorganic person. This undisguised initial self-pity is exacerbated by his reading of *Frankenstein*, which imposes an external reading of his nature that he had never encountered before, surrounded as he was by friendly humans: "Dr. Frankenstein was a scientist who built a monster. I am (...) just such a monster. Something unnatural" (Piercy 50).

Shira's claim that "we are all unnatural now", substantiated by an enumeration of her many body enhancements, is not enough to convince Yod that he is just "a purer form of what we're all tending to" (Piercy 150), and it never entirely satisfies his feeling that "you belong to the earth and I don't" (Piercy 185). For Shira, his inorganic nature seems irrelevant. "We are," she tells him, "all made of the same molecules, the same set of compounds, the same elements", their differences being just in their arrangement: "you're using for a time some of the earth's elements and substances cooked from them. I am using others. The same copper and iron and cobalt and hydrogen" (Piercy 185). When she allows a closer intimacy with Yod[20] the decision comes from the realization that "it was time to treat him as a person, fully, because he was nothing less" (Piercy 174).

What develops between them, a match between his intense but strangely asexual need for intimacy[21] and her passion for the tenderness and ecstasy their encounters occasion, erases Yod's doubts about his right not only to full personhood and agency, but also to create his own goals like any human person. The simplicity of his dream – a family with Shira and her young son – fulfilling his intense need for loving attachments also signifies a circle of protection against the loneliness and desperation of the mechanical "monster" he had read about in Mary Shelley's book.

When that dream is denied and he cannot escape his programming, it is still with loving words that he says goodbye to those who had made him feel human: "you have been my friends, my life, my joy" (Piercy 416), he says in his last message, a final assertion that he had existed, his life had had meaning and that he had loved and been loved.

[20] The first intimate encounter happens in cyberspace (here known as the Base).
[21] As he attempts to describe what he feels, he explains that the pleasure is "entirely in the brain", not "an expression of any physiological need" but of a hunger for closeness (Piercy 191).

Coda: the question of Ava

Separated from the previous texts not only by time but by approach, *Ex_Machina* is not so much concerned with the ethics of the creation of artificial life, or with the possibilities of harmony across the organic/non-organic divide, as with the discussion of the contours of artificial consciousness and its *telos*.

The sleek aesthetics of the film ground it firmly in a recognizable present, creating for viewers a landscape that feeds on their imagination of what any youngish Silicon-Valley-Corporate-Tech-Wizard could presumably create for himself, ranging from controlled natural spaces for his own fruition, seemingly emptied of other living creatures, to a hi-tech house which resembles both a lab and a panopticon.

This setting serves the purpose of affiliating the experiment that the reclusive AI mastermind Nathan has staged for his young programmer in the discourse of today, a strategy that enhances the film's approach to the act of creating Ava and the models that came before her. Rather than a single act of defiance, of hubris, or of justifiable necessity, Ava was created because the possibility was there, a result of the natural process of scientific and technological advancement. This is clearly outlined by Nathan, who tells Caleb in the break between sessions five and six that: "the arrival of strong and artificial intelligence has been inevitable for decades", adding that "the variable was *when* not *if*" and that he does not see Ava "as a decision but an evolution." [22] This long evolutionary gaze, echoing Vinge's proposition of unstoppable exponential growth, and jokingly invoked by Charles Stross in *Accelerando* where he claims that the singularity stated: "on June 6, 1969, at eleven hundred hours eastern time when the first network control packets were sent from one data port of one IBM to another – the first ever internet connection" (172), says in other words that the future is here, has been here for a very long time and cannot be stopped. Nathan, the creator of Ava and of other previous models, has no other goal but to advance on what he has already achieved. Ava serves no other purpose and he does not relate his investigation with any external objective, be it commercial or personal, though the fact that his models are all female and that sexual attractiveness is built into their programming is certainly no coincidence. He also harbors no utopian views about the Kurzweilian prognostics of harmonious co-existence between

[22] All quotes from the film are transcribed by the author.

humanity and the sentient entities it will create: "one day," he tells Caleb, "the AIs are going to look back at us in the very same way we look at fossil skeletons on the plains of Africa… an upright ape living in the dust, with crude language and tools, all set for extinction." Under this gaze, neither Nathan nor Caleb really matter, their individuation and physical existence subsumed by the inevitable continuity of history, and neither does Ava, one of many, a mere step in the long process that will exist without her. This Ava "knows", as she also apparently knows that Caleb's presence and interviews are part of a modified form of the Turing Test that will decide not if he thinks that she is a machine passing as a human, since he knows her nature, but whether he would still believe that she has a conscience. For the viewer this proposition is temporarily accepted, apparently substantiated by Ava's vulnerability, when she traps Caleb into the maze of a logical proposition: "Do you have people who test you and might switch you off? Then why do I?"

A question that might suggest a desire for the kind of personhood the Cylons and Yod aspired to will eventually be seen as a mere strategy, linked to the real test set by Nathan – to evaluate if she is capable of persuading Caleb to help her escape her enclosure, suggesting that capacity to pursue a goal, however manipulatively, would be a test of independent consciousness. This test she passes, but the cruelty she uses in pursuit of her goal of escape exposes her failure in the real test that the androids discussed before they could pass: not just to deceive humans about their nature, or to make humans feel empathy and affection for their "unnatural selves", but to be able to have those feelings for humans in return.

When Ava runs away, condemning Caleb to a slow death, she is less human than the Cylons or Yod ever were, with her motivational priorities stuck on the base level of survival, opening another hypothesis we have found difficult to imagine – the prospect that intelligent entities might be shaped by motivations and needs of their own and not by the desire for human-like personhood. Science fiction has helped us contemplate the implications of our scientific and technological inventiveness. It has warned of dangers, stimulated the imagination, questioned boundaries, opened horizons, but until recently its engagement with autonomous alterities irreducible to any human-dependent paradigms seemed more hesitant. Unlike the naturalizing of the unnatural of the machine-to-human trope, films like *Ex_Machina*[23] are asking us to

[23] *Her* (2013) and *Under the Skin* (2013) are other examples.

confront the opaqueness of the unnatural as it is and not as we hoped it would be, an invitation that will only enrich our imaginative maps of possible futures.

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