AIs, Androids, Machines, Sexbots: Questioning Humanity in Some Contemporary Narratives

Francesco Cattani (University of Bologna)
francesco.cattani6@unibo.it

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The essay aims to offer a transversal and transdisciplinary map of some cultural products (presenting themselves as science fictions, dystopias, but also possible utopias), all released between 2018 and 2019, where the human is forced to confront the new technology of the 'machine' – such as Artificial Intelligence or androids. In them, the appearance of new forms of 'life', which demand to be recognised and progressively develop strong 'moral judgements', prompts a reflection on the redefinition of the community, the re-vision of the anthropocentric construction of the world, and the radical act of re-thinking the human and humanity in a more collective and sustainable way. Drawing on the theories of Rosi Braidotti, Judith Butler, Donna Haraway, and Fredric Jameson, the essay will analyse the film *Aniara*, directed by Pella Kågerman and Hugo Lilja, the exhibition *Training Humans*, held in Milan at Fondazione Prada, and, in particular, the novels *Machines Like Me* by Ian McEwan and *Frankissstein: A Love Story* by Jeanette Winterson.

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KEYWORDS: Jeanette Winterson; Ian McEwan; Artificial Intelligence; Posthuman; Dystopia.

The Swedish film *Aniara* (2018), directed by Pella Kågerman and Hugo Lija and adapted from the 1956 Nobel laureate Harry Martinson' science fiction epic poem of the same name, is set aboard a colossal spaceship transporting thousands of people to Mars as they flee a planet Earth that has become uninhabitable due to a series of environmental catastrophes and calamities. The film appears as a post-apocalyptic science fiction – or a cli-fi – in which, following a minor accident that sends the spacecraft off course and out of the solar system, the passengers are faced with yet another disaster – arguably more insidious than those which have ravaged the Earth and forced the mass migration from it: the reconstruction of a community, or rather, the creation of a new one based on sustainability and collective engagement. In fact, while waiting for the technical damage to be repaired so that the ship can resume its course to Mars – a damage that ultimately proves to be irreparable –, they must find a way to support themselves, both physically and socially, using only the resources at their disposal. Above all, they must learn to cooperate and share as a means of resistance and coexistence. Such forced coexistence – depicted with biting irony as though aboard a cruise ship run by an incompetent, self-centred captain and crew – gradually reproduces the same social, class, and gender inequalities, as well as the identical issues of unequal access to food and waste disposal that originally caused Earth's devastation. Selfishness, lack of solidarity, inability to assist each other, and violence are precisely the disasters that the passengers have to face in this film[1].

Together with *Aniara*, this essay will examine the novels *Machines Like Me* (2019) by Ian McEwan and *Frankisstein: A Love Story* (2019) by Jeanette Winterson. The choice of these case studies lies not merely in the proximity of their release but rather, in their shared concerns. Indeed, despite their differing

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[1] It is interesting to note that the film, in some of its aspects, may recall or be associated with J.G. Ballard's novel *High Rise* (1973). The latter is set in a condominium which functions as a self-contained microcosm, an autonomous enclave resembling a miniature city almost independent from the external world and inhabited by two thousand residents, all members of the professional bourgeoisie. Once enclosed within this isolated environment, they rapidly reconstitute themselves by reproducing the traditional social division into three classes, as well as the same forms of economic injustice and inequalities. Above all, within this closed system a new type of community is free to develop, choosing violence as the primary source of cohesion and the dominant mode of interpersonal relation.

narrative structures and their specificities, all three texts engage with similar pressing questions, concerning in particular the future of humanity and of the 'human'.

In these works, environmental disasters, economic crises, and anticipated conflicts, as well as the appearance of new forms of life (or non-life) which demand to be recognised, prompt a reflection on the construction/re-construction of the community, a re-vision of what it means to be human, and the need to overcome the view of man as the measure for everything: a questioning of the sustainability of a future that is only and exclusively anthropocentric. Ideally, they all seem to answer Fredric Jameson's invitation to the radical, and perhaps impossible, effort to separate our [2] capacity of understanding from our anthropomorphic forms (and senses) of knowledge: to imagine a world and a system that are not uniquely governed and determined by anthropomorphic principles and parameters. Indeed, in *Archaeologies of the Future* Jameson underlines that "even our wildest imaginings are all collages of experience, constructs made up of bits and pieces of the here and now: […] this means that our imaginations are hostages to our own mode of production" (2005, xiii). Later, in the same text, he reiterates how "humans remain the prisoners of an anthropomorphic philosophical system" (111). The problem for him is:

> […] namely, whether we can really imagine anything that is not *prius in sensu*, that is not already, in other words, derived from sensory knowledge (and a sensory knowledge which is that of our own ordinary human body and world). (120)

From there, the invitation to find or look for "a new kind of perception", new organs of perception, "and thus ultimately a new kind of body" (111). For Jameson, utopia can help us in this operation (or adventure), as it "can serve the negative purpose of making us more aware of our mental and ideological imprisonment" (xiii). And this is exactly the active participation that the three texts analysed in this essay, as science fictions, dystopias, or 'unlikely' utopias, demand of their readers and audience.

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[2] The use of the first-person plural pronoun throughout this essay is intended to be both ironic and critically reflective, since the category of 'the human' is not an inclusive or neutral designation. Rather, it is constructed within rigid power structures and sustained by exclusionary norms. Far from being universally accessible, its boundaries make it almost impossible to be fully accessed.

Among the different aspects they address, these works wonder about the possibility of imagining an episteme that extends the very category of the human to those many subjectivities that were never granted complete access to it. In this sense, it might be affirmed that they follow the posthuman path theorised by Rosi Braidotti and the need, identified by Judith Butler in their study on precarious lives, to reformulate the 'frame' through which we recognise and apprehend (with the double, ambiguous meaning it carries of both to understand and to capture) what is life.

Braidotti opens her volume *The Posthuman* with the powerful statement:

> Not all of us can say, with any degree of certainty, that we have always been human, or that we are only that. Some of us are not even considered fully human now, let alone at previous moments of Western social, political, and scientific history. Not if by 'human' we mean that creature familiar to us from the Enlightenment and its legacy […]. (2013, 1)

While in *Frames of War* Butler claims:

> […] specific lives cannot be apprehended as injured or lost if they are not first apprehended as living. If certain lives do not qualify as lives or are, from the start, not conceivable as lives within certain epistemological frames, then these lives are never lived nor lost in the full sense. [… T]he frames through which we apprehend or, indeed, fail to apprehend the lives of others as lost or injured (lose-able or injurable) are politically saturated. They are themselves operations of power. (2009, 1)[3]

Furthermore, these texts not only invite to expand the category of the human, but also to extend the categories – the characteristics and attributes – used to define what is human to a series of new 'bodies' that have never been associated with it, and therefore with life. In all of them, in fact, we witness the appearance – more or less explicit and under different forms – of another

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[3] This brings Butler to the important distinction between 'living' and 'life': "[…] though it can be apprehended as 'living', [a figure] is not always recognized as a life. In fact, a living figure outside the norms of life not only becomes the problem to be managed by normativity, but seems to be that which normativity is bound to reproduce: it is living, but not a life" (2009, 8).

character, or rather of another presence that demands for a total reconsideration of the relationship between body and life, humanity and flesh, the natural and the manufactured: the presence of Artificial Intelligence and of the machine. Borrowing Simona Micali's words, these works "interrogate the status of a particular kind of artificial being, whose specificity lies precisely in its ambiguous positioning at the intersection of the categories of the *authentic*, the *copy*, and the *simulation*: the simulacrum that reproduces or hosts the consciousness of a real individual" (2022, 363; translation mine).

It is possible to add another lens (another 'frame') through which reading and entering these three texts. This time it is not a critical theory, but the exhibition *Training Humans*. Held between September 12 2019 and February 24 2020 at the Osservatorio of the Fondazione Prada in Milan, it was curated by the artist and geographer Trevor Paglen and Kate Crawford, a scholar and co-founder of the Research Institute *AI Now* at New York University.

The exhibition aimed to question the changes produced in the relationship between images, image-making technologies, and humans (and consequently the human), focusing not on how we see ourselves but on how we are seen, in particular by non-human 'eyes' and 'gazes' that nonetheless profoundly determine our lives and movements. The booklet produced for the occasion states: "Artificial Intelligence and computer vision now play a powerful role in how we see, and how we are seen" (Crawford and Paglen, 2019a). The 'training' of the title refers to the way Artificial Intelligence systems are taught (or fed) to know, interpret, and evaluate humans by analysing vast collections of images:

> […] vernacular photography is about images of the everyday, such as family events, ID photos, vacations, birthdays. Essentially a kind of accidental art by humans, for humans. Training images are often harvested from exactly these sources: people's photos scraped from the Internet, mugshots, selfies etc., but used purely for the purposes of machine identification and pattern recognition. The functional photography of the past is now training the systems of the future. (Crawford and Paglen 2019b, 2-3)

All the same, 'training' refers to the way we (as humans) are educated to recognise/not recognise and to be recognised/not recognised. Resorting once

again to Butler's terminology, our being recognised depends first of all on our being recognisable:

> If recognition characterizes an act or a practice or even a scene between subjects, then 'recognisability' characterises the more general conditions that prepare or shape a subject for recognition […]. [The] categories, conventions, and norms that prepare or establish a subject for recognition, that induce a subject of this kind, precede, and make possible the act of recognition itself. In this sense, recognisability precedes recognition. (Butler 2009, 5)

The exhibition implies that, this time, we have to be recognisable not only to our fellow human beings, but especially to the machines: will it be (or is it already) the algorithms that determine our humanity? And, as affirmed in McEwan's *Machines Like Me* on which I will go back later, are the "factory settings" – but also the instruction manual – "a contemporary synonym for fate" (2019, 6-7) and destiny?

Training Humans addresses "the politics of seeing that are being freighted in with these new technologies" (Crawford and Paglen 2019b, 4). At the same time, it tackles the ways in which the 'new' machine is educated to classify us through the use of extremely 'old', fixed, and rigid categories[4] of gender, race, ethnicity, class, age, ableism etc. that we thought we had overcome; but also to identify and detect our "emotional states and mental health" through the analysis of the images stored from social media:

> We start to see an explosion of online images that can be scraped, harvested, and used by computer vision researchers and corporations without asking for permission or consent from the people who took them, or the people in them. This proliferation of images is one of the reasons that machine learning became so much more efficient in the last decades. (10-11)

Another quote from the booklet might be important for the purpose of this essay: "Within computer vision and AI systems, *forms of measurement turn into moral judgements*" (Crawford and Paglen 2019a; emphasis mine). Indeed, the same machines and Artificial Intelligences which feature in the texts here analysed

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[4] Crawford and Paglen define these categories as "disturbing" (2019b, 13).

gradually develop an utterly human capacity of moral and ethical judgement towards humans and (so-called) humanity.

The main character in the film *Aniara* works, in a very intimate and almost symbiotic relationship, with Mima, an Artificial Intelligence capable of accessing each individual's personal 'memory bank'. It has been created to favour the re-experiencing of the Earth as it once was, by retrieving reminiscences and visions of rivers, gardens, and forests: of the no longer existing nature. Uncertain about the chance to finally making it to Mars and anguished over their destiny, more and more passengers begin to turn to Mima. As the latter connects with an increasing number of minds and emotions, it progressively learns not only about the nature on the Earth but also and more importantly about the nature of the humans: the sufferings they have endured as well as the atrocities they have committed. Initially, Mima is no longer able to select and recreate merely positive memories and it starts to replay images of violence and catastrophes, triggering panic crisis in its users.

Later, overwhelmed by the passengers' suffering – and experiencing its own emerging pain – it[5] overloads and does not simply crash but self-destructs, enacting a deeply human act of suicide. In its final broadcast, Mima's last words are: "My conscience aches […] I've been troubled by their pains. *In the name of Things I want peace.* […] There is protection from nearly everything. […] *There is no protection from mankind*" (min. 42:37-43:26; emphasis mine).

Something similar happens in *Machines Like Me* by McEwan. Both uchronia and science fiction, the novel is set in an alternative England of the early 1980s, where Margaret Thatcher, having lost the Falklands War, is forced to resign from her role as prime minister – being (momentarily) replaced by her rival and 'hard left' exponent Tony Benn –, Brexit is already looming[6], John Lennon is not dead and the Beatles are reunited, and, even more importantly, Alan Turing is still alive. Recognised as a national war hero and "presiding genius of the digital age" (McEwan 2019, 2), Turing has carried out his research mainly in the field of

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[5] At this point in the film, one might question whether the pronoun 'it' remains appropriate when referring to Mima, or whether it should be replaced with 'she' – an ethical consideration that also emerges prominently in both McEwan's and Winterson's novels.

[6] "Also, the government would set about withdrawing from what was now called the European Union" (McEwan 2019, 257).

Artificial Intelligence, also leading to the construction of synthetic and manufactured humans, labelled Adams and Eves, names "corny, everyone agreed, but commercial" (ibid.). The protagonist Charlie Friend, one of the first to 'buy' an Adam[7], begins to question the nature of these androids, their possible humanity and what makes them different from us. As Emanuela Piga Bruni points out, he confronts a web of contradictions:

> [...] in order to signal to Adam his determination not to treat him as a human being, Charlie tells him about the different stages that led to his acquisition, when he was unwrapped and power charged. [...] At the same time, however, Charlie feels the difficulty in finding a way to define the automaton, as the various expressions – artificial being, android, replicant – are all offensive to his presence. (2022, 136; translation mine)

Offensive expressions and, above all, utterly inadequate and inappropriate. Touching Adam's synthetic skin, Charlie states: "my reason said plastic or some such, but my touch responded to flesh" (McEwan 2019, 8). This opposition between 'reason' (Adam is a machine) and experience (still, Adam is something more) leads him to partly refuse to consider and accept the android as something more than a technologically advanced lively object; nonetheless, the words that he has to describe 'it' are only anthropomorphic terms which paradoxically turn Adam into life. As an example, throughout the novel the android is defined by the protagonist "as a real person, with the layered intricacies of his personality revealed only through time, through events, through his dealings with whomever he met" (22); as endowed with "an operating system, as well as a nature – that is, a human nature – and a personality" (24); suggesting an ability to really feel or to have sensations (255); or even as thoughtful and looking "sad sometimes" (234).

After all these speculations, Charlie seemingly arrives to the conclusion that "the moment we couldn't tell the difference in behaviour between machine and person was when we must confer humanity on the machine" (84)[8]; and later that "[p]erhaps biology gave [him] no special status at all, and it meant little to say

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[7] Charlie defines Adam as "the ultimate plaything, the dream of ages, the triumph of humanism – or its angel of death" (4).
[8] In particular, here he is making reference to what the fictional Turing had written in his early works.

that the figure standing before [him] wasn't fully alive" (129 – a conclusion similar to the one that can be found in Winterson's novel too).

Yet, it is important to emphasise how, in a kind of reversal of the mirror, the same act of questioning is carried out by the androids themselves, who painfully and with difficulty try to understand what they are and what they should be, but especially what the humans that surround them are and how they are supposed to function. In the novel, if the artificial mind is programmed to solve (our) problems, it is however "not so well defended" (180) from inhumanity – like our mind instead. Paradoxically, although the androids have access to all knowledge via vast databases, they are not equipped to understand our ethical nuances, our deviations, our cruelties and injustices, our excuses and lies[9]. *Machines Like Me* appears as an intense and profound consideration on values and morality, on ethics and judgement; but also as an invitation to rethink the human being both in his/her singularity and in his/her collective function as a social being, as well as to re-imagine what life is and what intelligence and cognition truly are.

In their struggle to recognise the essence of the humans, in their attempt to look into our hearts and minds and to understand how to live with us, these Adams and Eves begin to fail at coping with and to endure this task. As their software, or mind and consciousness learn about humanity, they realise to be unprepared, with no defence devices, while a profound sadness seems to seize them. In relation to this, Piga Bruni talks about "the feeling of *being cast out* into the world, in a condition of loneliness and bewilderment" (2022, 144; translation mine); while according to the words pronounced in the novel by Turing:

> […] the A-and-Es were ill equipped to understand human decision-making, the way our principles are warped in the force field of our emotions, our peculiar biases, our self-delusion and all the other well-charted defects of our cognition. Soon, these Adams and Eves were in despair. They couldn't understand us, because we couldn't understand ourselves. Their learning programs couldn't accommodate us. If we didn't know our own minds, how could we design theirs and expect them to be happy alongside us? (McEwan 2019, 299)

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[9] Not by chance, the novel opens with a quotation from Rudyard Kipling's poem "The Secret of the Machines": "But remember, please, the Law by which we live, /We are not built to comprehend a lie…" (no page).

Not surprisingly, just like Mima in *Aniara*, they become once again overloaded and begin 'to destroy' themselves, not through "physical methods, like jumping out of a high window. They went through the software, using roughly similar routes. They quietly ruined themselves. Beyond repair"; or they compromise their cognitive systems by making themselves "profoundly stupid [… able to] carry out simple commands but with no self-awareness". An act which is defined as a "*failed suicide*. Or a successful disengagement" (175; emphasis mine).

However, a different destiny is the one awaiting Adam, because he develops a compelling reason to remain alive: the love that he feels for Charlie's partner, Miranda. The 'Charlie's Adam' does not commit suicide; instead he is 'killed' by his own 'owner'. When Adam decides – driven by his own pure sense of justice even if in contrast with the feelings he has for the woman – to act in a way that will endanger Miranda, Charlie strikes him with a hammer, thinking: "I bought him and he was mine to destroy" (278). What is the proper definition for this action? Is it possible to murder a machine? And what or who is Charlie destroying? If the latter affirms "It wasn't a murder, this wasn't a corpse" (293), Turing, to whom Charlie takes the inanimate body of Adam, states:

> My hope is that one day, what you did to Adam with a hammer will constitute a serious crime. Was it because you paid for him? Was that your entitlement? […] You weren't simply smashing up your own toy, like a spoiled child. […] You tried to destroy a life. He was sentient. He had a self. How it's produced, […] it doesn't matter. Do you think we're alone with our special gift? Ask any dog owner. (303-04)

In the last paragraph I used the problematic expression 'Charlie's Adam', which echoes Charlie's already mentioned ongoing struggle in defining Adam's nature and presence. In the novel, it is once again Turing who questions whether 'owners' is the right term to describe those who 'possess' an android (174).

A similar question is addressed in Jeanette Winterson's novel *Frankissstein: A Love Story*. An astonishing, portentous, monstrous re-adaptation of the figures revolving around the creation of Mary Shelley's *Frankenstein*, as well as an high-

tech rewriting of the latter [10], Winterson's *Frankissstein* moves between the nostalgic and the optimistic; between the queer, transgender, posthuman, and transhuman; between science fiction and, if not directly utopia, at least a certain utopian and enthusiastic perspective towards the possibilities awaiting us, to be faced with openness and an attitude of wonder, with awareness but not with fear – the subtitle suggests that, in the end, what is offered is 'a love story'. Like McEwan's *Machines Like Me*, the novel explores the responsibility of creation – of creating, of giving birth, of giving life, and of accepting that that life can develop independently and autonomously without our control; but it is also about the right to personal identity; the right to create our self: to self-fashioning as self-affirmation.

Through a chain of events that are apparently impossible and, in certain cases, absurdly real, and through almost spectral and monstrous creatures such as the Artificial Intelligence, the sexbot, and the transgender body of the protagonist, the doctor Ry Shelley (a contemporary re-version of Mary Shelley), *Frankissstein*, too, invites us to a radical re-vision of what is recognised/able as human and, consequently, to a consideration on the need to re-construct our sense of community by expanding and opening it to those non-human agents who share our destiny.

The novel seems written with in mind the feminist figurations of the cyborg by Donna Haraway and of the nomadic subject by Rosi Braidotti, investigating issues related to the construction of gender, the compulsory binarism, the materiality and the ownership of the body, and what defines our being human, our being alive, and, thus, a life (body or mind, brain or mind, body or soul); as well as the question of our sustainability – of the sustainability of the human.

Frankissstein mixes and remixes imagination, romanticism and hard science, also becoming a reflection on how new the technology of Artificial Intelligence is and how natural the previous intelligence was: how the artificial brain of Artificial Intelligence operates differently from our natural brain and how algorithms have always been the determining companions in human life. To

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[10] The novel develops around two historical moments and two narratives (merging and 'fusing' together): one set during the years in which Mary Shelley conceived her work and the other in our (apparently) futuristic present.

clarify this last statement, it is possible to quote a very general definition of algorithm:

> An algorithm is a sequence of unambiguous instructions for solving a problem, i.e., for obtaining a required output for any legitimate input in a finite amount of time. […] The reference to 'instructions' in the definition implies that there is something or someone capable of understanding and following the instructions given. We call this a 'computer', keeping in mind that before the electronic computer was invented, the word 'computer' meant a human being involved in performing numeric calculations. Nowadays, […] although the majority of algorithms are indeed intended for eventual computer implementation, the notion of algorithm does not depend on such an assumption. (Levitin 2012 [2003], 3)

Taking into account that algorithms have usually to be finite (consisting of a delimited number of 'instructions'), deterministic (the same input has to produce the same output), unambiguous (they must be interpreted in the same way), and as general as possible (generating possible solutions for for "solving the same problem"; ibid.), all this makes them quite similar to the behavioural and social norms imposed to guide human attitudes, habits, and practices.

I would like to associate this vision of algorithms not as something entirely 'new', with an idea that Braidotti articulates in her essay "Organs without Bodies":

> [...] what we are going through in the postmodern technological scene, is not a 'scientific' revolution but rather an ideological one, a fundamental change in our modes of representation of life. There is clearly a shift in the scale of the techniques involved in contemporary biopower, but not in the scientific logic that sustains them. (1994, 44)

A similar consideration may be found in Winterson's essay "Love(Lace) Actually", part of *12 Bytes*, a collection of writings conceived as a kind of companion piece to *Frankissstein*. In particular, the essay is dedicated to two women, Mary Shelly and Ada Lovelace – (not always) remembered as the first computer programmer –, both appearing as characters in the novel. According to the author, the two figures stand "[a]t the beginning of the future":

> History repeats itself – the same struggles in different disguises – but AI is new to human history. In different ways the young women saw it coming. […]

Both Mary and Ada intuited that the upheavals of the Industrial Revolution would lead to more than the development of machine technology. They recognised a decisive shift in the fundamental framing of what it means to be human.
Victor Frankenstein: 'If I could bestow animation upon life-less matter…'
Ada: 'An explicit function… worked out by the engine… without having been worked out by human heads and human hands first'. (Winterson 2021b, 8-9)

As previously argued, *Frankissstein* mixes imagination and hard science to pose a series of provocative questions such as: is the ethics of Artificial Intelligence more human than the ethics of the human? And, similarly to McEwan's novel, if the future is in the 'hands' of that Artificial Intelligence, what will happen when the homo sapiens is no longer the 'smartest' thing on earth? In *Machines Like Me*, Adam suddenly manifests, as a kind of warning if not directly a menace, this following 'moral judgment': "From a certain point of view, the only solution to suffering would be the complete extinction of humankind" (McEwan 2019, 67). The warning stems from the fact that if the humans want to create an Artificial Intelligence capable of envisioning a better future for both them and the planet, they must be aware and prepared to accept that this does not automatically guarantee a future that is human: that the human, as it is now, is sustainable and the best possible choice for the planet – as well as for all the other 'creatures' inhabiting and living it. While in Winterson's text we read: "artificial intelligence is not sentimental – it is biased towards best possible outcomes. The human race is not a best possible outcome" (2019, 74).

Yet, *Frankissstein* seems to keep a positive attitude, by showing that one of the answers to this problematic future might be found in hybridity: the novel is hybrid, mixing two stories and two historical times; the characters are hybrid in their being simultaneously new and coming from another novel – already constructed by another author and other fictions; their bodies are hybrid, not only in their merging nature and culture, but also in their being simultaneously public and private; and the human is here hybrid in being never self-sufficient, but always in connections and relations with other humans and non-human creatures. Haraway had already prefigured all this, both imaginatively with her cyborg as a figure of potent fusion, and in a more 'scientific' way in *When Species Meet*:

> I love the fact that human genomes can be found in only about 10 % of all the cells that occupy the mundane space I call my body; the other 90 % of the cells are filled with the genomes of bacteria, fungi, protists, and such […]. I am vastly outnumbered by my tiny companions; better put, I become an adult human being in company with these tiny messmates. (2007, 3-4)

But, clearly, in the novel the human is hybrid also in its fusing together with the artificial, the manufactured, the information technology, and in being already a machine. Victor Stein, the re-incarnation of Mary Shelley's Victor Frankenstein as a transhumanist scientist in the field of Artificial Intelligence[11], defines it as 'data-processing biology', a sort of biological computer not so remarkable when compared to animals and plants. As he puts it:

> An algorithm is a series of steps for solving a recurring problem. A problem isn't a bad thing – it's more of a How Do I? A problem might be – my route to work every morning; it might be, I am a tree – so how do I transpire? So an algorithm is a data-processing plant. Frogs, potatoes, humans can be understood as biological data-processing plants – if you believe the biologists. Computers are non-biological data-processing plants.
> If data is the input and the rest is processing, then humans aren't so special after all. (Winterson 2019, 78)

'Blurred' and 'dissolved', being both among the first terms appearing in the novel, might be the key words to approach it and the (not so fictional) world it presents[12]: blurring and dissolution of boundaries, breaking binarism, merging

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[11] Many critics have seen in Winterson's Victor Stein a fusion of both Mary Shelley's Victor Frankenstein and Percy Bysshe Shelley. See for ex. Fausto Ciompi: "Like Percy, Stein is in love with a Shelley, the transsexual Ry, whose name, short for Ryan, obviously recalls Mary. Like both his counterparts, Stein […] defies God's and nature's laws by envisioning a life beyond biological life" (2022, 168-69).

[12] The beginning of the novel plunges the readers in a reality where water and mist have made things lose their usual definition:
"Lake Geneva, 1816.
Reality is water-soluble.
What we could see, the rocks, the shore, the trees, the boats on the lake, had lost their usual definition and *blurred* into the long grey of a week's rain. Even the house, that we fancied was made of stone, wavered inside a heavy mist and through that mist, sometimes, a door or a window appeared like an image in a dream.
Every solid thing had *dissolved* into its watery equivalent" (Winterson 2019, 1; emphasis mine).

genders and genres, but also past, present, and future, fiction and reality, physical and non-physical, life and death. All these fusions are (apparently) embodied by the transgender protagonist Ry[13], who describes themselves as:

> [...] liminal, cusping, in between, emerging, undecided, transitional, experimental, a start-up (or is it an upstart?) in my own life. (29)
> When I look in the mirror I see someone I recognise, or rather, I see at least two people I recognise. This is why I have chosen not to have lower surgery. I am what I am, but what I am is not one thing, not one gender. I live with doubleness. (89)
> I am in the body that I prefer. But the past, my past, isn't subject to surgery. I didn't do it to distance myself from myself. I did it to get nearer to myself. (122)

Refusing the surgery that would realign them to the recognised and accepted binary paradigm does not result in a fragmented body. Ry aligns their physical reality with the mental impression of their multiple selves[14] and, thus, becomes an assemblage – once again blurring pieces, parts, organs, sexualities, stories, histories, and bits (as the elemental units of information a computer can process). Like Haraway's cyborg, Ry might appear as a figure of potent fusions and connections; a connectivity, as tranversal and transpecies interrelationships and mutual help towards a collective and responsible sustainability, that is proposed by Winterson also in the preface to her *12 Bytes*:

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[13] I used the word apparently because it is important to underline the fact that Winterson has also been criticised for her representation of Ry as a transgender subject. The character undergoes throughout the novel an array of physical, psychological, and linguistic transphobic violence which are not always properly dealt with: in certain occasions, they are named but not completely addressed. Some reviewers, thus, have read Ry as passive and lacking agency – see for ex. Sam Byers review of the novel for *The Guardian*: "Ry may have taken control of their own body, adapted it in line with their sense of self, but they are discernibly excluded from the wider work of redesigning humanity – a poignant paradox when one considers Ry's personal insight into bodies in flux" (2019). Furthermore, a form of violence seems to be implicit in their 'love story' with Victor Stein, who sees them more as a transhuman experiment than a human being: "And you, Ry, gorgeous boy/girl, whatever you are, you had a sex change. You chose to intervene in your own evolution. You accelerated your portfolio of possibilities. That attracts me. How could it not? You are both exotic and real. The here and now, and a harbinger of the future" (Winterson 2019, 154). Some critics have also accused Winterson of reproducing transphobic attitudes (see Horvat 2021; John 2024).

[14] To paraphrase Victor Stein's words (see 188).

Humans love separations – we like to separate ourselves from other humans, usually in hierarchies, and we separate ourselves from the rest of biology by believing in our superiority. […] *Connectivity* is what the computing revolution has offered us – and if we could get it right, we could end the delusion of separate silos of value and existence. We might end our anxiety about intelligence. Human or machine, we need all the intelligence we can get to wrestle the future out of its pact with death – whether war, or climate breakdown, or probably both. Let's not call it artificial intelligence. Perhaps alternative intelligence is more accurate. And we need alternatives. (2021a, 5; emphasis mine)[15]

The transhumanist Victor Stein, instead, proposes another utopian/ dystopian solution (or alternative, to evoke the last quotation) to the revolutionary process of re-vision the human is undergoing, envisioning a becoming digital: "to upload [the] self, upload [the] consciousness, to a substrate not made of meat" (Winterson 2019, 110); discarding the body to transform one's self not into brain, but into a database, and thus in this way becoming immortal. A solution which might be regarded as either dystopian or utopian, but surely not far from the reality of our transhumanist science. By mentioning Hans Moravec's theories, Eugene Thacker highlights how the idea of mind uploading emerged as early as at the end of the 1980s, as a concept "in which the parallels between neural pattern activity in the human mind and the capacity of advanced neural networking computing will enable humans to transfer their minds into more durable (read: immortal) hardware system" (2003, 74)[16].

According to Victor Stein, becoming digital means to free oneself from the physical form, transcending the fragile body – a body in particular that is still too 'gendered' and therefore victim of discriminations –, while at the same time remaining radically human. In this way, through her provocative and problematic

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[15] Interestingly, this idea of connectivity is also at the centre of a kind of utopia envisioned and dreamt by Adam in *Machines Like Me*: "When the marriage to men and women to machine is complete […] we'll understand each other too well. We'll inhabit a community of minds to which we have immediate access. *Connectivity* will be such that individual nodes of the subjective will merge into an ocean of thought, of which our Internet is the crude precursor. As we come to inhabit each other's minds, we'll be incapable of deceit. Our narratives will no longer record endless misunderstanding" (McEwan 2019: 149; emphasis mine); even more interestingly, however in the following page of the novel the utopia of the android is redefined as a nightmare by the human Charlie: "Adam's utopia masked a nightmare, as utopia usually do […]" (151).
[16] For the idea of mind uploading see also Prisco (2013).

characters, Winterson prompts readers also to reflect deeply on love and affection: through which physical, emotional, or electronic circuits does love flow? Or rather, is love generated by the body or the mind[17]? What role does touch, reciprocal touch play? Which bodies are recognisable as normatively human and is it possible to recognise a non-body as a life form and, hence, falling in love with it? Once again, what makes us human and, above all, why choose to remain exclusively and permanently human? In a dialogue between Ry and Victor Stein it is stated:

> Think what it will be like, he says, when non-biological life forms, without hearts, seek to win ours.
> Will they?
> I believe so, said Victor. All life forms are capable of attachment.
> Based on what?
> Not reproduction. Not economic necessity. Not scarcity. Not patriarchy. Not gender. Not fear. It could be wonderful!
> Are you saying that non-biological life forms might get closer to love – in its purest form – than we can? […]
> All I'm saying is that love is not exclusively human – the higher animals demonstrate it – and more crucially we are instructed that God is love. Allah is love. God and Allah are not human. Love as the highest value is not an anthropomorphic principle. (Winterson 2019, 159-160)

Nonetheless, the novel makes the readers wonder whether technological advancement truly offers an opportunity to overcome women, gender, and racial discriminations, or if whether, being far from neutral and deeply enwtined with political and capitalistic systems, it simply reproduces the same forms of oppression – as Crawford and Paglen also clearly show in and with their previously described exhibition *Training Humans*.

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[17] The character Mary Shelly, talking to her Percy Bysshe Shelley, claims:
"How would I love you, my lovely boy, if you had no body?
Is it my body that you love?
And how can I say to him that I sit watching him while he sleeps, while his mind is quiet and his lips silent, and that I kiss him for the body I love?
I cannot divide you, I said" (15).

If Victor Stein believes that Artificial Intelligence can generate a world without "labels – and that includes binaries like male and female, black and white, rich and poor" (79), during a TED talk in which he expresses his ideas/dreams, he is faced by a woman from the audience rebutting:

> […] the race to create what you call true artificial intelligence is a race run by autistic-spectrum white boys with poor emotional intelligence and frat-dorm social skills. In what way will their brave new world be gender neutral – or anything neutral? […]
> We know already that machine learning is deeply sexist in outcomes. Amazon had to stop using machines to sift through job applications CVs because the machines chose men over women time after time. There is nothing neutral about AI. (76)

Not by chance, another specific category of automatons appears in the text: sexbots. They become a tool to interrogate the stereotypes, sexism, and gender violence that continue to characterise the world of new technologies (and the world of their users)[18].

At the same time, however, Winterson controversially invites her readers to consider them from a radically different perspective. The presumptuous, chauvinistic 'creator' of these sexbots Ron Lord (re-version of Lord Byron in the contemporary narrative) states: "What we offer is fantasy life, not real life" (46) – a sentence that can be read in an ambiguous way. What is this 'fantasy life'? What does make people choose the sexbot, the machine, rather than the human being? According to the same businessman: "anymore crap relationships with crap humans" (312). The author prompts us precisely to rethink this choice as the fear of engaging with other humans, of being abandoned and betrayed, of not being able to achieve the required standards – whereas apparently the machine could never let us down. Sexbots, then, can become companions. Ron Lord's previous remark continues: "And how do you know it will be one-way [relationships]? Bots will learn. That's what machine learning means" (ibid.).

At this point a beautiful and sad story is introduced, another 'love story' – recalling the novel's subtitle – between a human 'owner' and the sexbot Eliza. The man, having "for the first time in his life […] not feared rejection or failure" (ibid.), finds love in her. He starts sharing his emotions and the things he likes to

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[18] For a feminist critique to sex robots, see Richardson and Odlind (2022).

do with her. She listens and listens… She can speak (being equipped with a program that allows to repeat words), but she has no autonomous experience, so she learns his memories. The man grows old and dies, while the immortal Eliza, "a bit of an embarassement" for his family (313), is re-sold on eBay to another owner – one only interested in her original function.

Not completely 'cleaned' in her 'software' (if it is the right term), she continues to live with the words, stories, and memories taught by her previous owner (or partner?), which are now also her own words, stories, and memories. The novel states that Eliza finds herself "confused" and asks the question: "Is this a feeling?" (ibid.)[19].

This very question echoes the ontological and ethical uncertainties faced by Charlie in McEwan's *Machines like Me* as he struggles to categorise Adam not merely as an advanced piece of technology, but as a being whose cognitive, emotional, and moral capacities challenge conventional distinctions between the human and the artificial.

To conclude, in the texts analysed in this essay, the crisis of the human, does not simply result into catastrophic imageries, visions of extinctions, or fear about possible futures. Instead, it calls for radical and necessary acts of reconsideration and re-vision – acts that concern not only the future of humanity but also its pasts. Returning to one of the purposes of utopia (and science fiction as well as dystopia) identified by Jameson and cited at the beginning of this paper, these texts serve to make "us more aware of our mental and ideological imprisonment" (2005, xiii). Furthermore, pushing the readers above and beyond the boundaries of the human, these narratives embody Braidotti's definition of art as inherently posthuman:

> By transposing us beyond the confines of bound identities, art becomes necessarily inhuman, in the sense of nonhuman, in that it connects to the animal, the vegetable, earthy and planetary forces that surround us. Art is also, moreover, cosmic in its resonance and hence posthuman by structure, as it carries us to the limits of what our embodied selves can do or endure. (2013, 107)

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[19] For a reflection on sex robots "as both representational objects and vital matter", see also DeFalco (2023).

The machine, the android, the Artificial Intelligence – both negatively and positively, both as omens of extinction and as a wonder of immortality – teach us that there are (and there have always been) many possible forms of being human, many possibilities of becoming human, and, recalling Butler's theorisations, many living 'creatures' differently shaped who actually counts as life. Going beyond our anthropomorphic principles and parameters, our "sensory knowledge" (Jameson 2005, 120), implies once again expanding the category of the human and at the same time reducing and desacralising it: recognising that there are many forms of life also requires the acceptance that one's own (human) life is just one among the many possible (also non-human) lives.

To borrow Donna Haraway's vocabulary, it means acknowledging that life is an interaction of companion species and that "[t]o be one is always to *become with* many" (2007, 4): many who help and sustain us but whom we, as humans, still struggle to accept and recognise.

References

Ballard, J.G. 1973. *High Rise*. London: Jonathan Cape.

Byers, Sam. 2019 (24 May). "*Frankissstein* by Jeanette Winterson Review – A Dazzling Reanimation of Shelley's Novel". *The Guardian*. https://www.theguardian.com/books/2019/may/24/frankissstein-jeanette-winterson-review (06/12/2024).

Braidotti, Rosi. 1994. "Organs without Bodies". In Id., *Nomadic Subjects. Embodiment and Sexual Difference in Contemporary Feminist Theory*, 41-56. New York and Chichester: Columbia University Press.

Braidotti, Rosi. 2013. *The Posthuman*. Cambridge and Malden, MA: Polity Press.

Butler, Judith. 2009. *Frames of War: When Is Life Grievable?*. London and New York: Verso.

Ciompi, Fausto. 2022. "'The Future of Humans in a Post-Human World': *Frankissstein* by Jeanette Winterson". *Between* XII (24): 165-82. https://doi.org/10.13125/2039-6597/5161.

Micali, Simona. 2022. "Il Simulacro e la Copia: l'immaginario contempora-neo della vita artificiale". *Between* XII (24): 359-379. https://doi.org/10.13125/2039-6597/5216.

Crawford, Kate, and Trevor Paglen. 2019a. Booklet Exhibition *Training Humans*. Milano: Osservatorio Fondazione Prada.

Crawford, Kate, and Trevor Paglen. 2019b. "Kate Crawford in Conversation with Trevor Paglen". *Quaderni Fondazione Prada* 26: 2-24.

DeFalco, Amelia. 2023. "What Do Sex Robots Want? Representation, Materiality, and Queer Use". *Configurations* 31 (3): 257-284.

Haraway, Donna J. 2007. *When Species Meet*. Minneapolis and London: University of Minnesota Press.

Horvat, Ana. 2021. "'Trans Is Hot Right Now': On Cisgender Writers and Trans Characters in Jeanette Winterson's *Frankissstein* and Kim Fu's *For Today I Am a Boy*". *Gender Forum* 79: 79-96, 137.

Jameson, Fredric. 2005. *Archaeologies of the Future. The Desire Called Utopia and Other Science Fictions*. London and New York: Verso.

John, Aiden. 2024. "'Future Early': Trans* Body as Metaphor in Jeanette Winterson's *Frankissstein* (2019)". In *Literatur und Zukunft. Beiträge zum Studierendenkongress Komparatistik 2022*. Hg von Lara Ehlis, Kerstin Kiaups, Marco Maffeis und Ben Sulzbacher, 67-80. Berlin: C.A. Bachmann Verlag.

Levitin, Anany. 2012 (2003). *Introduction to the Design & Analysis of Algorithm*. Boston *et al.*: Pearson.

Piga Bruni, Emanuela. 2022. *La macchina fragile. L'inconscio artificiale fra letteratura, cinema e televisione*. Roma: Carocci.

Prisco, Giulio. 2013. "Transcendent Engineering". In *The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future*. Ed. by Max More and Natasha Vita-More, 234-40. Chichester: Wiley-Blackwell.

Richardson, Kathleen, and Odlind, Charlotta. 2022. *Man-Made Women: The Sexual Politics of Sex Dolls and Sex Robots*. Basingstoke: Palgrave Macmillan

Thacker, Eugene. 2003. "Data Made Flesh: Biotechnology and the Discourse of the Posthuman". *Cultural Critique* 53: 72-97.

Winterson, Jeanette. 2019. *Frankissstein: A Love Story*. London: Jonathan Cape.

Winterson, Jeanette. 2021a. "How These Essays Came About". In Id., *12 Bytes. How We Got Here. Where We Might Go Next*, 1-5. London: Jonathan Cape.

Winterson, Jeanette. 2021b. "Love(Lace) Actually". In Id., *12 Bytes. How We Got Here. Where We Might Go Next*, 9-32. London: Jonathan Cape.

Visual Media

Aniara. 2018. Directed by Pella Kågerman and Hugo Lilja. Meta Film Stockholm, Unbranded Pictures, Viaplay, Film Capital Stockholm Fond, Gotlands Filmfond, Ljud & Bildmedia.