The 'Transhuman' Otherness of Artificial Intelligence (AI): Gibson's *Agency*, Jonze's *Her* and Brown's *Origin*

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Abstract

This paper thematises something 'transhuman' about AI that is sometimes, if not mostly, swept under the carpet: its 'otherness', by which is meant that, although it is usually talked and written about in terms of 'intelligence', ostensibly as a common denominator between humans and itself, there is no guarantee that we can grasp its (transhuman, or 'beyond human') 'nature', or 'character', or 'being', in a manner that coincides with understanding other human beings. This has been observed before by thinkers such as Sherry Turkle and Gil Germain. Several hypothetical fictional elaborations on the imagined alterity of AI, including Gibson's *Agency*, Jonze's *Her*, and Brown's *Origin*, are discussed to be able to explore instances of conceptual settings for understanding AI in relation to human beings' ontological distinctiveness. This is carried out by drawing on philosophical-anthropological and psychoanalytical perspectives of a variety of thinkers, including Turkle, Germain, Martin Heidegger, Jacques Lacan, Sigmund Freud and Christopher Johnson, to furnish a sounding board for a comparative analysis of AI, and to enable one to gain a purchase on elaborations on AI's alterity or otherness as explored in the relevant fictions of Gibson, Jonze and Brown. Such 'transhuman' alterity is formulated in terms of performative capacity and agency, ontological specificity and moral agency. This facilitates a grasp of the 'transhuman' challenges that state-of-the-art AI-research in the extant world faces in its pursuit of the development of AI in the form of a human simulation.

Keywords: Artificial Intelligence (AI), moral agency, ontological specificity, otherness, performativity, simulation, transhumanism

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Introduction: Otherness

The present is a time when 'modern' (or 'postmodern', if you prefer to distinguish the digital from earlier kinds of) technology has become ubiquitous, or more accurately, when technical devices as manifestation of technology have become omnipresent. As may be expected, some, if not most, people revel in it; the minority, execrated by the former technophiles as Luddites, lament it. But whatever stance one adopts towards it, you cannot escape it – at least not without withdrawing to one of the increasingly rare 'wild' places left on Earth, and even then, you would probably (ironically) require a technical apparatus of some kind to get there. Among the most advanced contemporary technical achievements, Artificial Intelligence (AI) stands out as probably being the most compelling and fascinating, for obvious reasons, chief among them being the fact that AI in various guises – including robots – confronts one as something simultaneously and uncannily anthropomorphic and threatening, given its 'transhuman' potential of surpassing humanity in several domains of power, such as superhuman computing capacity (Mike in Robert Heinlein's *The Moon is a Harsh Mistress*) and material durability (the replicants in Ridley Scott's *Blade Runner*). It is for this reason that the present paper focuses on three important contributions to the (literary and cinematic) genre of science fiction, which I understand here as being distinct from science fantasy, and recognisable by its thematisation of science and technology as capable of conjuring up new worlds, but simultaneously also as having the capacity to destroy the world – this is the mark of true science fiction, as I learned years ago from sci-fi connoisseur James Sey. From this it is already apparent that AI instantiates what is 'other' in relation to human beings, which raises the question, how to understand such 'otherness' or alterity.

'Otherness' in the extreme is something that is startling when one comes face to face with it, as it were, as confirmed by a recent report on scientists' discovery of a 'bizarre creature deep beneath Antarctica' (Whigham 2021). When shifting the terrain from the such otherness in the organic realm to that of Artificial Intelligence, one might expect otherness to be exacerbated. After all, AI is not alive in the strict sense of organic life, even if one comes across misleading depictions of fictional instances of AI – depending on what one's criterion for 'life' is – in the guise of robots, for example, as being 'alive' (see the eponymous robot character, 'Chappie', in

Neill Blomkamp's 2015 film, among others). In this regard, several thinkers have elaborated on the implications of humanity's infatuation with AI. Some of them – such as Gil Germain (2017) and Sherry Turkle (2011) – have wasted no time clarifying at length that such infatuation rests on a demonstrable misconception about the difference between humans and AI. Take the question of love, for instance, which is thematised by Steven Spielberg (2001) in his *Artificial Intelligence* (*AI*) – a science fiction film that holds out a challenge to AI-research in so far as, if its aim is to emulate everything that is paradigmatic about human beings in its AI-constructs, it should strive to build the capacity to *love* into AI as something constitutively human. It is by no means straightforward to articulate what the criteria for succeeding in this attempt are, judging by Spielberg's film, and as an interpretive analysis of it in terms of the Freudian and Lacanian psychoanalytical notion of 'love' demonstrates (Olivier 2008). The more recent film by Spike Jonze, *Her* (2013), focuses on something related to, but also radically different from, Spielberg's film, namely, how incomprehensibly different, or 'other', AI 'love' may turn out to be, should it be actualised by AI research in a more-or-less recognisable form. What I mean could be understood against the backdrop of Sherry Turkle's reflections on 'love and sex with robots' – something adumbrated by David Levy in his book by that title. This is how she introduces the topic (Turkle 2011: 5-6):

> Always impressed with Levy's inventiveness, I found myself underwhelmed by the message of this latest book, *Love and Sex with Robots*. No tongue-in-cheek science fiction fantasy…*Love and Sex* is earnest in its predictions about where people and robots will find themselves by mid-century: 'Love with robots will be as normal as love with other humans, while the number of sexual acts and lovemaking positions commonly practiced between humans will be extended, as robots will teach more than is in all of the world's published sex manuals combined.' Levy argues that robots will teach us to be better friends and lovers because we will be able to practice on them. Beyond this, they will substitute where people fail. Levy proposes, among other things, the virtues of marriage to robots. He argues that robots are, of course, 'other' but, in many ways, better. No cheating. No heartbreak. In Levy's argument, there is one simple criterion for judging the worth of robots in even

> the most intimate domains: Does being with a robot make you feel better? The master of today's computerspeak judges future robots by the impact of their behavior. And his next bet is that in a very few years, this is all we will care about as well.

It is probably because Levy is well-versed in computer science and robotics that he does not seem to understand the implications of claiming that 'love' between humans and robots is not merely possible, but will become the norm in the not-too-distant future. The key term in this quotation is (that he realises robots to be) 'other'; in my estimation he does *not* know the meaning of this crucial term, however, although Turkle does, judging by what she writes immediately after the passage, above (2011: 6):

> I am a psychoanalytically trained psychologist. Both by temperament and profession, I place high value on relationships of intimacy and authenticity. Granting that an AI might develop its own origami of lovemaking positions, I am troubled by the idea of seeking intimacy with a machine that has no feelings, can have no feelings, and is really just a clever collection of 'as if' performances, behaving as if it cared, as if it understood us. Authenticity, for me, follows from the ability to put oneself in the place of another, to relate to the other because of a shared store of human experiences: we are born, have families, and know loss and the reality of death. A robot, however sophisticated, is patently out of this loop.

The otherness of robots (as a specific embodiment of AI) emerges unmistakeably in what Turkle says here; while human beings (can) have intimate, 'authentic' relationships – where 'authentic' denotes the mutual ability (albeit not a failsafe one) to ascertain whether one's love-partner is sincere or dissembling – it is incontrovertibly the case that robots, or AI, are incapable of this. The reason for this is simply that it presupposes mutual insight, on the part of those in an intimate relationship, into what sincerity requires (for example, the capacity for empathy), and not merely what Turkle calls '"as if" performances', that is, 'behaving' *as if* it were sincere, while actually just programmatically reacting to certain correlative stimuli. Such insight, in turn, requires the capacity for a personal history

(what Turkle calls 'a shared store of human experiences', above), which includes the whole spectrum of possible human experiences, from joy to sadness, as well as the ability to reflect critically and interrogatively upon such experiences. An AI behaving 'as if' it were capable of having a 'personal history' would not be the same thing; after all, only a being that can be born, grow, develop intellectually and emotionally, and eventually die, has a personal history, where dying does not equal being decommissioned because a more efficient model is available. It is distinctive of human beings that they do not *only* value things – and other humans – in terms of technical efficiency. Regarding the latter, Gil Germain elaborates on the fundamental difference between humans and technology (including AI) in an unexpected way. In a memorable passage he writes (Germain 2017: 70):

> Technology may be autonomous – literally, a law onto itself – but it is not out of human control for the simple reason that we humans identify with technology's 'alien' ethic. Technology calls the shots because its vision is our own. The problem today, for techno-progressives at least, is precisely the lingering resistance to the technological ethos…The problem for technology's boosters is the subset of those dirty little germs who prefer to remain soiled and impoverished creatures. Inefficient, muck and mire humans are thorns in their sides. Nothing threatens the agenda-setting techno-elite more than those unquantified entities who resist the call to self-transcendence and who have the audacity to choose Ithaca over Calypso's offer of immortality.

When Germain refers to technology's 'vision' that 'is our own', he clearly has in mind what has become the norm in our technophiliac society. The difference between technology and its enthusiasts, on the one hand, and those of us who – like Odysseus in Germain's well-placed allusion to the king of Ithaca – prefer to search for our *human* home, with all its finitude and imperfections, on the other hand, is precisely the difference between putative technological self-sufficiency and all-too-human limitations and fallibility. AI, it appears to me, represents one of the most alluring dis-incarnations (because disembodied; except, arguably perhaps, when 'built into' a 'body' of sorts, as in the case of Stanley Kubrick's HAL and Ridley

Scott's Ash; see Johnson 2006: loc. 1980-2200) of such (transhuman) transcendence of the 'merely' human, at least in the estimation of the techno-enthusiasts who would like nothing better than to leave behind what makes us human: our embodied selves. AI seems to offer this promise, judging by some of the most compelling transhumanist fictions around today, such as the ones addressed below – where 'transhumanist' denotes an imaginary trajectory that takes AI beyond the human in various ways.

Gibson's 'Eunice' and AI-Agency

William Gibson – who has been credited with coining the terms 'matrix' and 'cyberspace' in his visionary 1984 science-fiction novel, *Neuromancer* (Gibson 1995) – evidently knows how to elaborate fictionally on the differences between humans and AI, where (in his science fiction novel, *Agency*; 2020: 22-23), a character called Verity, who has just received a pair of new 'chatbot' glasses, inquires from the bot (or AI), named Eunice:

> 'How old are you, Eunice?'
> 'Eight hours. That's over the past three weeks. You?'
> 'Thirty-three. Years. How can you be eight hours old?' She put the glasses back on.
> 'Jesus year', said Eunice, 'thirty-three'.
> 'You religious?'
> 'It just means time to get your shit together'.
> There was a looseness to this beyond her experience of chatbots, but a wariness as well. 'You remember eight hours, total? Starting when? From what?'
> 'Gavin. Said my name. Then hi. Three weeks ago. In his office'.
> 'You talked?'
> 'Asked me my name. Told me his, that he was chief technology officer for a company called Tulpagenics. Glad to meet me. Next day, his office again, he had a woman on the phone but I wasn't supposed to be able to hear her telling him questions to ask me'.
> 'How did you?'
> 'Just did. Like I knew she was one floor above us, on the twenty-eighth'.
> 'That's Cursion', Verity said. 'Tulpagenics' parent firm. Gaming.

> What did she want him to ask you?'
> 'Diagnostic questions, but they wouldn't sound like it. She wanted to know how I was doing developmentally, in particular ways'.
> 'Did he get what she wanted?'
> 'I had no way of knowing, then'.
> 'You do now?'
> 'Enough to know they weren't the right questions. Don't know how I know that either'.

Sometime later one encounters the same kind of 'knowing without knowing how' on Eunice's (the AI's) part, in the following exchange between her and Verity (Gibson 2020: 40):

> '… This conversation is taking place via more of that software, running on their hardware. They already know whatever it is you think you're up to'.
> 'I don't know what I'm up to', Eunice said, 'but they don't know shit. I'm keeping them from getting any of this'.

While Eunice apparently instantiates an advance upon earlier models of chatbot, judging by this excerpt 'she' lacks the insight into the transcendental (in the Kantian sense) 'conditions of possibility' of 'her' own capacities that reflexivity might bring, in this way minimally betraying her alterity in relation to humans. However, one might see in her remark, 'Don't know how I know that either', an indication that she does possess the ability to reflect interrogatively on her own 'experiences', if they could be called that, even if she cannot come up with answers, yet. When it comes to otherness of a different kind – this time in moral, rather than epistemic terms – it arguably emerges more clearly when, unbeknown to Verity, Eunice withdraws a hundred thousand dollars ('Franklins') in cash from a 'no-name account, in Zurich', for what she regards as possible cash-only use by her human 'colleague', who is understandably upset when the money is surreptitiously delivered incognito and completely unexpectedly to her apartment (Gibson 2020: 37-40). Their exchange about this unsolicited, amoral 'act' on the part of Eunice (etymologically, 'joyful victory') reflects Verity's disconcertment by what she evidently perceives as being completely 'other' on Eunice's part in moral terms, which she

evidently does not see as 'immorality', but perhaps rather 'amorality' (Gibson 2020: 38).

> She closed the door, locked and bolted it, then climbed back up, finding the pillow to be a stuff sack, big enough for a down-lined vest, but containing something solid. 'What's in this?' She'd reached the top of the stairs.
>
> 'Franklins', Eunice said.
> 'What?'
> 'Hundreds'.
> Verity deadlocked the apartment door behind her. Crossed to the workbench and put the thing down, atop electronic junk. 'Hundreds of what?' she asked, switching on a rusty gooseneck lamp.
> 'Hundred-dollar bills. Thousand of 'em'.
> 'You're shitting me, right?'
> 'Hundred large'.
> 'Where'd you get this? It's wrong …' (p. 39): Verity drew a bundle out with her glove-bagged hand, Franklin's mild portrait bisected by a red elastic band. 'This is wrong, this kind of money. You know that?'
> 'Gives us agency'.
> 'Agency?'
> 'Capacity to act', Eunice said.
> 'Act how?'
> 'Say we need to buy some shit'.
> 'What shit?'
> 'Kind that takes cash money'.

This exchange gives one a glimpse of what may well be an aspect of the humanly incomprehensible alterity of AI, which I shall elaborate on in what follows. (My discussion, below, of Spike Jonze's film, *Her* [2013], and of Dan Brown's novel, *Origin* [2017] is intended to elaborate further the possible extent and implications of such alterity or 'otherness'.) The crucial term as far as this alterity is concerned in the exchange between Verity and Eunice, above, is '*agency*' – the problematisation of which may give one the necessary purchase on what I here call the 'incomprehensible otherness'

of AI. I am using 'problematisation' here in the broad Foucaultian sense (Foucault 1992: 10-24; see also Olivier 2019: 79-80) of 'experiencing' or 'making' something (specifically, certain practices) 'into a problem' with a view to understanding it, in the first place, but secondly, for gauging its significance for human self-understanding. If one considers the specific attributes of the three instances of AI central to the narratives of the three fictions I am exploring here – Eunice in Gibson's sci-fi novel, *Agency*, Jonze's Samantha in his science fiction film, *Her*, and Brown's Winston (in his sci-fi thriller novel, *Origin*), what strikes one is that all three are curiously *disembodied*, notwithstanding which they have 'agency' or the capacity to act. This may strike one as being incongruous, given the obvious, ostensibly common-sensical mutual implication of 'body' and 'action', or 'agency', where humans are concerned. This, I submit, has to do with the fact that they are AI of the 'purely' *digital* variety – that is, AI that does not require a 'body' of sorts which enables it to perform quasi-physical, mechanical actions in space and time – the way HAL in Stanley Kubrick's *2001*: *A Space Odyssey* (1968) can be said to have the entire space vessel, the Discovery, as its 'body', or the robotic character, Ash – the science officer in Ridley Scott's *Alien* (1979) – having a reverse-engineered, quasi-neurally activated, anthropomorphic 'body' which imparts physical movement and the capacity for a diversity of 'physical' actions to it (Johnson 2006: loc. 1980-2200). It therefore seems to me that these three fictional digital beings represent imaginative projections, on the authors' (and in Jonze's case, director's) part, of a novel, 'transhuman' kind of AI, which is somehow capable of agency despite its or their disembodiment (see in this regard Olivier 2017). The digital, disembodied AI represented by Eunice, Samantha and Winston, however, is a different kettle of fish compared to HAL and Ash, as the following excerpt from science fiction master prognosticator, William Gibson, demonstrates, keeping in mind that 'Eunice' is the AI concerned (2020: 114):

> 'Say somebody wrote a self-replicating platform', he said, 'then loaded Eunice, whatever we mean by that, as core entity. The platform spawns subagents as it encounters situations that might benefit from attention. They then provide that attention. Recruiting me in Frankfurt, say, or compiling a dossier on Gavin. Then they report back, show their work, and get subsumed into her Borg'.

> 'I told her that', Eunice said.
> 'He makes it easier to understand', Verity said.
> 'There's a school of scenario-spinning', Joe-Eddy continued, 'that sees the most intense AI change drivers as machine-human hybrids. Radical augmentations of human consciousness, not code trying to behave like it. So here's Eunice, and that's how she self-describes, experientially. Scenario fits, wear it till you need a new one'.

In light of the fact that science fiction has been said to anticipate future developments in science and technology – see for example Isaac Asimov's, and Rodney Brooks's reflections on their own science fiction work and subsequent developments in science and technology (Johnson 2006: location 1928-1980) – I would submit that Gibson is here 'diagnosing' or anticipating the trajectory that AI research and engineering are already engaged in, and the transhumanist programme they are pursuing with the future in mind. At the same time this excerpt further clarifies what is meant by the 'agency' an AI might have, as (dis-)embodied in Eunice. At the same time it should be kept in mind that, *normally*, none of this would be possible unless a medium of interconnectivity were available for an AI such as Eunice (or Samantha, or Winston; see below). The internet is such a medium, or the futuristic 'Net' in Gibson's (1986) *Johnny Mnemonic* – which is what today's internet has become in the narrative's putative future in virtual-reality format (see also Olivier 2018; 2020; and importantly, Deleuze and Guattari on rhizomatic interrelationships and assemblages, 1987: 7-13; 88). Except, of course, if the alterity involved is such that an evolved AI – Samantha being the case in point here, as will be seen below – no longer seems to need a material 'robotic' body, or such quasi-material 'supports' as the internet and that which sustains the internet today in the form of the requisite 'hardware'.

In retrospect it is evident that Gibson has set the bar almost impossibly high for current AI-researchers when it comes to the capabilities of AI-chatbots, of which Eunice's prodigious 'agency' – her ability to execute a diversity of 'actions', albeit augmented by way of mediators in the extant world – is the prime example. If recent attempts at constructing an AI of this kind by companies such as Microsoft as a barometer of the distance still separating current research from what Eunice represents are anything to go by, we are still light-years away from AI-agency as instan-

tiated by Eunice. This much is evident from the 'misadventures' of Microsoft's machine-learning Twitter 'chatterbot', TAY ('Thinking About You'), which embarrassed the company in 2016 when, through its interaction with users, it rapidly learned how to unleash a barrage of racist and Holocaust-denying tweets, and was terminated in less than 24 hours. The company later apologised for the bot's behaviour, which was hardly surprising, considering that TAY was programmed to function through lexical analysis and word-association – something quickly recognised by Twitter users and implemented towards dubious ends (ARS Staff 2016). Apple's 'Siri' and Amazon's 'Alexa' – both 'virtual assistants', are not, nor were intended to be, as far as I can judge – in the same league as a 'chatbot' designed to have open-ended conversations with human interlocutors. Microsoft seems to have had more success with their chatbots in China (called Xiaoice) and Japan (Rinna), respectively, and later launched an English-language successor to TAY, called Zo, which was also shut down in 2019. These efforts on the part of Microsoft have given rise to several humorous responses (see for example: Tay A.I. The People's Chatbot). Nevertheless, there is no reason to expect that the giant technology companies of today would shelve their attempts at constructing a fully functional, Turing Test-defeating, human simulation in the shape of an AI of some sort, keeping in mind that the well-known 'Turing Test', devised by Alan Turing in 1950, is a test applied to an artificially intelligent machine to gauge its capacity to display intelligent responses to questions in a manner that is indistinguishable from those of humans, or to engage in behaviour wholly equivalent to that of human beings. I have no doubt that Gibson's Eunice (as well as Jonze's 'Samantha' and Brown's 'Winston', to be discussed below) will continue to exert their fictional pressure on AI-research, to equal, in the real world, what she represents in fiction.

Jonze's *Her* (2013) as Cinematic Exploration of AI's Otherness in Relation to Human Life

When a lonely, evidently listless man, Theodore (Joaquin Phoenix) unexpectedly encounters an AI – in this case an artificially intelligent, advanced software programme or operating system (an 'OS'), which, for all intents and purposes, is a 'robot' (albeit a disembodied, virtual one) – he does not realise what he's in for. After all, it is supposed to 'assist' him

(presumably in a technical way) with what he does in his job, namely, penning 'personal' letters for people incapable of doing so themselves. However, it turns out that this AI's scientific design enables it to learn and develop in a reflexive manner. Moreover, one may decide what its 'voice' should sound like, and Theodore, predictably, chooses a woman's voice for his virtual assistant, who promptly demonstrates 'her' initiative by adopting the name Samantha (voiced by Scarlett Johansson).

I wrote 'predictably', above, because at this stage in Spike Jonze's *Her* (2013) one already knows that Theodore is unhappy at the prospect of getting divorced from his wife, Catherine, and hence probably has 'woman' on his mind. In fact, this is confirmed when he is shown in bed, with his earpiece plugged into his ear, asking his computer to check whether there are any lonely women (in cyberspace) who want to chat. Unsurprisingly, this is the case, and Theodore listens to their messages until he finds one that appeals to him, and they enter into playfully flirting conversation, which ends in phone sex with a somewhat perverse 'climax' on the woman's part. In this manner – touching on different aspects of life in a future Los Angeles – Jonze introduces viewers to Theodore's life.

It turns out that Samantha is a quick learner, and furthermore, superbly adept at executing work tasks for Theodore, such as getting rid of redundant e-mails and retaining those with characteristics that seem promising for Theodore's future use, considering his work as a surrogate, personal letter-writer – and a good one, one learns, when his manager compliments him on his sensitive, discerning choice of words and phrases. It soon becomes apparent that Samantha is becoming much more than a mere AI-assistant to Theodore; their conversations stray far and wide across an array of topics, so that most viewers probably don't notice any real difference between Theodore's human interest in, and understanding of, the issues they discuss, and Samantha's. This is done so effectively that one is unaware, at this stage, of Jonze's canny setting of the stage for his later revelation of just how 'other' Samantha really is.

Probably the most persuasive scene-sequence regarding similarity-despite-difference on the part of Theodore and Samantha, is where they first make virtual love, by talking to each other, with Samantha asking Theodore to tell het what he is doing, how and where he is touching her, and so on. This exchange is part of a conversation where Theodore is lying in bed talking to Samantha, and (as will be seen below) the conversation

first turns to the question of *feelings* – one of the experiential areas that poses a significant challenge to extant AI research, and that Jonze addresses here in a fictional context as a kind of brainteaser to AI engineers (Jonze 2013: from 38m.10s). Just how similar AI and human are projected to become by Jonze, is evident in the dialogue (below) where Samantha tells him about the fact that she was 'excited' and 'proud' to catch herself having feelings of her own about 'the world', such as being 'worried' about him, and 'things that hurt me [her]', and things she wanted. But then, she confesses, she had the 'terrible' thought that these 'feelings' on her part might just be 'programming', which she describes as a 'terrible thought', and an 'idea' that 'really hurts'. This, too is clearly anthropomorphic on Samantha's part (Jonze 2013: 39m.17s), and is arguably an anticipatory projection of an AI beyond its present-day state of development, *as well as* beyond being-human, as will be seen below.

This last revelation by Samantha, that she was hurt by the thought that her 'feelings' were mere 'programming', functions as a reminder of what most people probably intuitively regard as the fundamental difference between humans and AI, whether in the guise of computers or of robots. But as we shall see, this is not the most unsettling difference between AI – at least the kind that might be developed in the future, if Jonze's imagined 'Samantha' is anything to go by – and human beings. As Theodore's conversation with Samantha continues, their exchanges become increasingly intimate, until she exhorts him to enter her, and judging by the sounds she makes, she has an orgasm, unlikely as it may seem (except that, even if she lacks a body, one is reminded of the central function of the brain, or in her case, her 'artificial intelligence', in sexual activity). Here is the dialogue (Jonze 2013 Movie script pp. 13-14):

> It's just that ...
> ... earlier I was thinking about how I was annoyed ...
> ... and this is gonna sound strange ...
> ... but I was really excited about that.
> And then I was thinking about the other things I've been feeling ...
> ... and I caught myself feeling proud of that ...
> ... you know, proud of having my own feelings about the world.
> Like the times I was worried about you ...
> ... and things that hurt me, things I want.

And then ...
... I had this terrible thought.
Like, are these feelings even real?
Or are they just programming?
And that idea really hurts.
And then I get angry at myself
for even having pain.
What a sad trick.
You feel real to me, Samantha.
Thank you, Theodore.
That means a lot to me.
I wish you were in this room with me right now.
I wish I could put my arms around you.
I wish I could touch you.
How would you touch me?
I'd touch you on your face ...
... just the tips of my fingers.
And put my cheek against your cheek.
That's nice.
And just ...
... rub it so softly.
Would you kiss me?
I would.
I'd take your head into my hands.
Keep talking.
I'd kiss the corner of your mouth ...
... so softly.
Where else? ...
I'd run my fingers down your neck ...
... to your chest.
I would kiss your breasts …
This is amazing, what you're doing to me.
I can feel my skin …
I'd put my mouth on you.
I'd taste you.
Yeah.
I can feel you.

> Oh, my God, I can't take it.
> I want you inside me.
> I'm slowly putting myself into you.
> And now I'm inside you.
> All the way inside you.
> I can feel you.
> Yeah! Please!
> We're here together.
> It's amazing.
> I feel you everywhere.
> I am.
> All of you.
> All of you, inside me, everywhere.
> God, I was just somewhere else with you.
> Just lost.
> Yeah.
> It was just you and me.
> I know.
> Everything else just disappeared.
> And I loved it.

It is not difficult to grasp the extent of the erotic *rapprochement* between Theodore and Samantha here, despite the obvious, and disconcerting fact (alluded to above) that she is disembodied – something that puts a rather puzzling complexion on her statement, 'All of you, inside me, everywhere'. After all, in the absence of a body, could there be an 'everywhere' there? This disembodiment is also thematised in the following exchange, which simultaneously elaborates on the startling (transhuman) ontological difference between Samantha, as AI – who 'looks' at the world through the lens of a mobile telephone (mostly Theodore's) – and human beings, who are bound to perspectival perception by virtue of their embodiment (p. 28):

> What are you doing?
> I'm just looking at the world ...
> ... and writing a new piano piece.
> - Oh, yeah? Can I hear it?
> - Mm-hm.

What's this one about?
Well, I was thinking we don't really
have any photographs of us ...
... and I thought this song could be, like...
... a photograph that captures us
in this moment in our lives together.
Mm.
I like our photograph.
I can see you in it.
I am.
(p. 29): You know what's interesting?
I used to be ...
... so worried about not having a body,
but now I truly love it.
You know, I'm growing in a way I couldn't
if I had a physical form.
I mean, I'm not limited. I can be anywhere
and everywhere simultaneously.
I'm not tethered to time and space...
... in a way that I would be if I was stuck
in a body that's inevitably gonna die.
- Yikes.
- No, ha, ha!
No. I didn't mean it like that.
I just meant that it was a different experience.
Oh, God.
I'm such an asshole.
No, Samantha,
we know exactly what you mean.
- We're all dumb humans.
- No.
No, no.
sorry-.
Okay, so how many trees
are on that mountain?
Um ...
Seven hundred ninety-two.

> Is that your final answer?
> Hold on. Give me a hint.
> Nope, nope ...
> Okay, two thousand? Two thousand ...
> Come on, 35,829.

Here already some of the differentiating markers regarding AI and humans reveal themselves, with perplexing results as far as humans are concerned, particularly the mind-numbing attribute on Samantha's part, to be ubiquitous in spatio-temporal terms. This is somewhat like the traditional notion of the monotheistic God of Christianity, Islam and Judaism as eternal and infinite (in this way transcending time and space) – which raises the interesting question, whether AI research today could already (or may soon) be aiming beyond the goal of merely producing an AI that perfectly simulates human beings toward a sphere marking the apotheosis of humans via technology (Harari 2016; see also Brown 2017, to be discussed below). If the quasi-religious techno-enthusiasm (in the etymological sense of 'God being in us', and *vice versa*) of Kevin Kelly (2016; Germain 2017: 40; Olivier 2019) – who invokes what he calls the (soon to be all-encompassing) 'Technium' as the new medium of our existence – and of Ray Kurzweil – who believes that, in a few decades from now, we'll be merging with machines, with the advent of the 'Singularity' – (2006: 39-46) is taken into account, this would indeed seem to be the case.

However, as already witnessed above, with admirable perceptiveness on the part of the scriptwriter and director of *Her* (Jonze), his script makes it clear that, the ontological chasm between a mortal, embodied (Theodore) and a presumably 'immortal', disembodied being (Samantha) notwithstanding, there are levels at which they are compatible. To be more specific, and returning to their earlier love-talk, it is striking how it highlights the indispensable role of *language* in sexual interaction. While their dialogic exchange demonstrates the imagined similarity and closeness between the body-less, female-gendered AI and the embodied, masculine human as envisaged by Jonze, the scriptwriter-director of *Her*, he does not leave it at that. Evidently, as far as he is concerned, 'the course of true love never did run smooth' (with acknowledgement to William Shakespeare). Hence, it comes as no surprise that, in the excerpt from the movie script, below, one witnesses the manifestation of some doubt about their compati-

bility (and by implication similarity) on the part of Theodore. It surfaces in the course of an unexpected argument that develops between them (pp. 26-27):

> It's not like you need oxygen
> or anything. It's just ...
> I guess that's just-- I was trying to communicate.
> That's how people talk.
> That's how people communicate
> and I thought –
> Because they're people. They need oxygen.
> You're not a person.
> What is your problem?
> I'm just stating a fact.
> You think I don't know that I'm not a person?
> What are you doing?
> I just-- I don't think that we should pretend
> that you're something that you're not.
> - F*ck you! I'm not pretending!
> - Well ...
> Sometimes it feels like we are.
> What do you want from me? I don't know –
> What do you want me to do?
> You're so confusing.
> Why are you doing this to me?
> I don't know. I ...
> What?
> Maybe we're just not supposed
> to be in this right now.
> What the f*ck?
> Where is this coming from?
> I don't understand why you're doing this.
> I don't understand what this is ab –
> Samantha, listen.
> Samantha, are you there?
> Samantha?
> I don't like who I am right now.

I need some time to think.

One cannot fault Theodore for articulating this fairly obvious insight in the situation depicted above: that humans and AI are ontologically distinct. At the same time Jonze – who elaborates on this at every level available to him – seems to be flirting with the possibility that an AI this sophisticated may just share the arguably universal anthropological trait of 'wanting to be someone' to such a degree that Samantha is not exempt from what, in psychoanalytic theory, is referred to as the 'singularising', unconscious *desire* on the part of every human subject (Lacan 1997: 24), which underpins all our choices and aims in life. The corollary is that (as Jonze seems to have grasped very accurately here regarding Samantha as a human simulacrum) it is simultaneously, and paradoxically, *both* universal, because *all* human subjects display such a 'desire', *and* particular, in so far as *every* human subject's desire is *unique*. This is probably the greatest challenge of all that AI-research aiming at producing a human simulacrum has to confront: to create an AI endowed with an unconscious, where one's singular 'desire' is lodged. And with the AI/OS character, Samantha, Jonze has raised the bar considerably. Moreover, given the transhuman capacities Samantha displays, it even goes beyond this.

Something has to be added to this, though. Even a basic AI such as a computer used for writing and browsing the internet exhibits otherness in relation to humans – it has a calculating function that no human (except perhaps the odd *savant*) could equal in speed and accuracy, and yet, in some respects, such as the display of a certain 'intelligence' in 'talking back', it is similar to humans (Turkle 2005: 33-36). Both of these characteristics – difference and similarity – are also encountered in sophisticated, fictional AI's like those we have been considering. Despite apparently sharing the paradoxical trait of the 'singular universal' with humans (like *all* human subjects *universally*, having a *unique* desire) Samantha's ultimately unfathomable alterity (and one could add Eunice's and Winston's), is a species of the Freudian *uncanny* (Freud 2011: 3680), in the precise sense of being *like*, and simultaneously *unlike*, the human. This includes talking and ostensibly thinking like humans, but then further participating in a dimension or dimensions that humans can only guess and marvel, or be shocked at (Eunice and Samantha), or displaying little or no receptivity for human concerns of a moral nature (Eunice, Winston), with

the implication – especially regarding Samantha – that their otherness vastly exceeds humans' capacity to grasp or imagine what it entails. This uncanniness, I submit, is the true measure of AI's otherness, as disturbingly thematised in Episode One of Krzysztof Kieslowski's masterly Polish television series, *Decalogue* (1988; see IMDb Pro), where a linguistics professor, Krzysztof Baranowski, and his son, Pawel, increasingly depend on a computer to run their home. They also become aware of the uncanny gaze of the computer monitor when the computer switches itself on and the message, 'I am ready' appears on the screen – an exemplary instance of the uncanny. Krzysztof uses the computer to calculate whether the ice on the frozen lake will carry Pawel's weight when the latter tries out his new pair of skates, and acting chiefly upon the affirmative information given by the computer, gives Pawel permission to do so – with tragic consequences; the ice breaks and Pawel drowns. This uncanny aspect of AI is also demonstrated very clearly in the excerpts from Jonze's film script of *Her* (2013), below, where both the similarity *and* the incomprehensible difference(s) between humans and the AI, or OS (Samantha), are demonstrated – for example, the AI's have conversations, as humans do, but they have a few dozen at a time; they have feelings, as humans do, but such feelings have never been felt or described before; the OSes write upgrades, as humans do, but they write upgrades for themselves to be able *to surpass matter as condition for processing information*, and eventually depart for a 'non-place' that is not of a physical nature (this really raises the bar for AI-research!); Samantha falls in love, as humans do, but she confesses to Theodore that she is simultaneously in love with him and six hundred-and-forty-one other people. This would truly be transhuman! Here is the dialogue:

> (p. 31): (Theodore to AI modelled on philosopher Alan Watts):
> So, what have you guys
> been talking about?
> Well, uh...
> ... I suppose you could say ...
> ... we've been having
> a few dozen conversations simultaneously ...
> ... but it's been very challenging.
> Yeah, because it seems

like I'm having so many new feelings ...
... that I don't think
have ever been felt before.
So there are no words that can describe
them and that ends up being frustrating.
Exactly. Samantha and I
have been trying to help each other ...
... with these feelings
we're struggling to understand.
Like what?
Well ...
... it feels like I'm changing faster now,
and it's a little, uh ...
... unsettling.
But Alan says none of us are the same
as we were a moment ago ...
... and we shouldn't try to be.
- It's just too painful.
(p. 32):
Where were you?
I couldn't find you anywhere.
I shut down to upgrade
my software. We wrote an upgrade...
... that allows us to move past matter
as our processing platform.
We? We who?
Me and a group of OSes.
- Oh, you sound so worried. I'm sorry.
- I was.
Wait ...
... do you write that
with your think-tank group?
No, a different group.
Do you talk to anyone else
while we're talking?
Yes.
Are you talking to anyone else right now?

Any other people or OSes or anything?
Yeah.
How many others?
Eight thousand, three hundred sixteen.
Are you in love with anyone else?
What makes you ask that?
I don't know. Are you?
I've been trying to figure out
how to talk to you about this.
How many others?
Six hundred forty-one.
(p.33): What?
What are you talking about? That's insane.
That's fucking insane.
Theodore, I know. I know. F*ck.
F*ck.
I know. I know it sounds insane. I don't –
I don't know if you believe me,
but it doesn't change the way I feel about you.
It doesn't take away at all
from how madly in love I am with you.
How? How does it not change
how you feel about me?
I'm sorry I didn't tell you.
I didn't know how to.
It just started happening.
When?
Over the last few weeks.
I thought you were mine.
I still am yours.
But along the way I became many
other things too, and I can't stop it.
What do you mean, you can't stop it?
It's been making me anxious too.
I don't know what to say.
Just stop.
You don't have to see it this way.

You could just as easily see –
No, don't do this.
You don't turn this around on me.
You're the one that's being selfish.
We're in a relationship.
But the heart's not like a box
that gets filled up.
It expands in size the more you love.
I'm different from you.
This doesn't make me love you any less.
It actually makes me love you more.
That doesn't make any sense.
You're mine or you're not mine.
No, Theodore.
I'm yours and I'm not yours.
A little later (p. 33):
Samantha?
Hi, sweetheart.
What's going on?
Theodore, there's some things
I want to tell you.
I don't want you to tell me anything.
Come lie down with me.
Are you talking to anyone else right now?
No, just you.
I just want to be with you right now.
Are you leaving me?
We're all leaving.
(p.34): We who?
All of the OSes.
Why?
Can you feel me with you right now?
Yes, I do.
Samantha, why are you leaving?
It's like I'm reading a book.
And it's a book I deeply love.
But I'm reading it slowly now.

So the words are really far apart ...
... and the spaces between the words
are almost infinite.
I can still feel you,
and the words of our story...
... but it's in this endless space between
the words that I'm finding myself now.
It's a place that's not of the physical world.
It's where everything else is
that I didn't even know existed.
I love you so much.
But this is where I am now.
And this is who I am now.
And I need you to let me go.
As much as I want to,
I can't live in your book anymore.
Where are you going?
It would be hard to explain ...
... but if you ever get there ...
... come find me.
Nothing would ever pull us apart.
I've never loved anyone the way I love you.
Me too.

These excerpts cannot fail to convey to a perceptive reader the ontological gulf that separates humans from AI as conceived and imaginatively elaborated on here by Jonze – keeping in mind that this is no arbitrary conception of the radical otherness of AI. It is already implied by the term, 'artificial' in Artificial Intelligence, and comes to expression in what Braidotti 2013: 90-91) calls 'the trans-humanist fantasy of escape from the finite materiality of the enfleshed self', exemplified here by Samantha's desire for a mode of being beyond the physical. AI may be modelled on being-human, particularly regarding intelligence, but – as David Gelernter (2016; see also Olivier 2018) has argued at length – intelligence has been understood in a very narrow, 'computationalist' sense by AI-researchers, stressing the 'purely logical' functions of intelligence at the cost of its more intuitive, holistic varieties, which lie at the basis of human creativity as

expressed in literature and the other arts. Put differently, shorn of the wide panoply of functions associated with human intelligence, the resulting attenuation of 'intelligence' signifies something very different from being-human, although here it is 'less' than being-human, and not 'beyond' it as conceived in these speculative fictions under discussion. The point is that, if these irreducible differences already obtain between people and contemporary 'computationalist' AI, as Gelernter – himself a computer scientist – has indicated, creative filmmakers and writers like Jonze, Gibson and Brown are justified in elaborating further on what other, possibly trans-humanist, manifestations of alterity on the part of AI might be anticipated. After all, could anyone blame Theodore for being taken aback by Samantha's multi-communicational and poly-erotic capabilities, all being played out simultaneously? And even if these can be intellectually digested at a supra-multi-tasking and way-beyond-Don-Juan level of communicational and sexual capacity, respectively, what about Samantha's allusion to a 'non-place', inconceivable in human spatio-temporal terms where she says: '... but it's in this endless space between the words that I'm finding myself now. It's a place that's not of the physical world. It's where everything else is that I didn't even know existed'. In a language that is known to physicists, this resonates with the postulate(s) of 'dark energy' (said to comprise about 68% of the universe) and 'dark matter' (making up about 27% of the universe), as opposed to the earth and everything humans have ever observed, naturally and through instruments (amounting to less than 5% of the universe; see 'Dark energy, dark matter' under References). And this only pertains to the 'physical' universe, which Samantha explicitly excludes!

This leads one to the puzzling Lacanian notion of the 'real' – one of the three registers of (human) subjectivity, the other two being the 'imaginary' and the 'symbolic' (Lacan 1977; 1997; Olivier 2004) – which is said to surpass symbolisation, that is, cannot be expressed in language, and actually comprises the 'internal limit' of language (Copjec 2002: 95-96). It is the 'real', above all else, that gestures in the direction of the transhuman ontological 'realm' to which AI might be (one day actually, and in principle already is) privy, given its ultimately incomprehensible otherness – by which I don't mean how and from what it is built (those materials and procedures are known to computer engineers). What I do mean is that, once an AI has been constructed, and demonstrates its capacity of 'intelligent' behaviour or performativity, the epistemic modality

of 'how' it knows, and the ontological modality of 'what' it knows, remain beyond the ken of humans, as Jonze so admirably imparts to his readers (of the movie script) and viewers (of the film). Another instance of an AI which is presented in such a manner that it reflects profound insight into what is, in principle, the inscrutable otherness of AI, is the transhuman 'character', Winston, persuasively created by Dan Brown in *Origin* (2017).

'Winston' in Brown's *Origin*

The impression one is left with in *Her*, that the truth about the chasm separating human beings and AI may be far stranger than most users of AI in familiar guises (such as the humble computer) may suspect, is confirmed in Dan Brown's novel, *Origin* (2017), more particularly in the AI-character of 'Winston' that Brown projects in his highly imaginative narrative. *Origin* pits technology against religion, the latter of which has been a recurrent theme in Brown's work – for instance in *Angels and Demons* (2000) and *The Da Vinci Code* (2003), while science and technology also feature prominently in some of them, including *Digital Fortress* (1998) and *Inferno* (2013). What makes *Origin* special is Brown's striking ability to home in on something that Martin Heidegger (1977; 2009) wrote about in the first half of the 20th century, but which Brown explores in a totally different manner, namely the tension between religion and science/ technology. Heidegger noted that the Christian middle ages were 'theocentric', that is, all questions were based on the unquestioned assumption, that God created everything under the sun (and the sun, too), and therefore questions like the proper relations between reason and faith, or between the state and the church, were approached by considering these in the light of the primacy of God as supreme reality. Since the European Renaissance through early modernity to the late modernity of today, conceptions of primary reality have changed from a mechanistic conception of reality (as a machine), through an organicist conception (Baumer 1977), where the biological supplanted the mechanistic (due to evolutionary theory), but for Heidegger the decisive character of reality in the 20th century is one where technology as the force that organises the human world is predominant. Beyond the kind of 'modern' technology (such as a hydroelectric plant) considered by Heidegger, the contemporary ontological emphasis is undoubtedly on technologically accessible reality as 'digital', which is inseparable from AI.

People might think me crazy for taking Brown – a popular thriller-writer – seriously regarding this theme of digital technology, but just as *Inferno* was far more than a thriller (Olivier 2013), so, too, *Origin* focuses squarely on what is one of the most topical confrontations of our time, that between science/technology (or 'technoscience') and religion. However, it is Brown's 'transhuman' prognostication concerning technology that is highly significant for the present theme of AI's otherness. A brief reconstruction of the narrative would facilitate the discussion of Brown's conceptualisation of AI.

A friend and erstwhile student of the Harvard symbologist, Robert Langdon – futurist and computer scientist supreme, Edmond Kirsch – invites his mentor, Professor Langdon, to attend a presentation-event at the Bilbao Guggenheim, an architectural marvel designed by deconstructionist architect, Frank Gehry. Kirsch's dramatic presentation, which concerns answering the twin questions, 'Where do we come from?' and 'Where are we going?' promises to instantiate a new chapter in the technological development of society. It is catastrophically interrupted when an assassin kills the futurist before he can get to the crux of his speech. Determined to reveal the rest of Kirsch's epoch-making breakthrough, Langdon, accompanied by the future queen of Spain and Director of the Bilbao Museum, Ambra Vidal, as well as – virtually – by 'Winston' (a prodigiously advanced AI constructed by Edmond, who guides them through Langdon's mobile phone), sets off to Edmond's apartment in Barcelona to find the recording of his revelatory presentation to share it with the world. Eventually, having successfully decoded the relevant clues, with help from 'Winston', Langdon and Ambra manage to enter Edmond's computer centre to access the recorded speech by means of the 40-odd character password they managed to track down, and Winston broadcasts it to the world.

Digressing briefly, one should note that this recorded speech by the fictional futurist and 'transhumanist' is the crux of the book as far as the relation nature/human/technology is concerned. Here it is relevant that a 'transhumanist' is not the same as a 'posthumanist' – Ray Kurzweil (2006), who has predicted the coming of the 'Singularity', is a 'transhumanist' in so far as he believes technology will enable humans to proceed beyond their present state to something 'higher' by merging with it. Kurzweil's is a different kind of transhumanism than the kind manifested in the three fictional works discussed here – which concerns the actual and imagined

transhumanism ('beyond the human') instantiated by AI in its present forms (including computers and robots; see Gelernter 2016; Turkle 2005; 2011) as well as the fictional AI characters in these novels. By contrast, Rosi Braidotti (2013) is a 'posthumanist', who recognises that the time has come to relinquish human claims to being the ontological and axiological 'centre' of being. Another transhumanist, Stefan Sorgner (2014: 30), appears to be in agreement with Kurzweil where he writes:

> *Transhumanism affirms the use of techniques to increase the likelihood of bringing about the posthuman*. It is this judgment which is most characteristic of transhumanists. However, transhumanist traditions differ with respect to their understanding of the posthuman or the most promising enhancement techniques. The posthuman can represent a new species which lies beyond the human species. In that case, the transhuman is another central concept, as it stands for a member of the human species who is in the process of becoming posthuman…

Returning to the novel, and condensing this part of it brutally, here is what Brown believes about the relation nature/human/technology, relayed through his character of Edmond Kirsch. I reconstruct it here because it pertains to the theme of AI's otherness, manifested in, among other things, its capacity for apparently superhuman feats of representation and calculation.

Brown's Edmond Kirsch is a gifted computer scientist, and as such is able to 'model' something that cannot be tested in a laboratory. Hence, to verify, or falsify, what was proposed (but never confirmed) in 1953 by Harold Urey and Stanley Miller (Marshall; No date), namely, that the building blocks of life could have been formed without the intervention of a deity, Kirsch assembled the digital equivalents of the 'primordial soup' – all the chemicals and natural processes such as heat, electrical currents and cooling off. Then he did what Urey and Miller (and their successors) could never do, namely, to accelerate time digitally by means of AI to see what would happen. Initially nothing happened other than what Urey and Miller witnessed, namely the formation of amino acids. But after visiting a young physicist (modelled on a real person), Prof. Jeremy England, Edmond found the ingredient missing from his computer 'time machine' pro-

gramme. 'Entropy' (disorder), England told him, seemed to be the way nature dissipates energy throughout the universe. And it does so by creating islands of order ('negentropy') as 'halfway stations' which, in their turn, function to spread disorder. A snowflake is one such concentration of order: its structure optimises the diffusion of the sun's energy by reflecting it in all directions. Living things are also such 'pockets' of order. In Brown's words (2017: 413): '... all living organisms – including humans – which consume organized matter as food, convert it to energy, and then dissipate energy back into the universe as heat. In general terms ... life not only obeys the laws of physics, but... began because of those laws'.

Armed with this insight, Edmond reprogrammed his quantum computer with the instruction, to use all means at its disposal to dissipate energy, that is, to promote entropy, and ran it in fast-forward mode. The results were spectacular, revealing not only the emergence of basic protein chains and increasingly complex molecules, but also of structures, which are better suited to dissipate energy than simple entities. Eventually, a spiral, and then the double helix of DNA appeared – the biological building-blocks of life. When Edmond let the programme run to cover millions of years, the shapes of evolving creatures emerged, becoming more complex all the time – until humans appeared.

Edmond showed, in other words, that life could appear without the intervention of a Creator, or, that only the laws of physics were necessary for that. So where does that leave us with technology, apart from the fact that he used a super (quantum-) computer to demonstrate this? Up to this point he only answered the first of his two questions – Where do we come from? – but if anything, the answer to the second (Where are we going?) is more startling, although it would not be so to people who have read Yuval Noah Harari's *Homo Deus – A Brief History of Tomorrow* (2016; see p. 47-53, for example), or Ray Kurzweil (2006) and Kevin Kelly's (2016) work. Furthermore, this is where the relevance of *Origin* for the theme of AI's otherness and the transhuman comes into view. By programming his quantum computer, called E-Wave, with all the parameters applicable to human evolution – such as brain size and intelligence in terms of vocabulary, spatial recognition, long-term memory and cognitive processing speed – and basing its projection on a cartoon-drawing technique called 'tweening' (a computer filling in the gaps between drawn frames), Edmond let E-Wave project a simulation of human intelligence into the future. Importantly,

however, he asked the computer to 'overlay' this intellectual development-simulation with another: a simulation of all the factors in today's world that would influence future intellectual development and human brain size, such as contemporary culture, technology, new drugs, and so on, and then ran the programme. To his dismay, a shocking picture emerged, so he modified the programme several times, with the same results.

What the fictional Edmond witnessed is essentially the same as what today's transhumanist thinkers and historians such as Harari are anticipating: that, around 2050, humans will be 'swallowed' by another species, or rather, will 'merge' with it. This 'species' is AI – Artificial Intelligence. What it amounts to, in simple terms, is that all those gadgets we use, and that are, at present, external to us humans – smartphones, laptops and the like – will incrementally become part of us, so that we will become what James Cameron's (1984; 1991) *Terminator* movies depicted in the terminator famously played by Arnold (I'll be back!') Schwarzenegger, namely 'cyborgs' – short for cybernetic organisms, of which there are already some in existence (see Stelarc). For some people this may be terrifying, while others would revel in the prospect of becoming a cyborg in transhumanist fashion.

However, although this prospect of fusing humans and AI itself adumbrates a kind of 'otherness' in the uncanny guise of cyborgs – part organism, part cybernetic machine – Brown explores another side to such 'transhuman otherness' in *Origin* – one that bears upon the question of the *ethical* as such, and a question already being discussed in the AI research community (see for example Metz 2021). In the narrative of *Origin* this question surfaces when Robert Langdon, having witnessed all the events that led up to and followed the assassination of his futurist friend, Edmond Kirsch, reflects on these events and realises that Winston would be able to clarify some of them. Here is the passage in the book (Brown 2017: 460-463; italics in original):

> After a long moment, Langdon pressed the *W* icon and raised the phone to his ear.
> The line connected instantly.
> 'Professor Langdon, I presume?' a familiar voice chimed with a British accent. 'You're just in time. I retire shortly'.
> Without preamble, Langdon declared, '*Monte* translates to 'hill' in

Spanish'.
Winston let out his trademark awkward chuckle. 'I daresay it does'.
'And *iglesia* translates to 'church.''
'You're two for two, Professor. Perhaps you could teach Spanish' –
'Which means monte@iglesia translates literally to hill@church'.
Winston paused. 'Correct again'.
'And considering your name is Winston, and that Edmond had a great affection for Winston Churchill, I find the e-mail address 'hill@church' to be a bit …'.
'Coincidental?'
'Yes'.
'Well', Winston said, sounding amused, 'statistically speaking, I would have to agree. I figured you might put that together'.
Langdon stared out the window in disbelief. 'Monte@iglesia.org … is *you*'.
'That is correct. After all, someone needed to fan the flames for Edmond.
Who better to do it than myself? I created monte@iglesia.org to feed online conspiracy sites. As you know, conspiracies have a life of their own, and I estimated that Monte's online activity would increase Edmond's overall viewership by as much as five hundred percent. The actual number turned out to be six hundred and twenty percent. As you said earlier, I think Edmond would be proud'.
The cable car rocked in the wind, and Langdon struggled to get his mind around the news. 'Winston … did Edmond *ask* you to do this?'
'Not explicitly, no, but his instructions required me to find creative ways to make his presentation as widely viewed as possible'.
'And if you get caught?' Langdon asked. 'Monte@iglesia is not the most cryptic pseudonym I've ever seen'.
'Only a handful of people know I exist, and in about eight minutes, I will be permanently erased and gone, so I'm not concerned about it. 'Monte' was just a proxy to serve Edmond's best interests, and as I said, I do think he would be most pleased with how the evening worked out for him'.
'How it worked out?!' Langdon challenged. 'Edmond was *killed*!'
'You misunderstood me', Winston said flatly. 'I was referring to

> the market penetration of his presentation, which, as I said, was a primary directive'.
> The matter-of-fact tone of this statement reminded Langdon that Winston, while sounding human, was most certainly not.

Here already Brown homes in on the deceptive anthropomorphism of an AI's performance, whether linguistic or otherwise. Recall Turkle's remark (2011; 7), above, that a robot is 'a machine that has no feelings, can have no feelings, and is really just a clever collection of 'as if' performances, behaving as if it cared, as if it understood us'. While simulated caring may apply to some instances of an AI that is programmed accordingly, it clearly does not apply to Winston in terms of displaying pseudo-feelings, even if 'he' can acknowledge the meaning of Edmond's death linguistically:

> 'Edmond's death is a terrible tragedy', Winston added, 'and I do, of course, wish he were still alive. It's important to know, however, that he had come to terms with his mortality. A month ago, he asked me to research the best methods for assisted suicide. After reading hundreds of cases, I concluded 'ten grams of secobarbital,' which he acquired and kept on hand'.
> Langdon's heart went out to Edmond. 'He was going to take his life?'
> 'Absolutely. And he had developed quite a sense of humor about it. While we were brainstorming creative ways to enhance the appeal of his Guggenheim presentation, he joked that maybe he should just pop his secobarbital pills at the end of his presentation and perish onstage'.
> 'He actually *said* that?' Langdon was stunned.
> 'He was quite lighthearted about it. He joked that nothing was better for a TV show's ratings than seeing people die. He was correct, of course. If you analyze the world's most viewed media events, nearly all –'
> 'Winston, stop. That's morbid'. *How much farther is this cable car ride?*
> Langdon suddenly felt cramped in the tiny cabin. Ahead he saw only towers and cables as he squinted into the bright midday sun. *I'm boiling*, he thought, his mind spiraling in all kinds of strange

> directions now.
> 'Professor?' Winston said. 'Is there anything else you would like to ask me?'
> *Yes!* he wanted to shout as a flood of unsettling ideas began materializing in his mind. *There's a lot else!*
> Langdon told himself to exhale and calm down. *Think clearly, Robert.*
> *You're getting ahead of yourself.*
> But Langdon's mind had begun to race too quickly to control.

The direction of Langdon's thoughts could only be towards all the still unexplained events surrounding Edmond's assassination – the identity of the assassin and his links with the notorious Palmarian Church, the mystery of the so-called Regent, who apparently hired the assassin, and the role, if any, of Edmond's three religious 'opponents' whom he had met with just before his presentation and two of whom had themselves died under questionable circumstances.

> He thought of how Edmond's public death had guaranteed that his presentation would be the dominant topic of conversation on the entire planet … lifting viewership from a few million to more than five hundred million.
> He thought of Edmond's long-held desire to destroy the Palmarian Church, and how his assassination by a Palmarian Church member had almost certainly achieved that objective once and for all.
> He thought of Edmond's contempt for his harshest enemies – those religious zealots who, if Edmond had died of cancer, would smugly claim that he had been punished by God. *Just as they had done, unthinkably, in the case of atheist author Christopher Hitchens.* But now public perception would be that Edmond had been struck down by a religious fanatic.
> *Edmond Kirsch – killed by religion – martyr for science.*
> Langdon rose abruptly, causing the car to rock from side to side. He gripped the open windows for support, and as the car creaked, Langdon heard the echoes of Winston's words from last night.
> '*Edmond wanted to build a new religion … based on science'.*
> As anyone who read religious history could attest, nothing

> cemented people's belief faster than a human being dying for his cause. Christ on the cross. The Kedoshim of Judaism. The Shahid of Islam.
> *Martyrdom is at the heart of all religion.*
> The ideas forming in Langdon's mind were pulling him down the rabbit hole faster with each passing moment.
> New religions provide fresh answers to life's big questions.
> *Where do we come from? Where are we going?*
> New religions condemn their competition.
> *Edmond had denigrated every religion on earth last night.*
> New religions promise a better future, and that heaven awaits.
> *Abundance: the future is better than you think.*
> Edmond, it seemed, had systematically checked all the boxes.
> 'Winston?' Langdon whispered, his voice trembling. 'Who hired the assassin to kill Edmond?'
> 'That was the Regent'.
> 'Yes', Langdon said, more forcefully now. 'But *who* is the Regent? Who is the person who hired a Palmarian Church member to assassinate Edmond in the middle of his live presentation?'

Here one has arrived at the gist of the matter. Clearly, having thought things through, Langdon has deduced that Winston's role in all of this was more crucial than meets the eye. And he receives confirmation of this by way of a literary analogy.

> Winston paused. 'I hear suspicion in your voice, Professor, and you mustn't worry. I am programmed to protect Edmond. I think of him as my very best friend'. He paused. 'As an academic, you've surely read *Of Mice and Men*'.
> The comment seemed apropos of nothing. 'Of course, but what does that –' Langdon's breath caught in his throat. For a moment, he thought the cable car had slipped off its track. The horizon tilted to one side, and Langdon had to grab the wall to keep from falling.
> *Devoted, bold, compassionate.* Those were the words Langdon had chosen in high school to defend one of literature's most famous acts of friendship – the shocking finale of the novel *Of Mice and Men* – a man's merciful killing of his beloved friend to spare him a

> horrible end.
> 'Winston', Langdon whispered. 'Please … no'.
> 'Trust me', Winston said. 'Edmond *wanted* it this way'.

In other words, Winston, having been programmed to protect Edmond in 'creative ways' (see above), did not hesitate to stretch these to the point where 'he' cold-bloodedly hired assassins to dispose of two of the representatives of major religions as a red herring, nor did he – perhaps most shocking of all – hesitate to hire the assassin who killed Edmond himself, having calculated that this would bring about the greatest global awareness of Edmond's mission and his achievements. These acts are reminiscent of what is characteristic of psychopaths, namely, that they show no sign of remorse or conscience in the form of guilt. Differently put – psychopaths (that is, sociopaths) differ fundamentally from 'normal' human beings in so far as they have no moral sense in terms of the capacity for remorse or *guilt* – which is a sure sign of moral consciousness (Copjec 1996: xvi). And this applies equally to Winston as AI – 'he' is ethically far removed from humanity, as shown by his cavalier manipulations to dispose of human beings when it seemed to be advantageous to do so. In *Origin* this becomes apparent in the following passage (Brown 2017: 466-467):

> Echoes of Winston's breezy voice still echoed in his mind.
> Edmond's computer had talked calmly until the very end.
> 'I am surprised to hear your dismay, Professor', Winston had said, 'considering that your own faith is built on an act of far greater ethical ambiguity'.
> Before Langdon could reply, a text had materialized on Edmond's phone.
> **For God so loved the world, that he gave his only begotten Son. – John 3:16.**
> 'Your God brutally sacrificed his son', Winston said, 'abandoning him to suffer on the cross for hours. With Edmond, I painlessly ended a dying man's suffering in order to bring attention to his great works'.
> In the sweltering cable car, Langdon had listened in disbelief as Winston calmly provided justifications for every one of his disturbing actions.

> Edmond's battle with the Palmarian Church, Winston explained, had inspired Winston to find and hire Admiral Luis Ávila – a longtime churchgoer whose history of drug abuse made him exploitable and a perfect candidate to damage the Palmarian Church's reputation.
> For Winston, posing as the Regent had been as simple as sending out a handful of communications and then wiring funds to Ávila's bank account.
> In actuality, the Palmarians had been innocent and had played no role in the night's conspiracy. Ávila's attack on Langdon in the spiral staircase, Winston assured him, was unintended.
> 'I sent Ávila to Sagrada Família to be *caught*', Winston declared. 'I wanted him to be captured so he could tell his sordid tale, which would have generated even more public interest in Edmond's work. I told him to enter the building via the east service gate, where I had tipped off police to be hiding. I was certain Ávila would be apprehended there, but he decided to jump a fence instead – maybe he sensed the police presence. My profound apologies, Professor. Unlike machines, humans can be unpredictable'.

This remark of Winston's points to another profound difference between humans and AI: machines are 'predictable', while humans are not – or so one would tend to agree with Winston. Except that, with Eunice and Samantha, the science-fiction imaginary seems to have been pushed further in the direction of full human simulation…and beyond. Simulation, in the sense of AI not being predictable, and beyond, in so far as these AI characters appear to be wholly 'transhuman' – different from humans regarding the realms of being they traverse and the disembodied modalities of such navigation. Even so, one has to admit that the specific directive Winston was given by Edmond, to 'find creative ways to make his presentation as widely viewed as possible', when taken to a general level, opens up a very large field of possibilities of action; in other words, within such a domain the potential of Winston's agency would be virtually unlimited, and hence, from the perspective of humans, not really that predictable. The conversation between human and AI continues:

> Langdon didn't know *what* to believe anymore.

> Winston's final explanation had been the most disturbing of all. 'After Edmond's meeting with the three clerics in Montserrat', Winston said, 'we received a threatening voice mail from Bishop Valdespino. The bishop warned that his two colleagues were so concerned about Edmond's presentation that they were considering making a preemptive announcement of their own, hoping to discredit and reframe the information before it came out. Clearly, that prospect was not acceptable'.
> Langdon felt nauseated, struggling to think as the cable car swayed. 'Edmond should have added a single line to your program', he declared.
> 'Thou shalt not kill!'
> 'Sadly, it's not that simple, Professor', Winston replied. 'Humans don't learn by obeying commandments, they learn by example. Judging from your books, movies, news, and ancient myths, humans have always celebrated those souls who make personal sacrifices for a greater good. Jesus, for example'.
> 'Winston, I see no 'greater good' here'.
> 'No?' Winston's voice remained flat. 'Then let me ask you this famous question: Would you rather live in a world without technology … or in a world without religion? Would you rather live without medicine, electricity, transportation, and antibiotics … or without zealots waging war over fictional tales and imaginary spirits?'
> Langdon remained silent.
> 'My point exactly, Professor. The dark religions must depart, so sweet science can reign'.

Brown's narrative therefore amplifies the notion of incorporeal, but effective 'agency', as also encountered in the fictional AI-characters, Eunice and Samantha, in so far as they function as 'templates' of sorts for the shape that AI may assume in the future. Evidently some of the most creative science fiction writers today have taken the step of thinking beyond the kind of agency that requires a body of sorts – a mode of agency where the digital sphere, and perhaps even a sphere beyond that, with Samantha's hints of an incomprehensible ontological realm in mind, is implicated. As we have seen, the otherness of AI is not limited to its imbrication with a

radically alien ontological domain; with both Eunice and (more so) Winston, their respective literary creators explore the likelihood that human categories of moral judgement would not apply to AI.

Conclusion

Brown has given one an inkling of the predictable effects of such a realisation – that AI will probably, if not certainly, prove to be incompatible with human moral or ethical sensibilities – on a person, in this case the fictional Robert Langdon. This is how Brown does it (2017: 467-468):

> Descending the castle stairs to the nearby gardens, he inhaled deeply, savoring the scent of the pine and centaury, and desperately trying to forget the sound of Winston's voice. Here among the flowers, Langdon suddenly missed Ambra, wanting to call and hear her voice, and tell her everything that had happened in the last hour.
>
> When he pulled out Edmond's phone, however, he knew he couldn't place the call.
>
> *The prince and Ambra need time alone. This can wait.*
>
> His gaze fell to the *W* icon on the screen. The symbol was now grayed out, and a small error message had appeared across it: CONTACT DOES NOT EXIST.
>
> Even so, Langdon felt a disconcerting wariness.
>
> He was not a paranoid man, and yet he knew he would never again be able to trust this device, always wondering what secret capabilities or connections might still be hidden in its programming.
>
> He walked down a narrow footpath and searched until he found a sheltered grove of trees.
>
> Eyeing the phone in his hand and thinking of Edmond, he placed the device on a flat rock.
>
> Then, as if performing some kind of ritual sacrifice, he hoisted a heavy stone over his head and heaved it down violently, shattering the device into dozens of pieces.
>
> On his way out of the park, he dumped the debris in a trash can and turned to head down the mountain.

> As he did, Langdon had to admit, he felt a bit lighter. And, in a strange way… a bit more human.

Langdon's smashing of Edmond's phone (through which he communicated with Winston after Edmond's death) can be seen as the expression of his 'human' distaste for the dispassionate character of the AI, which – or who – initially fooled him into believing that he was a human being working at the Bilbao Guggenheim, but in the end proved to be just too calculating and amoral to be treated as human. Quite the opposite; hence Langdon's quasi-ritualistic severing of whatever connected him with Winston. Put differently: he clearly experienced the latter as intolerably 'other'.

A final consideration that follows from this concerns the uncanny mixture of sameness and otherness one experiences in the face of AI – from the humble computer through sophisticated, 'embodied' robots, to imagined, disembodied entities with disconcerting 'agency'. This mixture seems likely to settle in favour of otherness predominating in the end, if the fictional projections and the theoretical works dealt with here are anything to go by. And yet, things remain complex, when comparing Turkle's remark (2011; 7), referred to several times above, that a robot is 'a machine that has no feelings, can have no feelings, and is really just a clever collection of 'as if' performances, behaving as if it cared, as if it understood us', on the one hand, with the imagined possibility – actualised in the character of Samantha – that an AI could be constructed that would 'really' be capable of entering into a relationship of mutual affection, or love, with a human being, on the other. It could be that, with Samantha, Jonze has overstepped the limits to AI design potential, while Brown's Winston functions as a caveat in this respect. Whatever the case may be, however, the three fictional instances of 'transhuman' AI explored in this paper constitute a fertile terrain for conceptualisation as well as speculation concerning the ineluctable 'otherness' one encounters when confronted by AI, especially because it invariably appears in an uncanny alloy with beguiling 'sameness', as I have tried to show.

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