

The figuration of post-human bodies: a processual experiment with imaginaries

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Abstract This creative writing tries to analyse the current dominant figurations of post-human bodies, emphasizing their humanist, individual-centered and anthropocentric biases. It shows that these figurations rely upon a linear idea of time and a sealed perspective on the future. In order to imagine post-human bodies differently, I develop a collaborative research-creation project that challenges the individualist conception of problematizing and creating. One of the aims of this project is to ask what would be the conditions for the emergence of new figurations of post-human bodies. It will rely on a processual temporality allowing imaginaries to flourish without the constraint of a linear time.

Keywords post-human bodies | research-creation | imaginaries | figurations | future





We live inside an enormous novel. For the writer in particular it is less and less necessary for him to invent the fictional content of his novel. The fiction is already there. The writer's task is to invent reality.

Ballard (1974)

These words written by science fiction writer J.G. Ballard are probably even easier to understand in the context of our contemporary world. It indeed seems like today's Western world has turned fiction into reality, and inversely. The technologies imagined fifty years ago by many famous science fiction authors are now more real than ever, and merge with our human bodies, so that some have claimed we have become cyborgs for a while already, if not for ever, at the risk of putting aside the very specificity of today's technological bodies and world (Hayles, 1999). We can think of our very intimate cellphones, the little chips Swedish companies encourage their employees to insert in their skins to register at work, or the "multiverse", once imagined by Neil Stephenson, now made real by immersive environments. All of these examples materialize a world where the boundaries between fiction and reality have become blurred. In any case, science fiction's imaginaries of the last century have become parts of today's Western reality. They are so real, in some regions of the world, that it is tempting to ask ourselves if, following on Ballard, today's science fiction writers are not Silicon Valley's rich entrepreneurs like Elon Musk or Jeff Bezos. After all, the latter invest a huge amount of money in projects like developing spaceships' travels to Mars for tourism. There is little doubt then, that the prophecies of these entrepreneurs are fictions that fuel (pun intended) many people's dreams of the future and take part in a redefinition of the present and reality.

But which present and future are they proposing, exactly? Linear ones, mostly. This is at least what I will try to explain further on. In this linear time, future is seen as a mere extrapolation of the present. This is precisely what entrepreneur Alexandre Cadain reproaches to science fiction: it only exaggerates the main features of the present and actually guide people (engineers, scientists and entrepreneurs, mostly) towards building a very predictable idea of the future. Cadain, who spent a few years working with Elon Musk, even says we are currently "lacking of imagination" (Cadain, 2017), and what else but imagination makes us want to walk towards the future?

Post-human bodies are especially interesting to look at when it comes to human imaginaries. The post-human imaginary contemplates a futuristic world in which humanity would be transcended by technological means, mostly nanotechnologies, biotechnologies, information science and computing technologies (NBIC). This imaginary is developed in science fiction, futurologist texts and academic writings, giving a certain idea of a future when humankind will no longer be human. The creative reflection I want to develop here is deeply anchored in this context of



troubled frontiers between reality and fiction, in a future's contemplation where imaginaries seem to lose strength and breath. It focuses on post-human bodies to analyse what type of post-human imaginaries prevail today. But, far from staying on a critical analysis, I propose to discuss ways of reimagining post-human bodies. To do this, I will notably present and reflect upon my current research-creation. Research-creation is a recent approach that emerged in Canada. It is seeking to develop a constant dialogue between theory and creation in research. I am part of Hexagram, a research-creation network, based in Montreal. As Kim Sawchuk and Owen Chapman put it, "[i]n research-creation approaches, the theoretical, technical, and creative aspects of a research project are pursued in tandem, and quite often, scholarly form and decorum are breached and breeched in the name of experimentation." (2012 : 6). This experimentation has to be seen as a processual creative thinking. It relies upon a particular idea of fiction as a method to foster new imaginaries on the post-human. It requires to consider « the role of fiction in moving us beyond the impasses of the present, in opening to the radically new, embracing or reinvigorating the incoming future, and of turning toward the abstract, even numinous, outside » (Shaw & Reeves Evison, 2017 : 8).

1. Imagine a straightforward future^{present}

Imagine a far "future where consciousness is digitized and stored in cortical stacks implanted in the spine, allowing humans to survive physical death by having their memories and consciousness "re-sleeved" into new bodies"¹.

These « new bodies » are actually the same (spare a few high-tech prostheses or implants) as today's, except that they are supposed to be set in more than 300 years in the future. Bodies aren't immortal, minds are, it seems. This is the scenario of a recent Netflix's series, *Altered Carbon*, based on the 2002 novel from Richard K. Morgan, imagining post-human bodies in a cyberpunk inspired set-up. Post-human, really? Will future post-human bodies still rely on a strong mind/body dualism (like that of Descartes four centuries ago) and look like today's bodies (you know, with four limbs and a face, etc.)?

This type of figuration of post-human bodies is now very common, be it in science fiction novels, movies, series, or any kind of creative way looking at the technological future. By "figuration", I don't mean mere visual representation, but rather "material and semiotic signposts for specific geo-political and historical locations" expressing "grounded complex singularities, not universal claims" (Braidotti, 2018: 4). Figurations are an entanglement of language and matter expressing singularities. According to

¹ *Altered Carbon*, IMDB website, <https://www.imdb.com/title/tt2261227/>, last view 06/11/2018.



Rosi Braidotti, figurations “expose the repressive structures of dominant subject-formations (*potestas*), but also the affirmative and transformative visions of the subject as nomadic process (*potentia*)” (2018: 4). Therefore, the figurations of post-human bodies I am interested in comprise dominant and nomadic processes to which I will try to pay attention. This means I don’t seek to draw caricatured lines of these processes. Following on that definition, which *potestas* and *potentia* can we detach from today’s imagined post-human bodies?

Let me first be a little more precise as to what I refer to with the idea of post-human imaginaries. The post-human is set in a far future in which technology will have allowed humankind to transcend its “humanness” and often achieved immortality. It is commonly represented through dystopian worlds, very rarely through utopias (except in the transhumanist ideology), as if technological worlds were hard to be imagined otherwise than through Californian ideological or apocalyptic lenses. Post-human is closely linked to transhumanism (Ferrando, 2013), a contemporary ideology advocating the enhancement of humankind through technologies such as nanotechnologies, biotechnologies, information and cognitive technologies (NBIC) (Le Dévédec, 2015). This ideology, acting as a pragmatic utopia, is very popular in Silicon Valley’s companies that develop technologies to build (and above all sell) their ideas of the future. It is strongly reliant on an “economy of hope”, described by Nikolas Rose (2007), that sells narratives to people who want to know more about their future in order to control it better.

The link is often made between post-human, transhumanism and science fiction, this fictional genre looking at technological futures. In this text, I use the term post-human (imaginary) to refer at the same time to the post-human dystopias (and rare utopias), the transhumanist ideology and science fiction works. The post-human is not to be confounded with posthumanist² theories that were notably developed by Katherine Hayles, Donna Haraway or Cary Wolfe. These theories essentially criticize classical humanism and its anthropocentric and individualist way of putting humankind at the center of the universe. Some of those posthumanist theories will help me through the analysis, even though I do not intend to develop any labeled posthumanist thought and creation. For *media* theories (Bardini, 2011), new materialism (Braidotti, 2018) and other philosophical and literary references will be of big importance too.

Imagine a society where brains are stored after death so that we can upload memories into computers and resuscitate people, at least digitally.

This scenario may remind you of a *Black Mirror* episode (“Be right back”, S2, Ep1), but it is less likely you have heard of Nectome, a company founded in 2018, that is spending millions on this very project: to preserve brains until they find a solution to

² I use a dash in « post-human » to distinguish it from posthumanist theories.



upload their contents into computers. I do not intend to develop the issue of reducing memories to data, for this is has been a very common criticism of transhumanist ideas for the last decade (Lafontaine, 2008; Besnier, 2012). The idea of “mind-uploading” (the uploading of the supposed content of brains in computers) goes back to 1950’s science fiction novels, and was notably widely popularized by William Gibson’s *Neuromancer*. In its own way, Nectome puts incommensurable hope in the technological future, urging it to fulfill its promise. You can see with this example how imaginaries travel between fiction and reality in an almost perfect loop. In this case, present ideas revive yesterday’s fictions while pretending to foretell the future they intend to build. Many science fiction works are indeed often presented as very premonitory considering today’s advanced technologies and their use. When people discuss Crispr-Cas9, a genome editing tool developed in 2013, they inevitably think and talk about *Gattaca*, the dystopian movie depicting a society segregating people according to their genetic make-up. This reference to a dystopia is actually telling far more about our present than imagining any different future. Here, fiction is used to ward off a terrifying idea of the future.

Imagine a body merging with technologies. Imagine a sonar implant connected to the cheekbones of Joe Dekni, a cyborg artist, allowing him to perceive what’s behind him. When you look closer at the technology he chose to plug into his skin, you are plunged into the cyberpunk universe. The metallic grey material looks massive, heavy. A chip the size of a hand is hanging down his neck.

Couldn’t Joe Dekni find more advanced and convenient technology to merge with, for approximately the same cost? Probably. Then why did he choose such implants? Joe Dekni is both a cyborg³ and an artist, so this may be mostly an esthetical choice. This gesture presented as very disruptive looks like it is directly taken from a cyberpunk novel. Is this some kind of fulfilment the cyberpunk imaginary? Why such technological body would still need to refer to this imaginary?

Let me first explain a little more what imaginaries account for in this text. According to philosopher Cornélius Castoriadis, an imaginary is an “incessant and undetermined creation” (Castoriadis, 1999) of meanings. It is also fully taking part in reality (Godelier, 2015). In other words, there is no opposition between what is imaginary and what is real, for what is imaginary is real (or the contrary?). In this sense, we can think of the world as composed of performative fictions, fictions that are turned into reality and action. As Thierry Bardini puts it in *Junkware*, some metaphors have the power to open the world of meanings (they are then “positive performativities”), some others shrink it (he calls them “negative performativities”) (2011).

Dekni’s body is at the same time the fulfilment of an old imaginary (not that old,

³ Cyborg is a contraction of cybernetic organism.



alright) that is considered in many ways as prophetic for today's technological world, but it doesn't seem to open new potentials and meanings. On the contrary, it seems to me it relies upon the kind of "negative performativity" Bardini points towards (2011), a meaning that withdraws into itself and shrinks the imaginaries rather than opening them.

2. Imagine fictional realities-real fictions

Imagine a society in which robots are the new working class being exploited by humans. Among these androids (human-looking robots), some start to be conscious and they decide to free themselves and rebel against the humans.

This scenario of the Swedish series *Real humans* illustrates a recurrent idea on artificial intelligence and future bodies: the myth of the Singularity (Ganascia, 2017; Raulerson, 2013). This myth was notably popularized by the SF writer and computer scientist Vernor Vinge and is now part of the rhetoric of popular futurologist Ray Kurzweil⁴. According to the latter, the time will soon come when what we call artificial intelligence will surpass human intelligence. From that time on (in 2029, precisely, he states⁵), we will have no choice but merge completely with artificial intelligence or die. This will be the end of the human species as we know it. This idea is deeply anchored in current figurations of future bodies. According to Kurzweil's non-fiction book, *The Singularity is near* (2005), there is no way we can imagine what this future may look like—even though it is very near us. Like many transhumanists, Kurzweil is not writing fictions that open new imaginaries, but rather prophecies that reduce the future to one scenario.

It seems to me that this type of figuration relies upon very individual-centered, anthropocentric and humanist perspectives. The myth of Singularity puts "human intelligence" first and reflects on how humanity could keep its dominant position over the world in the future, putting aside at the same time any part of the world and any people that can't afford the technologies at stake. It constrains us to adhere to one particular view on the future, arguing that, in any case, we are not able to imagine what could exist beyond us. While there has been so many interesting works on the post-human phenomenon to help us shift from the classical humanist thought (especially in the posthumanist theories) it seems imagination is still stuck with what Katherine Hayles identified almost 20 years ago: in the future, post-human bodies will

⁴ Ray Kurzweil is Google's director of engineering. He also created the Singularity University, a transhumanist institution trying to raise humanity's future leaders.

⁵ Let me add Ray Kurzweil originally chose 2045 to be Singularity's year, but he changed it to 2029 two years ago. The future is getting nearer and nearer...



be either robots, or completely dematerialized (1999). It is also worth underlining Katherine Hayles is a literature researcher and based her famous book (*How we became posthuman*) on science fiction and literary theory. The type of science fiction she studies serves as reality for today's works about transhumanism and post-humanism. My point is that the type of dominant figuration of post-human bodies conveyed by the myth of Singularity tends to shrink the world of meanings and imaginaries. And it is more and more common, as a recent trend called "worldbuilding" shows it. Indeed, science fiction scriptwriter Alex McDowell sells futurist narratives to companies to help them play a crucial role in the future :

In worldbuilding, we are not dealing with prediction or trends. We are looking for arcs of history through present to future at multiple scales that properly represent each unique world. From the past and present, we extrapolate forward to immediate, near, or far future horizons (2018).

Here again, the future is seen as a mere extrapolation of the present, as if exaggerating its main features inevitably led to the future. The company SciFuture has the exact same goal and gets inspired from science fiction writer Brian David Johnson's methodology called "science fiction prototyping".

Imagine a start-up working on a chip that you will implant in your brain, and that will give you the intelligence of the most powerful computer. You will (perhaps) remain an emotional and situated being, but you will be way more intelligent, whatever that means.

Elon Musk has founded the start-up Neuralink in 2016 with this very purpose in mind. Being faithful to Kurzweil's prophecies on Singularity, Musk actually considers artificial intelligence as an "existential threat". He has chosen between the two possible outcomes of this myth: humankind will be merging with machines, rather than letting them control the world. This scenario seems to be at the same time deeply influenced by Mary Shelley's *Frankenstein*, in which Victor, the scientist, has to face the tragic consequences of having created a monster. In order to warn the world before it is too late, Elon Musk and other very influent cultural icons like Stephen Hawkins published open letters in 2015 and 2017⁶ that were widely shared. They used them to call for precaution and expose the dangers of an artificial intelligence that could take over humanity if not carefully controlled.

You may have noticed through this example that prophecies have a strong performativity, meaning they shape and are part of today's world, a performativity that is mostly driven by fear. This kind of prophecy doesn't only anticipate what is to come, but prescribes the conditions to set for such an outcome (De Launay & Crépon,

⁶ This letter focusing on autonomous weapons is available on The Future of life Institute's website: <https://futureoflife.org/open-letter-autonomous-weapons/>



2004). As the illustrious modern biologist François Jacob puts it:

Whether in a social group or in an individual, human life always involves a continuous dialogue between the possible and the actual. A subtle mixture of belief, knowledge, and imagination builds before us an ever changing picture of the possible." (Jacob in Kember, 2005: 154)

According to him, science would need a constant dialogue between what may occur (the possible) and what is here (the actual). This dialogue mixing belief, knowledge and imagination would be a condition for society's perpetual renewal. This idea is very interesting when linked with current technological imaginaries and their figurations of bodies, for it seems "the picture of the possible" has never been that straightforward.

Throughout this work, I try to illustrate and deconstruct what Rosi Braidotti would call *potestas*, dominant figurations of post-human bodies or, according to Thierry Bardini, "negative performativities" that reduce the world of imaginaries to one possible future. These dominant figurations are intrinsically linked to a dominant temporality, a "linear time" that structures present imaginaries and actions in a set of causes and consequences. This time is very much linked to western conceptions of time and space:

When I desire, and when I stage the scene of fantasy (fantasy always seems to be a staged scene), I struggle against the brutal hegemony of the visual's conceptualization of the body—overwhelmingly, in this culture anyway, structured by linear time—for what might otherwise be a far queerer experience of the body's persistence in time." (Dinshaw and al., 2007: 193)

Thinking bodies' differences and, thus, imagining future bodies in all their diversity may require the kind of temporal twist advocated by Dinshaw. "Linear time", clock time around which Western societies are organized, is built upon the idea that "time moves steadily forward". The rush towards the future leaves no room for imaginaries and "fantasy".

3. Imagine a room for collective and ~~prophetic~~processual imaginaries^{realities}

If the dominant figurations of post-human bodies are forged through a linear time, it seems necessary to wonder which conditions could help new imaginaries to emerge. My research-creation appears here, in the midst of a lot of fictions imagining the future of human bodies: those fictions take part in the creation of what we think of past, present and future bodies. Current dominant figurations of post-human bodies assume a present leading irrevocably to a certain future in which human beings will be either extinct, immaterial or cyborgs. No need to say it is a very restrictive future.



Therefore, instead of looking towards the future, what if we cared about the potentialities along the processual cycle of imagination? They would include all the paths the actual may and may not take, all its uncertainties. Let's imagine a research-creation speculating about the potentialities, the uncertainties, and not about the future. It requires considering bodies and imaginaries in a cyclic time, blurring the frontiers of past, present and future. In current transhumanist and post-human imaginaries, what prevails is a linear time, a present made of the prediction of the past that keeps trying to predict its own future.

Many searchers and journalists writing on the transhumanist phenomenon end up their papers wishing for new stories of the future to arise, after having deconstructed the whole transhumanist ideology. I have no wish to leave the reader with a deconstruction that doesn't offer any open path to new imaginaries, new *potentia*, which is one of the reasons of the research-creation I am developing. One of the questions I want to ask is: instead of repeating past and present imaginaries, how can we build the conditions that may help us renew our imaginaries, precisely as far as post-human bodies are concerned? What would be the conditions to generate new imaginaries and new figurations of bodies?

Imagine a collaborative project working on current figurations of post-human bodies, embracing at times a "transindividual" form. Imagine a machine, precisely a text generator, collecting most current textual figurations of those bodies and participating in the creation of new ones. Imagine several people working in a processual way, with these texts and the text generator, discussing and imagining, in their turn, which bodies could emerge along the process.

Such a project requires considering that imaginaries would have many ways to emerge and may give birth to many modes of figuration. One mode of figuration will be textual—it is the way I choose to start from—but it won't exclude other modes: the figurations may appear in discussions with the people taking part in the project, in their minds, in texts, drawings, songs and so many other modes the research-creation may then give birth to. A key element is that I do not presume what type of figurations may emerge. In this sense, this project won't rely on a predictive approach, or a "linear time" like the one currently prevailing, but a processual one. As Rosi Braidotti puts it:

As a figuration, the posthuman is both situated and partial – it does not define the new human condition, but offers a spectrum through which we can capture the complexity of ongoing processes of subjectformation. (Braidotti, 2018: 6)

Speculating on post-human bodies' figurations implies taking a closer look at the "ongoing processes of subjectformation". It therefore excludes any preconceived idea of production or final creation as well as any final thesis. It doesn't seek to define any



“new human condition”. This also requires reflecting about time and causality. The theoretical and creative process at stake in this project is driven by a formal cause, a cause immanent to the research-creation, rather than an efficient cause leading to a predictable creation (Bardini, 2016). Or, if I borrow Deleuze and Guattari’s terms to define a production, it is “a process overflow[ing] all ideal categories and form[ing] a cycle relating to desire as an immanent principle” (1972/73: 12). It follows a loop each time opening a path to the new.

More concretely, imagine a collective project seeking to collect many current textual figurations of post-human bodies, to question them and to produce new figurations. If I often use the first person pronoun for the convenience, I have to specify that this isn’t an individual project. Many current post-human bodies’ figurations are imagined through the eyes of sealed individuals thinking on their own, often reducing bodies to anthropocentric forms, and academic criticisms are no exception in this regard. How we imagine has a strong impact on what we imagine. This project suggests as much as possible embracing a different point of view and challenging the traditional idea of an individual problematization and creation.

Problematizing is not a solitary activity. Imagine I have had a lot of influence from other people in the ideation and framing of this project, from colleagues to relatives and every day’s interactions. They are the indirect actors of the process at the very center of the project. The acts of problematizing and creating in this context can be thought as “transindividual” processes. The term “transindividual” is borrowed from Gilbert Simondon: it is what unifies a relation inside the individual (defining the psyche) and a relation outside (defining the collective) (Combes, 1999; Simondon, 2007). The movements between the individual and the collective are processual ones and they are at the same time irreducible to the individual and the collective. I am notably inspired by research-creation projects that have used “friendship as methodology” (Sawchuk & Chapman, 2012; Chapman 2007; Tillmann-Healy, 2003), a network of collaborations forming a structural basis for the research. The aim of this experiment is to set the conditions to write new imaginaries collectively, to depart from individualist dominant imaginaries about the future.

Now, to make the project a more tangible reality, imagine building a text generator, a software generating texts. According to Jussi Parikka, software arts need to be considered “as a process of individuation and relationality.” (2010: 120). As he puts it “we need to bypass the cliché of reducing new media to a binary mode of coding and understand the potential relationality and processuality inherent in software environments” (2010: 121). I am here inspired by recent generative poetry (Johnston, 2017-2018; Parrish, 2018; Carpenter, 2015) which uses deep learning processes and softwares like *pytorch* or *tensorflow* and give a new sense of what poetry and imaginary can be, going far beyond any individual intention. Working with text generation is the opportunity to let the binary language express itself among other actors’ languages, not reducing it to a tool, not giving it the central role either. The generator will thus help creating new texts on post-human bodies. What is special about text generation is



actually its collaborative and processual aspect. Tons of tutorials and source codes are in free access on GitHub, meaning that anyone can use and modify them. Using those source codes to experiment is already in itself a sort of a collective work. These generated and created texts will act as pretexts to work on new imaginaries and figurations of post-human bodies. Obviously, the creation of such a text generator will not be an end in itself. The generator will be one of the actors taking part in the process and adding its own language to it, bearing in mind it has its own materiality. It is certainly important for the binary language to have its say in all these stories and languages about future bodies, especially when it is often given a phantasmatic and caricatured role.

But this experiment will also require collective meetings between the bodies for which it matters to discuss and challenge Silicon Valley's straightforward idea of the future. I will lead creative writing workshops in Montreal this summer with this very purpose in mind: fostering people's ideas and desires on the post-human and its future bodies.

The process I am sharing with you is at its beginning. It implies that the reader should imagine it as an ongoing collective dialogue that is summoning many modes of figuration of post-human bodies: a technical mode, a poetic mode, a textual mode, an imaginative mode, a discursive mode, a sensorial mode, a binary mode... This entanglement of languages and figurations may or may not lead to other and new languages and figurations.

Such a processual project can be hard to explain because, when viewed through a linear lens, it often appears pointless. Still, imagine what is at stake is not so much to know the future but to renew our present constantly, not letting anyone desire in our name. I will now leave to your imagination what the poet once said:

If the time should ever come when what is now called science, thus familiarized to men, shall be ready to put on, as it were, a form of flesh and blood, the Poet will lend his divine spirit to aid the transfiguration, and will welcome the being thus produced as a dear and genuine inmate of the household of man. (Wordsworth, 1802)

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