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Fictions and Theories of the Posthuman From Creature to Concept

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INTRODUCTION

Amongst the countless stages that have led to the existence of the artefact that now lies in your hands (or, most probably, appears on your screen), one of the most challenging has certainly been identifying its disciplinary affiliations. Its central topic, the posthuman, indeed stands at a disciplinary crossroads between Science, Philosophy, Sociology, Literature and the Arts. How, therefore, can one study and report on such an undeniably transdisciplinary topic from a perspective that is bound, by the practicalities and requirements of academia, to be partial? How, indeed, can one apply the framework of a specific discipline on an object that transcends this framework, forcing the *disciplined* scholar to follow it *out of bounds*? These issues have lingered at the back of my head throughout the elaboration of the present study and have surely been partly responsible for its current form. Indeed, as a literary scholar, I can hardly claim to have expertise in all of the areas that a comprehensive study of the posthuman should entail; nor can I,

therefore, contribute legitimately to the philosophical, sociological or scientific scholarship of the posthuman. Fortunately, my intentions lie elsewhere.

In 2015, I attended the first of the *New York Posthuman Research Group* annual conference, presenting a highly literary paper amongst a group of philosophers and scientists, and I remember organiser Francesca Ferrando emphasising the relevance of literary studies by recalling the anteriority of literary posthumans to their theoretical and technological counterparts. Whether these counterparts have actually been offsprings shall be one of the issues debated in this study, as part of a more general reflection on the role of fiction in (the development of) non-fictional discourses about the posthuman. Ferrando must not have known that she would thereby give birth to the questioning that would guide me throughout the process whose result you are currently reading, and which is: “how can I, as a literary scholar, contribute to this discussion in a meaningful and original way, all the while taking into account the input from other disciplines?”

Part I aims at fulfilling the second half of this objective by presenting an overview of theories of the posthuman in all their past and present variety. Chapters 1 and 2 indeed provide an account of the first – sometimes, hesitating – steps of, respectively, transhumanism and posthumanism. Note that neither of these two chapters focuses on building the genealogy of transhumanism and posthumanism by tying them to older ideas,¹ but instead, they observe the first uses of related terms (e.g. ‘transhumanism’ and ‘posthumanism’, ‘transhuman’ and ‘posthuman’, and ‘transhumanity’ and ‘posthumanity’) and trace the evolution of their meanings across the years. As the

¹ One of the most erudite yet clearest instance of such kind of comprehensive genealogical account can be found in Pramod K. Nayar’s *Posthumanism* (2014).

number of publications on these topics has been dramatically increasing, so has the variety of definitions and conceptualisation attempts. Chapter 3 therefore describes and categorises the main developments in the field, this time focusing on the posthuman, so as to deal with all the variations in this concept, regardless of the type of discourse in which it occurs. This categorisation brings to light the concept's modes of transfer and transformation across disciplines and cultures, as well as the fact that its theoretical developments generally fall somewhere on a spectrum that goes from 'total emphasis on philosophy' to 'total emphasis on technology'.

All in all, Part I uncovers the variety – and sometimes the confusion – that reigns in this field and suggests a way of organising its theoretical production that might avoid further confusion. Even though it might prove useful to other scholars, Part I has been, above all, a more than necessary prelude to the core reflection of my investigation (which occupies Part II). Indeed, it provides a complete, nuanced but stable notion of the posthuman upon which to rely for further uses. More precisely, it postulates that 'the posthuman' is not one signifier that has several signifieds – a character in (science-) fictional narratives, an object of speculation in scientific texts or a concept in philosophical writings – but rather a *transdiscursive figure* that, whenever and wherever it appears, conveys all of these aspects at once. This observation, whose validity across theoretical texts Part I aims at proving, made me consider this validity after putting not only theoretical but also fictional texts into perspective. This is precisely the goal of Part II, as it seeks to explore the relationship between theories and fictions of the posthuman, especially the ways in which they manifest into each other.

Throughout the twentieth century, the idea that a text is always in a relationship with other texts was shaped by successive theories. In the 1920s, Mikhail Bakhtin developed the concept of *dialogism*, arguing that every word is always already someone else's, therefore making it impossible for anyone to be the sole author of one's text. Bakhtin's dialogism was imported into French literary theory in the 1960s by Julia Kristeva as "*intertextuality*", which she described as the fact that "each text is constructed like a mosaic of quotations, each text is the absorption and transformation of another text"² (85).³ In the 1980s, Gérard Genette conveys a narrower notion of intertextuality, "the actual presence of one text within another"(2), which is only one amongst several types of relationships between texts, others being *paratextuality*, i.e. the text that surrounds a work such as titles, prefaces, notes, etc., *metatextuality*, i.e. the text that comments on a work, *hypertextuality*, i.e. the text that derives from another text, and *architextuality*, i.e. the categories to which a text belongs (Genette 1-5). These relationships are gathered under the overarching concept of *transtextuality* as "the textual transcendence of the text, [...] all that sets the text in a relationship, whether obvious or concealed, with other texts" (1). These relationships characterise the text as a whole: for example, if a text (intertextually) refers to or is a (hypertextual) parody of Shelley's *Frankenstein, or the Modern Prometheus*, it establishes a (transtextual) relationship between itself and Shelley's text. Yet, sometimes, a text may feature only few elements from another text, and when these elements are characters, Richard Saint-Gelais suggests calling this phenomenon "*transfictionality*" (7). Such is the case, for

² Translated by Paweł Marciniak (80). Original: "tout texte se construit comme une mosaïque de citations, tout texte est absorption et transformation d'un autre texte."

³ Quotations in other languages shall appear in English within the main text (followed, when necessary, by the indication "my translation"). Their original version shall be provided in footnotes (with the exception of *LoveStar* by Andri Snær Magnason, whose Icelandic version could not be obtained).

instance, of the 2004 film *Van Helsing* (Sommers), which features Frankenstein's Creature alongside other characters from supernatural Victorian literature (Dracula, Van Helsing, Dr Jekyll, Mr Hyde and Dr Frankenstein himself); all of these characters are *transfictional*.⁴

My assumption is that the posthuman actualises several versions of Genette's textual relationships. Chapter 4 anatomises the posthuman, uncovering its (science-)fictional nature. Therefore, the relationships that are under scrutiny in this chapter are those of discourses of the posthuman with other texts and with each other, on the basis of a shared affiliation to (science-)fictional texts. As such, these relationships rely upon the categories into which texts could be sorted, and could therefore be described, with a little stretch, as *architextual*, since Genette's notion of *architextuality* encompasses "the entire set of general or transcendent categories – types of discourse, modes of enunciation, literary genres – from which emerges each singular text" (1).⁵ Chapter 5 focuses on the relationships of theories of the posthuman with fiction, which mainly materialise intertextually, *i.e.* through references to fictional works. This chapter describes the two main roles that fiction plays in theoretical texts – inspiration or illustration – and which correspond to the two main successive trends in the theorisation

⁴ Saint-Gelais specifies that *transfictionality* and *hypertextuality* are closely related but do not automatically entail each other: sequels are both *transfictional* and *hypertextual*, but parodies and pastiches are only *hypertextual*, while some instances of *transfictionality* are not *hypertextual*. Indeed, *Van Helsing* or, in a lighter register, animation film *Hotel Transylvania*, feature Frankenstein's Creature, but their plots do not rely upon Shelley's original novel *Frankenstein, or the Modern Prometheus*.

⁵ The fictional nature of a text and its generic affiliations is something that Genette has indeed already contemplated, but I have chosen to extend his notion of *architextuality* to the philosophical affiliations of texts. For example, William Gibson's *Neuromancer* can be tied by its generic affiliations to other science-fiction, more precisely, to cyberpunk texts, or, more broadly – and by its fictional nature – to other fictions; but it can also be tied by the postmodern nature of the themes it develops to anterior or posterior postmodern philosophical texts. Note that if a posterior philosophical text comments on *Neuromancer*, its relationship to the novel therefore becomes *metatextual*.

of the posthuman: induction and (then) deduction.⁶ The last section of Chapter 6 also describes textual relationships, this time focusing on fictional texts and how they *refer*, in the widest sense, to theoretical works. Some of the relationships are intertextual, in that some fictions paraphrase passages from theories, and sometimes, characters of these fictions represent theoreticians or their theoretical figures. It is nonetheless problematic to characterise this last phenomenon as “transfictionality” since the source material is not fictional but theoretical and the original “character” is an actual person.

It is precisely because of this issue, which is related to the disparity between the two types of discourses (fiction vs. theory), that I have chosen to describe the posthuman as *transdiscursive* rather than *transfictional* (and as a *figure* rather than a *character*, which would be semantically too close to fiction). As such, it echoes the more sociological and sociocritical theories of intertextuality, which consider literature as a part of a greater network of discourses between which transactions abound in every way (Chassay, ‘Intertextualité’ 307). More precisely, Marc Angenot’s work on the *discours social*, which presents intertextuality “as circulation and transformation of ideologemes, of small signifying units endowed with diffuse acceptability in a given doxa” and

⁶ At first sight, the use of fiction in/by theory rather corresponds to Genette’s notion of metatextuality, “the *critical* relationship par excellence” (3). This implies that, even though the non-fictional work relies on the fictional work, the latter remains, by way of commentary, the critic’s focus. However, such a description is not accurate for all fiction-in-theory configurations: while fiction is instrumental to the inductive process, it is not always central in texts that make a deductive use of it. In these texts where developing theory precedes any use of fiction, the latter may indeed remain central (in literary studies, for example), but can also be peripheralised and confined to the role of pure, occasional illustration (see Chapter 5 for examples). Moreover, even though Genette unambiguously defined the notion of metatextuality as “by essence non fictional” (397), later scholars considered the possibility of metatextuality in fictional texts, leading to the study of the marks of self-reflexivity, self-awareness or self-reference in fiction (Lepaludier 9). “Metatextuality” therefore now refers to a wider range of texts and denotes a topic that does not fall into the scrutiny of the present study. Because of these two reasons, I believe the term “intertextuality” is more suited to this study, as neither its Genettian definition, nor later developments contradict my use of it.

interdiscursivity “as reciprocal interaction and influences of discourse axiomatics”⁷ (‘Théorie’ 4, my translation), conveys the idea that neither literature (‘Intertextualité’ 128) nor philosophy (‘Théorie’ 20) are beyond the scope of *social discourse*; rather, both can therefore influence and be influenced by other discourses, as well as by each other. I believe that Angenot’s uncovering of this generalised interdiscursivity helps postulating the existence and nature of the relationship between fictions and theories of the posthuman, even though I do not aim at conducting an enquiry into the posthuman as social discourse. Incidentally, readers shall notice that I prefer to define the posthuman as *transdiscursive* rather than *interdiscursive*, partly as a way of signalling that this study does not intend to replicate what Angenot did with the *discours social*. Besides avoiding too close an affiliation with a specific theory, another reason for my choosing ‘trans-’ over ‘inter-’ is mainly related to the signification of these prefixes: while ‘inter-’ generally means ‘between’ or ‘mutual’, ‘trans-’ means ‘across’ or ‘beyond’ (Sheehan 43, 88), which better corresponds to the nature of the relationships between the posthuman and its various discourses, as it goes *beyond* – or even better, it *transcends* – the boundaries between types of discourses.

As already conveyed by the past few paragraphs, this dissertation presents a range of perspectives related to literary theory, narratology and semiotics, which are enabled by close-reading techniques and applied to a corpus of fiction and a corpus of nonfiction. The nonfiction corpus comprises a variety of discussions, theorisations and conceptualisations of the posthuman, though sometimes not in these explicit words.

⁷ “d’intertextualité (comme circulation et transformation d’idéologèmes, de petites unités signifiantes dotées d’acceptabilité diffuse dans une doxa donnée) et d’interdiscursivité (comme interaction et influences réciproques des axiomatics de discours).”

The corpus of transhumanist and posthumanist texts has been selected following two principles: on the one hand, the earliest texts on these topics provide insights into the foundations of these discourses and the cultural mind-set in which they first appeared (see Chapters 1 and 2); on the other hand, more recent texts have been chosen in virtue of their paradigmatic natures. This second principle is justified by the general objective that underpins this study, which is to gather and organise knowledge about the posthuman and the textual relationships that it fosters. The typologies developed in Chapters 3 and 5 – a typology of contemporary theories of the posthuman in Chapter 3, and of the presence of fiction in theory in Chapter 5 – indeed only mention, in each of their parts, a few representative texts.

Similarly, the fictional corpus of Chapter 6 (which explores the presence of theory in fiction) is meant to be less exhaustive than paradigmatic. Progressively assembled as I explored and made sense of the variety of relationships between fiction and theory of the posthuman, this fictional corpus now resembles a motley collection of novels, films and plays with diverse origins such, as Belgium (2018 collective play *Cocon!*), Canada (Margaret Atwood's 2003 *Oryx and Crake*), France (Michel Houellebecq's 2005 *The Possibility of an Island*), Iceland (Andri Snær Magnason's 2002 *LoveStar*), Japan (Mamoru Oshii's 2004 anime *Ghost in the Shell 2: Innocence*) and the U.K. (Kazuo Ishiguro's 2005 *Never Let Me Go*). These works are nonetheless united by their science-fictional nature, and more precisely by their representation of posthuman life, the variety of which they nonetheless account for (genetically enhanced humans, cyborgs, AIs, androids, and clones), thereby not limiting the meaning of the posthuman to either the technological modification of humans or the human creation of sentient

entities. Being produced over the past two decades, these works are also tied together by their hyper-contemporaneity. Discussions on humankind's nature, future and relationship with technology may have started a few decades or centuries ago (depending on the scholar's opinion, perspective and field of expertise), but there seems to have been a significant increase of interest in the posthuman and all related topics from the 2000s onwards (*circa* 2005).⁸ Clearly, the new possibilities offered by 1980s and 1990s information and telecommunication revolution (Šmihula 51) have had a great impact on the formation of the earliest instances of theories of the posthuman, but the intensification of technological progress and the transition into the digital age have made them even more relevant.⁹ The turn of the century has been particularly marked by a series of events that brought the posthuman, and especially its ethical implications, in the spotlight: for example, in 1996, the birth of Dolly the Sheep, which was announced in alarming terms by the *Times*, raised awareness about the possibility of cloning an entire (and maybe, someday, human) being and inspired reflections about identity, human nature and creation; in 2003, the Human Genome Project's completed sequencing of the human genome opened up the possibility of knowing our species even more deeply, but also of considering genetic engineering to modify or improve it; one could also mention the polemic surrounding Paralympic champion Oscar Pistorius's participation to non-disabled races with supposedly advantage-giving prostheses, which initiated a shift in the perception of disabled people and triggered questionings about the goal of restorative medicine and medical science altogether. Measuring precisely

⁸ See Appendix 2.

⁹ Practically speaking, the rise of the Internet and the subsequent development of digital databases have also made the circulation of ideas much more efficient, which has stimulated the popularity of the posthuman just as much as that of any other academic topic.

the impact of such events is beyond the scope of this study, but they can nonetheless be assumed to have participated in shaping the twenty-first-century cultural landscape, including theoretical and artistic productions. This might partly account for the peak in publications about the posthuman, posthumanism or transhumanism these past two decades, which is, in turn, the reason why I have chosen novels from that same era: as the theories of the posthuman that I focus on mainly belong to the twenty-first century (cf. Chapters 3 to 5), I find it more fitting, when investigating the presence of theory in fiction, to examine fictions that are posterior to, or at least concomitant with these theories.

I now shall finish – or start – with a short remark that acts as instruction, disclaimer and incentive: readers primarily interested in literature could jump straight to Part II, and readers mostly curious about theory could limit themselves to Part I; each Part – much as the two main definitions of the posthuman – could indeed stand on their own. Yet, only upon contact with each other do both parts eventually reveal their full extent.

PART I

POSTHUMAN DISCOURSES

Chapter 1

Transhumanism, From Extropy to Academia

In 2018, French historian Franck Damour published an intellectual history of transhumanism in an effort to go beyond both the simple genealogical study of the term 'transhumanism' and the official narrative established by the transhumanists themselves ('Mouvement' 155–56). The result is a history of the movement revolving around the figure of Max More, who initially was the junction of three circles with a similar preoccupation for the future of the human species: futurologist FM2030 and his UCLA students (who focused on enhancement), the cryogenics movement (which focused on life extension), and the *L5 society* (which focused on spatial colonisation). Max More was indeed a student at UCLA, a member of the cryonics network and husband to *L5* member Nancie Clarke, later known as Natasha Vita-More (Damour, 'Mouvement' 150). Moreover, in 1988, he launched the magazine *Extropy*¹ for which he

¹ Extropy was first subtitled Vaccine for Future Shock, which shifted to *Journal of Transhumanist Thought* in 1990.

managed to gather, from his central position, articles by the most prominent figures of each of the aforementioned circles. The first step towards the constitution of an actual movement was the setting up of a mailing list in 1991 by Harry Hawk and Perry Metzger. However, Max More took a step further, first by creating the *Extropy Institute (ExI)* in 1992, then by launching the *Extro* conferences in 1994 in Sunnyvale, California, which gathered scientists, theoreticians and even writers ('Mouvement' 151).

However, transhumanism in those days was a mixture of various ideas, and More's understanding of the concept – as a philosophy of life, metapsychology, ethics and self-growth method (Damour 152) – did not prompt unanimous support. Swedish philosopher Nick Bostrom, in particular, wanted it to become more legitimate, hence the need to meet academic standards. With David Pearce, Bostrom therefore created the *World Transhumanist Association (WTA)*² in 1998, which fulfilled the latter purpose but also made transhumanism more international (Damour 144). Just like the *ExI*, the *WTA* has also been organising yearly international conferences, *TransVision*.

In 2004, Bostrom intended to legitimise transhumanism further by creating, with James Hughes, a second organisation: the *Institute for Ethics and Emerging Technologies (IEET)*. The *IEET* took on the responsibility of publishing the *Journal of Transhumanism* (previously held by the *WTA*) and renamed it *Journal of Evolution and Technology* for the occasion. The journal has adopted a more and more scholarly tone ever since. The days of the activist, new agey journals such as *Extropy* were long gone. Nowadays, most transhumanists seem to be gravitating towards two think tanks: the first one, established by Nick Bostrom at Oxford University, is called the *Future of Humanity*

² It was renamed *Humanity +* in 2008.

Institute (FHI); the second one, based in California and founded by Ray Kurzweil, one of the most mainstream transhumanists of the last decades, is known as the *Singularity University*.

The major difference between Damour's intellectual history and Bostrom's official history lies in locating the roots of transhumanism. While Damour attributes the birth of transhumanism to futurologist FM2030 and leader of the cryonics movement Robert Ettinger in addition to nineteenth-century American technological utopianism (149), Bostrom forged a legitimising narrative that ties his movement to the Enlightenment rationalism of Francis Bacon, Nicolas de Condorcet and Benjamin Franklin (Bostrom 2; Damour 145). Given that this study is devoted to the figure of the posthuman, the present chapter focuses on the transhumanist notion of 'posthuman', also called 'transhuman' by some transhumanists.

Julian Huxley (1957)

The historiography of transhumanism may entirely be dependent on its actors' backgrounds, affiliations and allegiances. It may be a ground of battles and contradictions; but most of its soldiers are forced to agree on one thing: the origin of their label. Those who have intended to trace the history of transhumanism, whether as the main object of a research³ or as a mandatory first step in a more general project⁴, have come to name biologist Julian Huxley as the father of the word 'transhumanism', while they acknowledge that the notion has evolved since then. Julian Huxley –Aldous Huxley's brother – who wrote an essay significantly entitled "Transhumanism" in the

³ See "A History of Transhumanist Thought", published in 2005 by transhumanist Nick Bostrom and Franck Damour's more impartial intellectual history, "Le mouvement transhumaniste: Approches historiques d'une utopie technologique" (2018).

⁴ Such as Ranisch & Sorgner's *Post- and Transhumanism: An Introduction*, amongst others.

collection *New Bottles for New Wine* (1957). In their book *Post- and Transhumanism: An Introduction* (2014), Ranisch and Sorgner however suggest that Huxley's understanding of transhumanism differed from the ones of those who later used the term in that the improvements that he was considering were merely social and spiritual (10)⁵. However, even though Huxley acknowledged "creating a more favourable social environment" (16), his focus remained largely on scientific progress: preceded by a preface glorifying the expansion of scientific knowledge and its achievement, "Transhumanism" extolled evolution and the exceptionalism of the human species as the only one possessing self-awareness:

And finally, during the last few ticks of the cosmic clock, something wholly new and revolutionary, human beings with their capacities for conceptual thought and language, for self-conscious awareness and purpose, for accumulating and pooling conscious experience. (13)

However, such outstanding capacities, awarded through an outstanding evolutionary process, come with great "responsibility" as Huxley put it: "to be an agent for the rest of the world in the job of realizing its inherent potentialities as fully as possible" (13). Mankind's "destiny" is to somehow pursue the evolutionary process of which it is the result, for its own sake and that of nature – the control of which was praised by Huxley, who considered such control as a benevolent act part of the human species' responsibility as the most intelligent one. Huxley also reinforced this sense of duty by recalling humans' persisting flaws – as shown by the horrors of the first half of the

⁵ A similar shift in understanding has occurred to two other notions frequently compared to and associated with the posthuman: Lucian of Samosata's *hyperanthropos* (mentioned in *The Downward Journey*, in the 2nd century AD) and Nietzsche's *Übermensch* (mentioned in *Thus Spoke Zarathustra*, in 1883). Both concepts initially postulated that the 'overhuman' was better morally, spiritually and socially; but not bio(techno)logically, as desired by transhumanists (Babich 58).

twentieth century – and the “present limitations and miserable frustrations of our existence” that still needed to be “surmounted” (16).

Such an opinion about humankind led Huxley to the following conclusion:

The human species can, if it wishes, transcend itself – not just sporadically, an individual here in one way, an individual there in another way, but in its entirety, as humanity. We need a name for this new belief. Perhaps *transhumanism* will serve: man remaining man, but transcending himself, by realizing new possibilities of and for his human nature. (17)

Clearly this conclusion laid some of the foundations of transhumanism; it indeed expressed a desire to *transcend* the status of the human being as merely a product of evolution, to become an agent of such evolution, and to aim for a better version of humanity. Notably, it also featured the spark for the idea of transhumanity as a transitory state, where “man” could be enhanced, but still “remain[s] man”⁶. Beyond Huxley’s ideas, it is also his tone – overly optimistic, meant to convince his readers to “believe in transhumanism” as he himself does (17) – that has persisted into further transhumanist writings.

However, as Ranisch and Sorgner observe, “the meaning of ‘transhumanism’ [...] has changed after Huxley” to become “the transgression of human’s biological boundaries by means of technologies” (10). Huxley indeed envisioned enhancement through scientific knowledge, but was not specific about the ways to achieve such an enhancement; he did not overtly allude to the use of technology, let alone its fusion with the human body. Moreover, he insisted upon improving humanity “in its entirety,” but the solutions that later transhumanists have usually put forward have consisted of

⁶ Later transhumanist indeed consider the transhuman and the posthuman as two subsequent states in the future evolution of our species, the former being a *transitional* state still featuring some attributes of humanity while the latter has overcome humanity completely (see Max More’s and Nick Bostrom’s conceptualisations).

individual enhancements to fulfill “individual ambitions” (“Transhuman Principles”). The fact that transhumanism has developed from the 1960s onwards in a more and more individualist, liberal, and capitalist American society may have contributed to divert it from its original, more collectivistic purpose. The result has been that, even though most transhumanists claimed that all of humanity (and, according to the 1998 Declaration, “all sentience”) should benefit from their breakthroughs, hardly anything has been planned to make sure that these breakthroughs would be accessible not to the wealthiest only. In fact, avoiding this issue altogether has been common, especially amongst early transhumanists, like American physicist and mathematician Robert Ettinger.

Robert Ettinger (1964, 1972)

In 1964, Robert Ettinger contemplated the possibility and practicalities of cryogenics in *The Prospect of Immortality*, in which he alluded to future humans for the first time – “if we cease being human and become superhuman, will we still be ourselves? How much can a man change without losing his essence?” (17) – but did not expand on this topic. Rather, it is in his next book, *Man Into Superman* (1972), that he developed this reflection and advocated for the enhancement of the human species.

The aim of this book is to convince his readers that technological enhancement is positive and desirable for humankind. To do so, the author recurrently addresses his readers —“You personally and your families have a genuine opportunity to prolong your lives indefinitely and outgrow the human mold” (7)— luring them with a future so bright that no one could possibly refuse its realisation. Though initially toned down in

Huxley's essay, this proselytism of sorts as well as the use of similar rhetoric have become common practice amongst transhumanist discourses, as one shall see.

Ettinger starts by putting forward a classic argument in favour of technology: "On a rudimentary level, the engineering of humanity is as old as humanity" (10). He indeed presents human enhancement as a process of improvement carried out by humankind since time immemorial; medicinal herbs, glasses, birth control pills and genetic engineering are all human enhancement technologies of varying degrees of complexity. He thus establishes as natural the desire to enhance the human species, which forces his readers to at least accept – and, in the best-case scenario, want – enhancement. Such a strategy of naturalisation, which justifies the need to evolve by its inscription in the human genes, may be found not only in many transhumanist⁷ but also posthumanist works⁸. Ettinger then counters some of the ethical and religious objections, according to which designing humankind would amount to challenging God's or Nature's authority. In other words, by emphasising how human enhancement could reduce suffering or improve living standards globally, Ettinger turns it into a moral duty. To convey the urgency of human enhancement, Ettinger then lists the weaknesses of the unenhanced human body. Making enhancement a moral duty urged by the human species' built-in flaws – the similarities to Huxley's own strategy are blindingly obvious. Lastly, he recalls the narratives that have contemplated the enhanced human: Babylonian mythology, Eastern spirituality, Nietzsche's and G.B. Shaw's supermen, detective fiction and science fiction. In the latter genre, he mentions George Orwell, H.

⁷ See "Evolution" (Fuller).

⁸ Sorgner interprets Hayles's "we have always been posthuman" as recognition of our ancestral, perpetual use of technology (33).

G. Wells, Olaf Stapledon, Robert A. Heinlein, Stanley G. Weinbaum, E. A. van Vogt, Arthur C. Clarke and Alfred Bester; he praises them when they present the enhanced human in a favourable way and contradicts them when they insist upon the shortcomings and negative consequences of supermen. From that moment on in the book, the persuasion phase seems to be complete, and Ettinger moves on to a more detailed description not only of the ways in which the superhuman could be achieved, but also of the various aspects of this achievement (gender and sexuality, pain, morality, economy, religion). Thus Ettinger's essay seems to be a continuation of Huxley's, with the difference that he presents more specific ways to become "supermen."

Ettinger uses a twofold terminology to label his enhanced humans: 'superman' (or 'superhuman', 'superhumanity') and 'transhuman' (or 'transhumanity'). 'Superman' and its derivatives appear much more frequently than 'transhuman(ity),' but there is no consistency regarding the use of one over the other. 'Superman' is always used as a noun (and so are 'superhumanity' and 'transhumanity'), but 'superhuman' and 'transhuman' can both be used as nouns and adjectives. Unfortunately, Ettinger does not clarify the difference between the two concepts, nor even whether there is actually one. Some parts of the book indeed imply that both terms can be used interchangeably: in the chapter dealing with literary works, for instance, Ettinger writes about H.G. Wells:

"He was wrong to sneer at gadgetry, which is an essential part of our salvation. [...] But he was right in calling for more subtlety and delicacy in postulating superman, and made an effort at least to hint at some possible transhuman traits." (29)

Similarly, in the chapter "Growing pains," Ettinger contemplates the possibility for enhanced humans to feel empathy, and writes:

Perhaps, then, superman will regard generosity and niggardliness alike merely as miscalculations, carrying emotional freight only for the immature. [...] But along with his coolness, his ability to make the grimmest decisions without the quiver of a muscle, the transhuman may also be warm and understanding in a way that we see only few hints of today. (110)

None of these extracts yields a clue that could help differentiate between 'superman' and 'transhuman'; Ettinger seems to use both terms to refer to the same concept of enhanced human.

Despite their terminological vagueness, Ettinger's books achieved posterity amongst transhumanists, partly because the author was the first to coin 'transhuman'⁹ in a sense closer to current transhumanism (Hughes 133), partly because he was a cryonics pioneer, which correlated with the transhumanists' chief goal of achieving immortality, as established by F.M. Esfandiary, another "forerunner of contemporary transhumanism" (Ranisch and Sorgner 10).

F.M. Esfandiary, (1973)

Only a year after Ettinger's *Man Into Superman*, Iranian philosopher F.M. Esfandiary published *Up-Wingers* (1973), a series of speculations about the future achievements of humanity. In this definitely optimistic book, Esfandiary highlights two particularly significant human breakthroughs:

1. beyond the animal/human.
2. extending beyond Planet Earth.¹⁰

Whereas the interest in spatial exploration progressively decreased in later transhumanist works and has, by now, almost completely ceased to be a preoccupation,

⁹ According to the *ExI "Transhumanist FAQ,"* "Abraham Maslow referred to transhumans in *Toward a Psychology of Being*, (1968). The actual concept of transhuman as an evolutionary transition was expressed by FM-2030 in his contributing final chapter in *Woman, Year 2000* (1972)" (n.p).

¹⁰ Unless specified otherwise, all the references in this section belong to a digital, non-paginated version of *Up-Wingers*.

the first of these two “new concepts of life” is extremely relevant to this study. Even though the formulation “animal/human” first comes across as ambiguous, its other uses in the book eventually clarify what Esfandiary means by it. In the chapter “the time dimension,” he writes: “Except for the human brain everything having to do with the body is primitive—belonging to the animal stage in our evolution. Eating drinking defecating reproducing sleeping walking dying—all these are animal/human.” He also reminds us of the fragility of the “primitive” and “animal” human body, deplors our acceptance, as humans, of what “has been *imposed* on us by evolution,” and claims that “[w]e must de-animalize ourselves.” Incidentally, in his glossary, Esfandiary defines “deanimalize” as follows: “Replace our animal organs and body parts with durable painfree non-flesh implants. Any parts that enhance rapid evolution we will keep. The rest is dispensable.” Going “beyond animal/human” therefore means overcoming or improving the ‘organic’, ‘original,’ ‘natural’ body. This idea corresponds to the two theoretical directions that the posthuman has taken in the following decades: posthumanism, on the one hand, has been focusing on erasing the boundary between humans and other animals (amongst others); transhumanism, on the other hand, has been focusing on enhancing the human body and transcending its original condition. With the exception of the glossary, however, the book is concerned with the latter goal only, which might explain why only transhumanists consider Esfandiary to be the forerunner of their philosophy. Esfandiary indeed advocates for a new philosophy, a new ideology, and new conceptual and social systems “to accommodate this emerging dimension” brought by progress. Like Huxley, Ettinger, and most of the later

transhumanist works, Esfandiary meant to convince his readers of the benefits of technological progress for humankind.

Surprisingly, Esfandiary does not make a significant use of the words 'transhuman' or 'transhumanism'. 'Transhuman' appears only once, in the glossary and without further explanation: "Nonflesh implants are central to the emerging transhumans and telehumans." This last word is a term he uses to call "[t]he next stage in the evolution of humans." Telehumans would be "at all times protected and easily connected to other people and to communication outlets." The definition in the glossary highlights two aspects concerning these future humans: their hybridity with technology and their connectivity. The author thus emphasises the importance of communication: "Communication is central to [the telehuman's] existence its pleasures its accelerated evolution." What is more, Esfandiary uses the word 'posthuman' several times in this book, as "an entirely new concept of the human," "entirely new kinds and forms and shapes of life" and "the evolution from the human." These descriptions are very general and the author's "posthuman" remains undifferentiated from his "telehuman." Nonetheless, the idea that the posthuman is one step further down the road and that we must first pass by a transitional state (in this case, possibly the transhuman or the telehuman) takes shape.

Again, Esfandiary's notion of the posthuman, especially when described as "an entirely new *concept* of the human" (my emphasis), as opposed to a new *type* of human, could be argued to contain the seeds of posthumanism, but the rest of his book disproves this possible connection in several ways: not only does Esfandiary fail to address humanism, let alone its flawed implications, but he also focuses on the

improvement of the human species *only* – a focus that has been maintained in the following developments of his thought into transhumanism, which has provoked a lot of criticism of transhumanism as a reaffirmation of the humanist anthropocentrism (Thweatt-Bates 5). The posthumanist project to question and overcome human exceptionalism and anthropocentrism does not seem to be part of Esfandiary's goals at all. On the contrary, Esfandiary, in the same vein as Huxley, insists on the exceptionality of the human species: “[we are] members of a remarkably intelligent species inhabiting a planet in this solar system this galaxy this universe. [...] It may then occur to us that our brain [...] is one of the extraordinary phenomena on the universe.” Esfandiary's work therefore remains a classic for transhumanists, especially for Extropians.

Natasha Vita-More (1983)

In 1983, Natasha Vita-More (born Nancie Clark) wrote the “Transhuman Manifesto,” a twelve-line statement about the transhumanist ideals:

We are transhumans.

Transhumans integrate the most eminent progression of creativity and sensibility merged by discovery.

Transhumans want to elevate and extend life.

Transhumans seek to expand life.

As our tools and ideas continue to evolve, so too shall we.

We are designing the technologies to enhance our senses and increase our understanding.

The transhumanist ecology and freedom exercises self-awareness and self-responsibility.

Let us choose to be transhumanist not only in our bodies, but also in our values.

Toward diversity, multiplicity.

Toward non-partisan ideology (transpolitics, transpartisan, transmodernity).

Toward transhuman rights of morphological freedom, existence safety, personhood preservation.

Toward a more humane transhumanity.

Some of the ideas in this manifesto – such as expanding life – had already been conveyed by Ettinger’s and, to a lesser extent, Esfandiary’s works. More generally, improving the human condition physically, psychologically, morally and socially had been the central concern of these two thinkers, who had insisted upon human enhancement being not only natural but also a right.

For the first time since Huxley’s “Transhumanism”, ‘transhuman’ modified by the suffix ‘-ist’, turning it into something closer to an ideology than a technophile fantasy of a science-fiction character; but ‘transhumanist’ is also used to name the thinkers gathered by this ideology. The use of first-person plural indeed signals the existence of such a group, but may also be a way to encompass the reader or even all of humankind. Most transhumanists and their forerunners have used this inclusive pronoun to designate humanity as a whole: Ettinger uses it extensively in both of his books: “There is really no evading the fact: our species is in many respects, and possibly in most respects, physically abnormal” (*Prospects* 18-19), for example; so does Esfandiary: “These new dimensions in human life—all our social economic political systems—all our age-old concepts of life and nature—Time and Space”. Before them, Teilhard de Chardin writes: “With our knowledge of hormones we appear to be on the eve of having a hand in the development of our bodies and even of our brains” (168, qtd. in Ettinger 13); and after them, Max More claims: “[human nature] is just one point along an evolutionary pathway and we can learn to reshape our own nature in ways we deem desirable and valuable” (4); and Nick Bostrom laments: “Opponents of posthumanity argue that we should not seek enhancements of a type that could make us, or our

descendants, posthuman" (29). These are but a few examples of how overwhelming the use of the second person plural has become in transhumanist texts.

The ethical stance, however, is much stronger in Vita-More's manifesto: she differs from her predecessors in going further than simply asserting her right to evolve with and through technology; she insists upon the moral promises of such change. Her propositions counterbalance the improvement of the physical with that of the moral; that of the self as a body with that of the self as a member of society. Life is to be not only "extended" but also "elevated". Technology should be used to better not only "our senses" but also "our understanding"; not only "self-awareness" but also "self-responsibility"; not only "our bodies" but also "our values." Moreover, when Vita-More encourages "diversity, multiplicity" and "non-partisan ideology" and outlines "transhuman rights," she emphasises tolerance toward, and unity beyond, difference. The last line of the manifesto – "Toward a more humane transhumanity" – even makes the ethical stance explicit: it implies that previous forms of transhumanity were not "humane" enough and that attention must be devoted to having more ethical transhumanist goals.

Neither Ettinger nor Esfandiary expanded upon the ethics of human enhancement. Both agreed upon the inadequacy of the morals of their time, especially regarding romantic and sexual relationship (Ettinger, *Immortality* 151; Esfandiary 'Part 2'). Both also agreed upon the moral superiority of human enhancement because it could free humankind from the inherent tragedy that is death, yet, none of them dealt with the ethics of enhanced beings seriously. In *Man into Superman*, Ettinger focuses on the morality of longevity and immortality and acknowledges that enhancing some

humans could lead to injustice, but downplays the consequences of such injustice (111-12). In *Up-Wingers*, Esfandiary presents technology as the remedy for all of humanity's built-in sicknesses, mainly caused by its submission to the limits of Time and Space. Overcoming these limits is the aim of the "cosmic upheaval" that he advocates and describes in the third part of his book. This part, in which he offers to go beyond freedom, the human robot, equal rights, competition, violence, loneliness, all identities, alienation and utopia, could have been the ground for more ethical reflections. Yet, Esfandiary relates (sometimes quite clumsily) these phenomena (when they are negative) or the lack of them (when they are positive) to the underutilisation of technology only. For example, according to him, "biology is the primary perpetrator of inequality. People are born unequal," so enhancement could provide the opportunity to prevent some of these physical inequalities. Never once does he consider that technology, which is *not* available universally, might be the "perpetrator of inequality" itself.

Lastly, Vita-More alludes to artistic creativity, an aspect that had hardly been considered by her predecessors¹¹, but which has been one of the foci of her research. In the "Transhumanist Arts Statement", which she probably drafted at the same time as the "Transhuman Manifesto,"¹² she advocates for the use of technology in the process of artistic creation: "The Transhumanist Arts embrace the creative innovations of transhumanity" (Vita-More, *Transhumanist Arts* n.p.); and, conversely, the importance of creativity in the process of technological human enhancement. Creativity is indeed presented as one more way to achieve immortality: "Transhumanist Artists want to

¹¹ Focused on life extension, both Ettinger and Esfandiary simply conclude that more time to live will give humans more time to fulfil the different facets of their personalities, including the creative ones. (SOURCE)

¹² Written in 1982 and revised in 1998.

extend life and overcome death. / We plan to do so with vitality and amplified creativity" (n.p.). Then in 1997, she published "The Extropic Art Manifesto," which is, again, quite similar to the two previous texts. In this case, new emphasis is laid on art as a way to explore the new possibilities brought by technology: "We are exploring how current and future technologies affect our senses, our cognition and our lives" (Vita-More, *Extropic Art* n.p.).¹³ Let us note that her terminology changes as well: while the word 'transhuman' prevails in the first manifesto, the statement and the second manifesto favour the use of 'transhumanist'. The fact that these last two texts are more creativity and art-related while the first one is rather technology-oriented might be a motive for this variation. Consequently, one could conclude that 'transhuman' refers to the concrete enhanced human and the technology related to it whereas 'transhumanist' is to be used to discuss the more abstract or secondary aspects of the transhuman, such as its ethical, social and creative implications. Finally, the 1997 manifesto also contains the word 'posthuman': "We are active participants in our own evolution from human to posthuman". By then, this word had been used by FM-2030, as we have just seen, but also in most founding texts of a more institutionalised transhumanism (*i.e. ExI* and *WTA*¹⁴); it had taken on a specific meaning for transhumanists: that of the final stage of human evolution and, for some, the birth of a different, no longer human, species.

Steve Nichols (1988)

In 1988, Steve Nichols published "The Post-Human Movement" in the *Games Monthly* magazine. This one-page manifesto unambiguously conveys a message that could be

¹³ Vita-More expanded on this topic in "Aesthetics Bringing the Arts & Design into the Discussion of Transhumanism" (18-27), an article published in the anthology *The Transhumanist Reader* (2013), co-edited by herself and her husband, Max More.

¹⁴ More on this further in this chapter.

labelled as transhumanist. The goal of this text is perceptible as soon as in the tone-setting first sentence: "Do you have the potential to evolve – or are you doomed to remain human?" Evolving and remaining human are presented as the two options polarised into, respectively, positive and negative, which is conveyed by the non-neutral words "potential" and "doomed" (Nichols n.p.). The rest of the text is in the same vein as this catchy slogan. Nichols states that "we have at our disposal a greater intellectual and economic resource than ever before" but that "[our] capacity to fully utilise it has not grown at a corresponding rate." Moreover, the idea of evolution as a moral duty, which is recurrent in transhumanist works,¹⁵ is already present in this text: "We owe it as debt to our ancestors for their efforts in ascending from sub-human to fully human status, we owe it to our descendants in turn to progress from the worn out human role-model, to being POST-HUMAN".

The general tone of the manifesto imitates that of advertisement or salesmanship, with sentences such as "At last, a software upgrade is available!" and the true function of the text is unveiled in the last part, entitled "At no cost to you..." This confirms that all this serves as a promotional tool for Nichols's transmedial project *The Primal Eye*, which comprises a book and a film whose general aesthetics is new agey and whose discipline, under the guise of cognitive sciences, philosophy and theology, actually borders on esotericism. The author tries to prove his expertise by alluding to several famous figures of the past, associating, quite boldly but unconvincingly, Buddha, the "Pharoes" [sic], the Kings of medieval Europe, Nietzsche, Christ, Francis Regardie, David Bowie and Descartes. Needless to say, even though this manifesto

¹⁵ A more exhaustive description of the transhumanist movement and its authors can be found in Chapter 1.

contains some seeds of transhumanism – Nichols anticipates extropianism, which is an early form of transhumanism (see below) – it does not have any value regarding the development of posthumanism. The *tabula rasa* that these fields might have been in 1988 gave Nichols the opportunity to buy the web domains “posthuman.org,” “posthuman.tv,” and “extropia.net” to advertise for his borderline cult-like project. Later works on post- or transhumanism barely make any reference to him or his work.

FM-2030 (1989)

In 1989, F.M. Esfandiary, then going by “FM-2030,” came back into the spotlight with a self-evaluation book, *Are You a Transhuman? Monitoring and Stimulating your Personal Rate of Growth in a Rapidly Changing World*, structured around a series of questions meant to make the reader self-aware about their level of transhumanity.¹⁶ His explicit definition of ‘transhuman’ remains quite simple – “a stage beyond the human” (FM-2030 n.p.)¹⁷ – but the whole book eventually provides a quite detailed image of his notion of *transhuman*.

The test starts with a vocabulary monitor in which the reader is asked to choose between two terms that describe the same thing but somehow connote various degrees of modernity. This list covers the domains of personal, family and sexual relationships as much as wider circles of togetherness, amongst people of different spheres of power, different religions, different countries, different cultures:

Column A

1 _____ Boyfriend-girlfriend

2 _____ Bachelor

Column B

_____ Friend-lover

_____ Single

¹⁶ Note that FM-2030 uses neither *transhumanism* nor *transhumanity* in this particular work, so here I use the word *transhumanity* as the most direct and neutral derivative of *transhuman*.

¹⁷ Unless specified otherwise, all the references in this section belong to a non-paginated version of *Are You a Transhuman?*

3_____ Unsuccessful marriage	_____ Dissolved marriage
4_____ Illegitimate child	_____ Child
5_____ Broken home	_____ Single-parent home
6_____ Promiscuous	_____ Fluid—open— liberated
7_____ Test-tube baby	_____ In vitro fertilized baby—high tech baby
8_____ Homosexual	_____ Gay
9_____ Sex object	_____ Lover
10_____ Pornography	_____ Erotica
11_____ Relationship	_____ Romance— friendship—linkup
12_____ Courtesy title: Mr.— Mrs.—Miss—Ms.	_____ No courtesy title. Only names.
13_____ Doctor Jones (physician)	_____ Sam or Sam Jones
14_____ Secretary	_____ Assistant—associate
15_____ Leader	_____ Catalyst-facilitator
16_____ Masses	_____ People
17_____ Foreigner—alien	_____ Visitor (from abroad)
18_____ Spiritual	_____ Religious—devout
19_____ Holy places—holy land	_____ Religious places
20_____ God bless	_____ Good-bye or May the force be with you!
21_____ God willing	_____ Let's go for it.
22_____ Artificial insemination	_____ Insemination (or asexual insemination)
23_____ Artificial organs	_____ Prostheses— replacement parts
24_____ Artificial intelligence	_____ Ultraintelligent machines
25_____ Far East	_____ East Asia
26_____ Middle or Near East	_____ West Asia
27_____ Far West (in the U.S.)	_____ Western states
28_____ Free World	_____ Western world
29_____ Third World	_____ Developing regions
30_____ Man	_____ Humankind

Despite FM-2030 being overwhelmingly branded as a transhumanist, a certain posthumanist flavor emanates from this first “monitor” and, in fact, from the whole book. It probably stems from his will to prove that being a transhuman does not automatically imply heavy bodily transformations and actual technological implants or

prostheses, but could instead be about “immediate everyday changes in our lives.” This echoes, though in a simplified manner, Donna Haraway’s famous statement in the “Manifesto for Cyborgs” (1984): “[b]y the late twentieth century, our time, a mythic time, we are all chimeras, theorized and fabricated hybrids of machine and organism; in short, we are cyborgs” (8), which is followed, a few pages later, by a similar two-column chart that illustrates how we have gone “from the comfortable old hierarchical denominations to the scary new networks [...] called the informatics of domination” (Haraway, ‘Manifesto’ 20). A cursory look at the 1984 table should be enough to see that the comparison stops there. Even though FM-2030’s list advocating for a change in vocabulary hints at an actual change in the general mind-set of his time (which has become, as we shall see, more tolerant and fluid), and also marks a departure from “hierarchical denominations” (Haraway 20) – through the rejection of courtesy titles, for instance – it is nowhere near as thorough and nuanced as Haraway’s inventory of the mutating 1980s society. Moreover, it implies that changes in the way people speak – towards a more politically correct language – suffice to bring about actual social change, which, quite ironically for what will develop into a libertarian movement, recalls Orwellian notions of authoritarian propaganda.

Yet, despite their superficiality, FM-2030’s vocabulary suggestions still convey several positions that are usually associated with posthumanism. To begin with, most items of the list implicitly undermine usual binary categorisations, such as male vs. female, heterosexual vs. homosexual, the West vs. the rest, poor vs. rich, educated vs. ignorant, or subject vs. object. Such fluidity, which is a fundamental characteristic of

posthumanism,¹⁸ is advocated for again in “Monitor 5: How Fluid Are You?”, in which FM-2030 explains that being fluid – *i.e.* not having “fixed or static identities,” being able to “flow in and out of different lifestyles,” being “transglobal” – is the only way to adapt to a rapidly changing society, to embrace progress or, as he writes, be “energized by the acceleration of change in the world.” However, FM-2030’s project does not seem to be about acknowledging our inherent ontological fluidity and supporting complex identities as much as promoting flexibility to better fit the evolving society. FM-2030’s idea of fluidity thus does not seem to be about adapting the categories that we rely on to define ourselves to our complex identities, the outside, social norms of denomination to our inside, mixed being. Quite the contrary: we are the ones who adapt, hence our need for fluidity.

Another ontological boundary that is not just questioned but downright erased is the one between the genuine and the artificial. In his list, the author suggests the avoidance of the adjective ‘artificial’ in order to re-naturalise technology: “*anything* that unfolds in this world is part of this nature and cannot be artificial.” Undermining the difference between artificial and natural implies, in such cases as prostheses, blurring the line between man and the machine, the organic and the mechanic, the human and the non-human. With such a statement, FM-2030 suddenly no longer seems so remote from Donna Haraway’s claims.

Lastly, preferring “Humankind” to “Man” might be the one aspect to give this list a resolutely posthumanist resonance. One of the armful implications of humanism, against which posthumanists stand out, is the setting of the white, European healthy

¹⁸ See Chapter 2.

male as a standard for humanity, as a norm, the ultimate *self* whose *other* is any deviation from this norm – women, queers, non-whites, the disabled, etc. Choosing “humankind” over “man” expresses a need for more encompassing ways to accurately describe such a heterogeneous whole. Yet, despite such heterogeneity, FM-2030 seems convinced that, as humans, we (should) all share one feature: humanity, precisely. In “Monitor 23: What Is Your Level Of Humanity?” he explains that the less violent we are, the more humane turn out to be. His notion of humanity¹⁹ is therefore closely tied to that of non-violence; besides, he demonstrates that violence decreases as time passes, and concludes, somehow baselessly, that “[t]he evolution of life has profoundly heightened our appreciation of human rights.”

However, FM-2030’s point, in this “Monitor 23,” is that being transhuman means being “profoundly humanistic,” having “enlightened values and ethics.” Had he even heard of posthumanism, this last comment proves that FM-2030 had no intention to be in line with this trend, given how attached he still seems to be to humanist and the Enlightenment values. Such uncritical praise of humanism obviously cannot fit the posthumanist agenda, but could instead correspond quite well to the hyper/super-humanism of transhumanists (see below). Although the author claims that being transhuman is about new technologies as much as new worldviews, he deals with new technologies in most “Monitors” and pinpoints the ones that are most likely to turn us into transhumans.

As early as “Monitor 2: How Telespherical-age (Postindustrial) Are You?”, FM-2030 stresses the importance of telecommunication in eliminating the distance

¹⁹ Note that FM-2030 uses “humanity” and “humaneness” indistinctly, and therefore assimilates being human to being humane.

preventing people from communicating and information from being shared.²⁰ With subtitles such as “Won’t such a technology-intensive environment leave many people behind because they will not be skilled at using the new hardware?”, “If you do your work and shopping and learning and everything else from your home or wherever won’t that lead to isolation?” and “What does efficiency mean in the telespherical age?”, this chapter actually conducts the defense of new technologies, debunking arguments related to their potential to cause isolation, inequality and idleness. In “Monitor 3: How Information Rich Are You?”, the author insists upon the importance of being informed, especially in “our information age,” and highlights the benefits of technology in doing so. Similarly, “Monitor 4: How Time Rich Are You” demonstrates how technology can lighten workload, thus giving us more free time. “Monitor 7: What Is Your Cultural Orientation?” argues that technology will save culture by renewing it, contrary to the “old” or “traditional” culture, which “was great in its time. But [...] does not point the way to the future.” “Monitor 8: How Power Oriented Are You” contends that technology contributes to a fairer distribution of power and a less hierarchical society. Technology can also make us more creative (“Monitor 12: How Creative Are You?”), more rational and intelligent (“Monitor 13: How Emotional Are You?” and “Monitor 14: How Intelligent Are You?”), more tolerant (“Monitor 18: How Global Are You?”), or better communicators (“Monitor 17: How Telecommunized Are You?”). Lastly, new technologies can also help preserve the environment since they have, according to the author, a lighter ecological impact than old, “heavy industry (for example steel),” as asserted in “Monitor 16: How Ecology Conscious Are You?”. Even when technology

²⁰ FM-2030’s obsession with telecommunication and its world-changing potential, expressed a year before the *World Wide Web* was developed (Naughton 232; Ryan 107; Banks 112), was almost prophetic.

could clearly be blamed for the humans' intellectual decline, as in "Monitor 6 : How High Tech Is Your Attention Span?", FM-2030 argues that our narrowing attention span is not an issue: "We have to learn to compress our thoughts more effectively."

This book delineates FM-2030's idea of the transhuman and even though it does not contain the word "transhumanism," it might be one of the foundational writings of this trend. The last monitor "How Transhuman Are You?" provides a clear description of transhumanity and ways to get there that match most later transhumanist works: prostheses, plastic surgery, identity fluidity (regarding gender, culture and nationality), assisted reproductive technology, space travel and even resurrection. FM-2030 also insists that his transhuman is not a new species but, precisely, a *transitional* being, "an advanced forerunner of the posthumans who will surely evolve later in the twenty-first century." The prefix "trans" standing for "transitional" will be picked up by most transhumanists, even though many of them will instead choose to interpret it as a nod to the ultimate, Huxleian transhumanist goal: *transcending* human nature. The best way to achieve this goal has remained unchanged since Robert Ettinger, which is the reason why the latter is still considered as a founding father of transhumanism: immortality. FM-2030's book may be quite optimistic – which is a mindset that he has been valuing since his earliest works – but maintains that technological advance will be useless as long as it does not aim for immortality. In "Monitor 20: What is Your Ideological Orientation?", he indeed writes: "The most urgent problem facing us is not social—economic—political. The most pressing problem facing us all everywhere is death. [...] So long as there is death no one is free." The utmost importance of achieving life extension is fully developed in "Monitor 24: How Immortality Oriented Are You?" where he asserts that

"[t]here is no dignity to dying. [...] In our times the only dignity is in mobilizing intelligently to overcome aging and death." Given the genealogy of transhumanism and its ideological and institutional connections with cryogenics, such obsession for immortality unsurprisingly still prevails amongst most transhumanists, FM-2030 included.

Ed Regis (1990)

These transhumanists (who did not necessarily call themselves so then) were precisely the protagonists of Ed Regis's *Great Mambo Chicken and the Transhuman Condition*. This 1990 non-fiction book is an informal but documented account of several groundbreaking experiments conducted in the second half of the twentieth century, in the fields of private space travel, space colonisation, cryonics, nanotechnology, robotics, cybernetics, artificial life, genetic engineering, macro engineering and nuclear physics. Throughout this book, Regis develops a notion of the *transhuman* that mainly focuses on the ideal of transcendence:

What these forward-looking scientists were doing, it turns out, was nothing less than reinventing Man and Nature. They wanted to re-create Creation. They wanted to make human beings immortal or, failing that, they wanted to convert humans into abstract spirits that were by nature deathless. They wanted to gain complete control over the structure of matter, and they wanted to extend mankind's rightful sovereignty out across the solar system, into the Galaxy, and out into the rest of the cosmos. An imposing enterprise, to be sure, but that was the way of science and technology during these bold days of *fin-de-siècle* hubristic mania.

Fin-de-siècle hubristic mania was the desire for perfect knowledge and total power. The goal was complete omnipotence: the power to remake humanity, earth, the universe at large. (7)

Humans will thus reach transhumanity once they have transcended their condition, especially its most negative features: an organic, decaying body heading towards an

unavoidable death, and the inescapable earthliness that ties humans' destiny to that of their planet. Being transhuman therefore means regaining control of one's own destiny, as an individual body and as a species, as well as expanding such control over everything else that exists.

One can easily guess the type of criticism that such "*fin-de-siècle* hubristic mania" has attracted.²¹ Such criticism can come from the religious side, for which aiming for transcendence through technology and passing from the status of creature to that of creator may equate with blasphemy. Criticism can also come from conservative milieus that consider that human nature is sacred and should remain untampered with. Lastly, the will to extend humans' control over the physical world, their "rightful sovereignty," may be criticised by environmentalists since it reaffirms the human species' alleged exceptionalism and condones an exclusively utilitarian view of nature.

Well aware of such criticism, expressed by those whom he calls "the skeptic" (275, 276), Regis even stages an imaginary debate towards the end of his book, in which he outlines some arguments against human enhancement technologies and counterbalances them with scientists' alleged answers. In this debate, the skeptics are concerned with scientists' excess of hubris – "*Lord, what fool these mortals be!*" (275) – leading to an inevitable failure – "for how many times in the past had people's boldest hopes and dreams been turned to dust by the cruel forces of nature?" (275) – as well as

²¹ The theme of hubris, with which the book started (see above), though in a rather unflattering light, returns in that last part of the book and proves to be more ambiguous than it appears in its first reference: as Regis mentions, hubris may be the cause of the downfall of our species, as represented in myths and literary works – "Adam and Eve, Oedipus, Prometheus, Faust, Ahab—all of them went up against the gods and then got damned to hell for their arrogance" (275) – but it is also "an inescapable part of the human condition" (275). Consequently, the recurring criticism according to which such hubristic desire poses a threat to our humanity does not hold; it is not a threat to but the realisation of the human condition, the next logical step in humanity's history.

their “unseemly” denial (276) of the body and environment they were given. The “extremely advanced thinkers” (275) defend themselves just like transhumanists, by arguing that there is nothing new or transgressive in their research: on the one hand, they have merely been “using science in an ordinary way, to gain control over nature and improve the lot of humanity, just as their predecessors [did]”; on the other hand, such desire to improve, to transcend the human nature, such “tendency to *go beyond* seemed to be so deeply rooted in the human genes that it [...] was the common lot of mankind, part and parcel of the human condition” (275). In other words, they believe that they are doing what they are supposed to, as scientists or as humans:

Hadn't man always been taught that he had to “grow,” intellectually, spiritually, and morally? Hadn't he been criticized for being “materialistic”? Hadn't he been instructed to transcend his animal instincts, primal urges, and dirty bodily lusts? Hadn't he been told, in short, to make fundamental enhancements to his vile, vulgar self? But what were all these exhortations other than attempts to get man to surpass what he already was, to eclipse himself, to go beyond, to become more? [...] Man had *always* been aiming at some type of transhuman condition, whether on earth or in heaven. (276-77)²²

This last chapter helps delineate Regis's understanding of “transhuman.” The edge at which, according to the title, science currently is, is “the dividing line separating the Human from the Transhuman” (278). As hinted at in the early pages and confirmed in the last ones, such transhumanity consists of improvements. Regis indeed refers to Ettinger's *superman*, which he connects to Lucian of Samosata's *hyperanthropos* (276), both of which convey a desire to improve the human body as well as mind. Therefore, Regis's transhumans are humans who have *transcended* their condition by improving themselves as well as their habitats. In that way, they constitute a new evolutionary step

²² One cannot help notice Regis's persistent use of the masculine (“man”, “he”, “his”, “himself”) instead of more neutral forms to denote the whole of humankind.

for the human species, but it does not go much further than that. Even though it appears in the title, the “transhuman condition” is a mere pretext for discussing these scientists, who are the true protagonists of this book. In the pages devoted to their childhood dreams, their personal, professional and academic paths and their achievements, *Great Mambo Chicken* is a tribute to them more than actual, early theorisation of transhumanism.

Max More’s Extropy (1990)

After obtaining a degree in Philosophy, Politics and Economics from the University of Oxford in 1987, Irish-born Max T. O’Connor left England for California to work on his doctoral dissertation and, according to Damour, to join the cryonics movement (150). As early as 1988, he launched the magazine *Extropy*, the first issue of which he used to develop his extropian philosophy. The second issue included articles by, amongst others, Keith Henson, co-founder of the *L5 Society*.

The sixth issue (Summer 1990) seemed to be a shifting point in O’Connor’s philosophy and life. It is indeed the issue in which he renames himself – explaining that he chose Max More “in order to remove the cultural links to Ireland (which connotes backwardness rather than future-orientation) and to reflect the extropian desire for MORE LIFE, MORE INTELLIGENCE, MORE FREEDOM” (‘Editorial’ 4) – as well as his philosophy²³, with the articles “Transhumanism: Towards a Futurist Philosophy” and “The Extropian Principles.”

²³ Note that More does not present transhumanism as the new name of extropianism, but instead extropianism as “the particular version of transhumanism that is being developed and refined in this journal” which “affirms the values of Boundless Expansion, Self-Transformation, Dynamic Optimism, and Intelligent Technology” (‘Editorial’ 6). The latter fields are precisely the structuring points of “The Extropian

Surprisingly, “Transhumanism: Towards a Futurist Philosophy” does not amount to a general statement about the principles of transhumanism but has an unexpected emphasis on religion. In the author’s own words:

In this essay I will show how religion acts as an entropic force, standing against our advancement into transhumanity and our future as posthumans. At the same time I will acknowledge the necessary and positive role that religions have played in giving meaning and structure to our lives. The alternative to religion is not a despairing nihilism, nor a sterile scientism, but a transhumanism. (‘Transhumanism’ 6)

Of course, despite describing transhumanism through its comparison (and, to some extent, opposition) to religion, this text has participated in the relentless definition process that took place in the early years of institutionalisation of transhumanism. It defines transhumanism as a ‘philosophy of life’ – or ‘reliberium’ or ‘eupraxophy’ – destined to substitute religion as the main entity giving meaning to existence. More states that meaningfulness can be found by “connect[ing] with anything beyond your current condition” (10), which sets transhumanism, with its refusal of limitation, as the perfect candidate for replacing religion – an all too limiting institution – in giving life meaning. Therefore, the ‘trans’ of ‘transhumanism’, in this early text, still stands mainly for ‘transcending,’ though it could also stand for ‘transitional’, even though it is not formulated explicitly. More indeed insists on the existence of a final state, in which the transhumanist goals would be attained and the transformation complete: posthumanity. For this reason, transhumanism as a philosophy of life acknowledges the unavoidable need for flexibility, thanks to its emphasis on progress and evolution. This is how More manages to set transhumanism against religion, because “Dogma has no place within

principles,” in which he repeats: “Extropianism is a transhumanism” (18). From that issue on, however, transhumanism seems to be discussed more extensively than extropianism.

transhumanism" (10); just as humans are and should be evolving into transhumans and eventually, posthumans, transhumanism should and will be "reconfiguring into higher forms, new versions of transhumanism and, one day, posthumanism" (10). Just like species, philosophies of life thus evolve; and while posthumanism should be the dominating reliberium when transhumanism has achieved its goal, transhumanism itself stems from an older alternative to religion: humanism.²⁴ In More's words, humanism "rejects deities, faith, and worship, instead basing a view of values and meaningfulness on the nature of humans and their potentials given rationality and science" (6). The only difference between humanism and transhumanism it thus that the latter "recognizes and anticipates the radical alterations in the conditions of our existence resulting from various sciences and technologies such as neuroscience and neuropharmacology, nanotechnology, artificial ultraintelligence, space habitation, and so on" (6).

Many critics, in both transhumanist and posthumanist traditions, have long refuted such understanding of these concepts. Posthumanists, unsurprisingly, have opposed to More's simplistic use of 'posthumanism' as the final stage of an evolution process starting with humanism because their own use of 'posthumanism' conveys a movement *away from*, if not *against*, humanism. Probably in an attempt to defend themselves against posthumanists' accusations of perpetuating the humanist assumption of human supremacy, subsequent transhumanists have also tried to reject this close connection with humanist anthropocentrism by claiming that they are interested in enhancing *all* living species (see the "Transhumanist Declaration"). Yet, this

²⁴ Anti-humanists will argue that humanism was not an alternative to religion but a new religion altogether. As Edouard Delruelle states when describing the origins of anti-humanism: "*L'antihumanisme théorique tient en une proposition simple: le concept d'Homme n'est qu'un avatar de l'idée de Dieu. L'humanisme est une crypto-théologie reconduisant la structure de l'idéologie religieuse.*"

widespread idea that More's transhumanism is a humanism+ or a super-humanism (Thweatt-Bates 5) might not take into account More's own questioning of humanism: transhumanism may be "similar" to humanism, but the latter "contains too many outdated values and ideas" (6). More does not really clarify what these are, but his intent to move *beyond* humanism shows that, at least, transformations are needed.²⁵ This transformation process seems to be further discussed later on in his article to describe the transformation of both humans and philosophies of life: it all is the result of an "ordering-and-transcendence" process (11). In other words, life and its philosophies must transcend all limits, break all structures to create new structures (the "ordering" or "unification" phase), which must be transcended again, in an infinite, on-going process.

Even though this last comment echoes a braidottian posthumanism,²⁶ most aspects of *Extropy* contrast greatly with the posthumanist school of thought, which, in the early 1990s, had been mostly influenced by Hassan and Haraway (see Chapter 2). Such contradictions of posthumanist principles appear as early and blatantly as on the cover of the first issue:

²⁵ As shown in Chapter 2, many posthumanists have manifested a similar will to move *beyond* humanism, retaining the aspects they still deem positive and replacing those that no longer belong to the late-twentieth and twenty-first centuries.

²⁶ See Chapter 2.

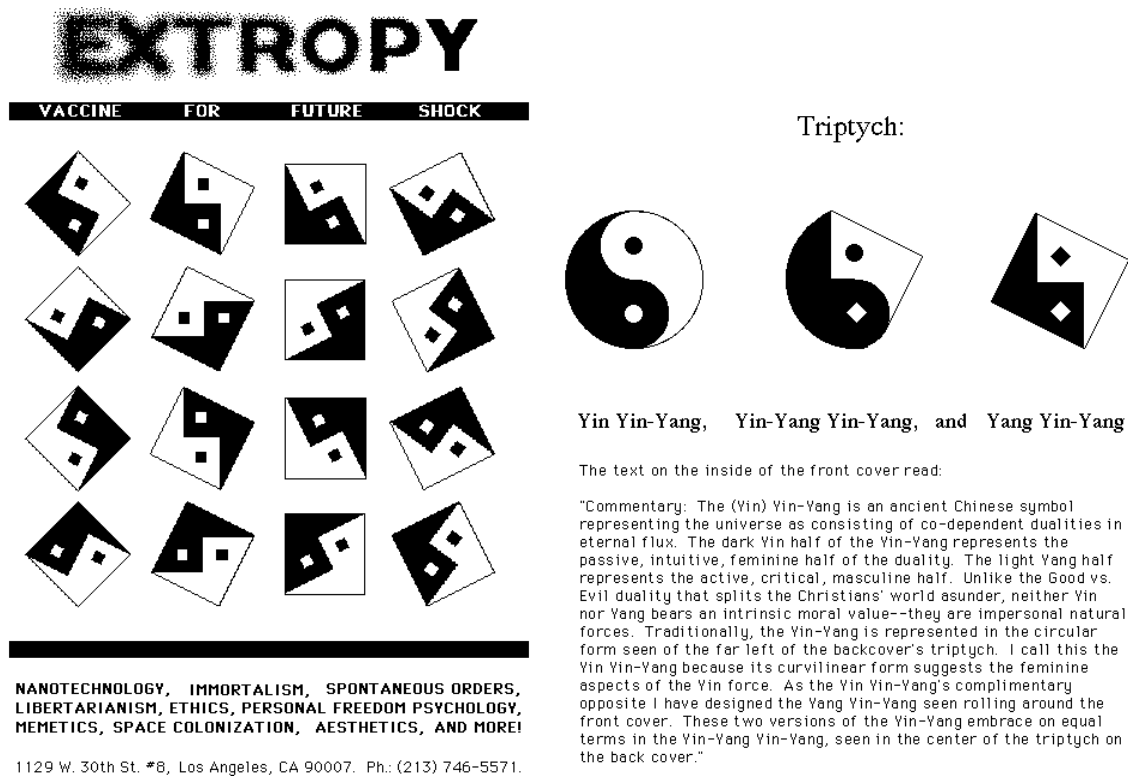


Fig.1. Front and back cover of the first issue of *Extropy* (1988).

The illustration visible on the front cover and explained on the back cover was designed by Max More himself and is a deviation of the Yin-Yang symbol. This arranged Yin-Yang retains and reaffirms the dualities of which it is a symbol – “the passive, intuitive, feminine [dark] half” vs. “the active, critical, masculine [light] half” – while implying the predominance of the masculine over the feminine by making it square rather than round and choosing that masculine version for the cover rather than the balanced, middle version of the sign he yet acknowledged. Not only does affirming these dualities conflict with posthumanism since Haraway’s *Manifesto*, but implying the superiority of one side as he does – while simultaneously claiming that no “intrinsic moral values” are attached to these dualities – is also in glaring contradiction with said posthumanism, which was basically born as a way to formulate a new feminist theory.

Making such a statement in a section as fundamental as the cover of the first issue of his magazine definitely alienates Max More from the preexisting and widely accepted understanding of posthumanism – which did not stop him from building a vague and simplistic definition of his own (see below). His most obvious influences were far away from this field anyway, coming from his fellow transhumanist predecessors. His emphasis on optimism, on the one hand, largely echoes F.M. Esfandiary's first non-fiction work, *Optimism One: The Emerging Radicalism* (1970). Optimism, especially "dynamic optimism," is indeed so important that it is even part of the Extropian principles. Optimism is actually a driving force and a condition of the aforementioned process:

Unlike faith's unquestioning belief in a superior realm to be bestowed on us through divine agency, dynamic optimism is an internally generated motivation for progress [...] Extropian transhumanism offers a (sic) optimistic, vital and dynamic philosophy of life. We face a picture of unlimited growth and possibility with excitement and joy. We seek to void all limits to life, intelligence, freedom, knowledge and happiness. Science, technology and reason must be harnessed to our extropic values to abolish the greatest evil: death. (9-10)

This extract, which is quite representative of all the elements put forward by More – the comparison between religion and philosophy of life, the dynamic nature of transhumanism, the transgression of limits of all sorts, the legacy of humanist rationality, the crucial role of technology in this undertaking and, of course, an optimistic vision of its result – ends with the prevailing transhumanist topic of longevity. Further on, More claims that there is no point in progressing as a species as long as individual lives are still limited by death and asserts that immortality is therefore the condition of optimism and transcendence (10). This idea is in line with the ones of his peers and, in terms of publication date, predecessors, Robert Ettinger and FM-2030. Damour precisely recalls

that Max More came to California to join the cryogenic movement and attend classes at the university where FM-2030 was teaching (150). Just as More made a connection between these two milieus (along with a third one, the *L5 society*), his thinking also seems to have constituted a synthesis of their ideas and concerns.

In this article, More also defines extropianism as only one version, though the most complete one, of the more encompassing notion of transhumanism (10).²⁷ Extropianism is the one version that “affirms the values of Boundless Expansion, Self-Transformation, Dynamic Optimism, and Intelligent Technology” (6). Further in that same sixth issue, Max More published “The Extropian Principles,” a short text written in the second person plural – making it more akin to a manifesto – which expands upon these four principles, albeit with more pragmatism. For example, the text does not just praise boundless expansion; it suggests actual, tangible solutions to achieve it, such as acknowledging the irrelevance of the nature/culture dichotomy or supporting biomedical research, especially in cryonics and mind-uploading (“Extropian Principles’ 17).

Overall, the Principles assert the same values as in the previous article: infinite freedom and progress, both accomplished by and resulting in more and more sophisticated technology. However, the true originality and interest of this text lies in the presence of a “reading list” of both fiction and non-fiction that “embody Extropian ideas” (18). Of course, this list comprises the works of both Ettinger and Esfandiary.

²⁷ Unfortunately, More does not mention any other version of transhumanism, so one can hardly grasp the specificities of extropianism, whether compared to the assumed other versions of transhumanism or to transhumanism itself.

Alongside them, it also mentions non-fiction in the fields of life extension,²⁸ physics,²⁹ robotics and cybernetics,³⁰ nanotechnology,³¹ evolutionary biology,³² the environment,³³ general futurology³⁴ and even esotericism.³⁵ Regarding fiction, the spectrum is just as broad: from Ayn Rand's dystopia *Atlas Shrugged* (1957) and Robert Shea and Robert Anton Wilson's conspiracy trilogy *Illuminatus!* (1975) to tales of nanotechnologies, artificial intelligence, cybernetics such as Vernor Vinge's *True Names* (1981), Bruce Sterling's *Schismatrix* (1985)³⁶ and Marc Stiegler's short stories in *The Gentle Seduction* (1990), via space travel stories such as *Have Space Suit - Will Travel* (1958) by Robert Heinlein, *Voyage from Yesteryear* (1982)³⁷ by James P. Hogan and *Eon* (1985) by Greg Bear.³⁸

Besides publishing *Extropy*, More worked towards building a coherent movement by creating the *Extropy Institute* in 1992 and launching the *Extro* annual conference in 1994 (Damour, 'Mouvement' 151). Max More's legacy, especially as a unifying figure of various intellectual movements, may have been acknowledged within transhumanist circles. Nonetheless, these early texts are not the ones to which critics – whether transhumanist or not – automatically resort whenever they need to define

²⁸ Robert Ettinger, *The Prospect of Immortality and Man Into Superman*; Mike Darwin & Brian Wowk, *Alcor: Threshold To Tomorrow*; Albert Rosenfeld, *Prolongevity II*; Alan Harrington, *The Immortalist*.

²⁹ Freeman Dyson, *Infinite in all Directions*.

³⁰ Hans Moravec, *Mind Children: The Future of Human and Robotic Intelligence*; Grant Fjermedal, *The Tomorrow Makers*; Paul M. Churchland, *A Neurocomputational Perspective*.

³¹ Eric Drexler, *Engines of Creation*.

³² Richard Dawkins, *The Selfish Gene*.

³³ Julian Simon, *The Ultimate Resource*; Julian Simon and Herman Kahn (eds): *The Resourcefull Earth*.

³⁴ FM-2030, *Are You A Transhuman?*; F.M. Esfandiary, *Optimism One, Up-Wingers and Telespheres*; Jerry Pournelle, *A Step Farther Out*; Jerome Glenn, *Future Mind: Artificial Intelligence*; Adrian Berry, *The Next Ten Thousand Years*.

³⁵ Timothy Leary, *Info-Psychology*; Robert Anton Wilson, *Prometheus Rising and The New Inquisition*.

³⁶ Given its early use of the term 'posthumanism', *Schismatrix* is further dealt with in Chapter 2.

³⁷ *Voyage from Yesteryear* has been mistakenly quoted as "*Voyage to Yesteryear*" in More's *Principles*.

³⁸ I expand upon this list of novels in Chapter 4.

transhumanism. The present-day understanding of transhumanism, or at least the one on which most critics agree, instead finds its roots in the subsequent texts.

“Transhumanist Principles” (1996) and “The Transhumanist Declaration” (1998)

In 1998, Nick Bostrom and David Pearce sought to distance themselves from certain aspects of More’s transhumanism by which they did not abide and, simultaneously, give the movement more legitimacy, which led them to create the *World Transhumanist Association (WTA)* (Damour, ‘Mouvement’ 146). This was another opportunity to gather transhumanists around a shared, settled understanding of transhumanism and its stakes. It resulted in the formulation of “The Transhumanist Declaration” and “The Transhumanist FAQ.”

“The Transhumanist Declaration,” whose first version dates from 1998, might derive from the “Transhuman Principles,” which must have been inspired by More’s “Extropian Principles.” The “Transhuman Principles,” drafted by Alex Bokov around 1995 and revised by a small group of Extropians, including Anders Sandberg (who published the text) and Nancie Clark (a.k.a Natasha Vita-More), are very similar to FM-2030’s writings: the principles advocate the use of technology, the development of the individual, open-mindedness about and tolerance towards diversity. The first principle sets a very particular tone, though:

Transcend!

Strive to remove the evolved limits of our biological and intellectual inheritance, the physical limits of our environment, and the cultural and historical limits of society that constrain individual and collective progress. (Sandberg)

The emphasis on limits, whether natural or cultural, is a recurring element of the transhumanist rhetoric, especially amongst those who will later stay close to the extropians. The definition of 'posthuman' found in the Extropian Transhumanist FAQ (see below) also lays similar emphasis on the transcendence of limits. Yet, the most interesting aspect of this principle is its commanding style induced by the use of the imperative form. Such style is quite representative of the ideological and prescriptive nature of transhumanism, yet becomes rather rare as time passes by. This does not mean that the transhumanists' intention to convince has disappeared, but the will to make transhumanism more legitimate has forced members to make their orders more discreet. In this early text, though, transhumanists do not hide their ideological agenda:

Memetic propagation.

Support the proliferation of transhumanist principles and goals, consciously setting an example that others may follow or promoting the principles of transhumanism directly. Spread awareness of the dangers of technophobia, coercion, anti-humanism and other destructive ideologies.

Not only are readers encouraged to promote transhumanism, but they should also bring discredit upon their opponents, the so-called "destructive ideologies": technophobia, because transhumanists see in technology and progress the best way to achieve their transcendence; coercion, because it contradicts their libertarian ideas; and, most surprisingly, anti-humanism, which is, as we shall see, a philosophy initiated by Michel Foucault in the 1960s which questions the very concept of "Man" – *l'Homme*. I write 'surprisingly' because both Foucault and transhumanists situated their philosophies as heirs to the Enlightenment. According to Edouard Delruelle, Foucault believes that the erasure of Man as a founding principle leads to a thought experiment in line with the Enlightenment tradition because it is a "historico-practical test of the limits that we may

go beyond, and thus as work carried out by ourselves upon ourselves as free beings” (qtd. in Delruelle n.p., my translation).³⁹ Meanwhile, in his “History of Transhumanist Thought,” Nick Bostrom repeatedly mentions the Enlightenment and how its rational humanism constituted the “roots” of transhumanism (3-4).

The “Transhumanist Principles” have had a second version, drafted by the WTA and shared by Bostrom via the mailing list in March 1998⁴⁰. The draft was discussed and shortly became “The Transhumanist Declaration,” labelled 2.4. and published on the WTA website in July 1998. While the acknowledgement of technology as a tool for enhancement, the obligation to be open-minded, the emphasis on the individual and the weariness of technophobia characterising the Principles remain, the Declaration also puts forward the idea that humanity is bound to evolve anyway, turns such evolution into a right and claims a need for research and public debate. As mentioned above, those had always been the strategies of transhumanists. Two points nonetheless stand out: on the one hand, the fifth principle warns against the possible negative outcomes of progress, which was not part of the Principles and, in my view, sets the path for a more ethical dimension of transhumanism, which will be more apparent in the FAQ (see below); on the other hand, the last point contains the unprecedented preoccupation with non-human “sentience”:

(7) Transhumanism advocates the well-being of all sentience (whether in artificial intellects, humans, posthumans, or non-human animals) and encompasses many principles of modern humanism. Transhumanism does not support any particular party, politician or political form.

³⁹ “épreuve historico-pratique des limites que nous pouvons franchir, et donc comme travail de nous-mêmes sur nous-mêmes en tant qu’êtres libres” (Foucault, “Qu’est-ce que les Lumières?”, qtd. in Delruelle n.p.)

⁴⁰ See all of the exchanges on : <<http://diyhpl.us/~bryan/irc/extropians/www.lucifer.com/exilists/extropians.1Q98/3192.html>>

Interestingly, this justifies what might appear as a contradiction regarding the existing ties with humanism (acknowledged by More) by specifying that transhumanism is related to *modern* humanism.

This connection with humanism, as well as the following statement of apoliticism, did not make it into the final version of the Declaration (2009), neither did the remark that transhumanity would be achieved through technology, which may have been too obvious by then. This final version is a major reworking of the previous version but essentially features the same ideas. Two points are, however, original: the second point presents the human's potential as unfulfilled and thus builds an image of the human as unfinished; the fifth point, for its part, insists that priority should be given to preserving life, avoiding suffering and improving wisdom and that those fields need heavy funding. While the importance of health and longevity is nothing new, the pecuniary aspect of transhumanism had usually been omitted.

The Transhumanist FAQs (1999)

Whereas the authors of the 1996 Declaration were members of both *ExI* and *WTA*, including Max More, Natasha Vita-More, Anders Sandberg, David Pearce and Nick Bostrom, the gap between these two organisations seemed to become wider and, in 1999, the *WTA*, led by Bostrom, published the "The Transhumanist FAQ," a document of which Max More was not a signatory; the *ExI* publishing its own "Transhumanist FAQ" a few years later may indicate a disagreement over their notions of transhumanism. This disagreement seems to have been settled in the meantime as the 2009 version of the Declaration features both More and Bostrom, together again. For

this reason, Franck Damour⁴¹ defines the Declaration as a “minimalist” attempt at extracting the essence of transhumanism, the commonalities between all of its composing tendencies (147).

“The Transhumanist FAQ” is a document written collectively by almost a hundred members of the WTA (Bostrom 54).⁴²⁴³ As one might expect, it opens on a “General” section compiling the precious definitions of ‘transhumanism’, ‘posthuman’ and ‘transhuman’ that are supposed to lay the groundwork for all subsequent transhumanist writings. The definition of ‘transhumanism’ has the merits of delineating, for the first time, two different aspects of transhumanism:

(1) The intellectual and cultural movement that affirms the possibility and desirability of fundamentally improving the human condition through applied reason, especially by developing and making widely available technologies to eliminate aging and to greatly enhance human intellectual, physical, and psychological capacities.

(2) The study of the ramifications, promises, and potential dangers of technologies that will enable us to overcome fundamental human limitations, and the related study of the ethical matters involved in developing and using such technologies. (‘Transhumanist FAQ (v. 3.0)’)

The first aspect focuses on enhancement, which derives from the tradition that has been described so far, from FM-2030 to Max More. It contains the idea that transhumanism is

⁴¹ Note that Franck Damour does not mention the competing FAQs in his intellectual history and claims that the “Transhumanist Declaration” dates from 2002.

⁴² I was unable to find the first version of the FAQ, so the ones I discuss here are the second version (2003), coordinated by Nick Bostrom, and the third version, which is available on the Humanity+ website and was updated in 2017. The main differences between these two versions are, on the one hand, improved conciseness and, on the other, reformulations that were meant to acknowledge Max More’s legacy. Note that I will refer to the latest version unless stated otherwise.

⁴³ Note that the *Extropy Institute* has also put forward a “Transhumanist FAQ,” the creation date of which seems to have been purposefully left unclear. The authors of this Extropian FAQ define it as “a compilation of transhumanist writings since 1989” and claim “state-of-the-art reliability,” achieved through constant revision. Little to no reference is made to the WTA “Transhumanist FAQ”; the existence of “many transhumanist FAQs available on the Internet” is mentioned, but the extropian authors recall the primacy of their organisation to imply the ultimate reliability of their own FAQ. However, there is no proof that such FAQ existed before 2004, when the Internet page featuring this one was first set up.

a technophile movement that seeks the improvement of the human condition. The second aspect, however, lays emphasis on the ethics of such improvement in a rather unprecedented way, which has significantly influenced further developments of transhumanism (as explained further in this Chapter).

The rest of the FAQ's definition explains the movement's connection with humanism, from which transhumanism is "partially derived," "an extension," especially regarding the values of humanism: "rational thinking, freedom, tolerance, democracy, and concern for our fellow human beings." Humanism and transhumanism differ, however, in their methods: education and cultural development for the former, technological means for the latter.

Even though, in its latest version, this definition claims to have been inspired by Max More's definition (see above), it is definitely more comprehensive. More's 1990 definition was indeed quite circular: transhumanism "is a class of philosophies that seek to guide us toward a posthuman condition" whereas the "posthuman condition" is generally defined as the ultimate goal of transhumanism, the final outcome after a transhuman phase. In terms of origins, More identified similar values in humanism and transhumanism, but the latter differs from the former not so much in the method as in its mere acknowledgement of technology. However, in his own extropian FAQ, he (or rather, the authorial collective, the leader of which he likely is) expands upon these two notions: 'transhumanism' is provided with complementary definitions belonging to Anders Sandberg – containing the prescriptive aspect of transhumanism⁴⁴ – and Robin Hanson – presenting transhumanism as the rather passive belief that technology might

⁴⁴ "Transhumanism is the philosophy that we can and *should* develop to higher levels, physically, mentally and socially using rational methods."

change the human nature.⁴⁵ Again, both More's early texts and the extropian FAQ remain very general and approximate; and even though they lay similar emphasis on enhancement, the WTA's ethical stance is completely absent from the extropian definition.

Another important discrepancy between the extropians' and the WTA's understanding of these concepts lies in their respective uses of 'transhuman'. The extropians made it one of their key concepts, which therefore deserved its own etymological history in the FAQ, maybe as a way to compensate for, again, a short, circular, and wide-ranging definition: "A transhuman is a human in transition [...] seek[ing] to become posthuman and take action to prepare for a posthuman future." Ways to become transhuman comprise the use of enhancing technologies and the "[rise] above outmoded human beliefs and behaviors," which betrays the strong influence of FM-2030, deemed father of the "actual concept of transhuman as an evolutionary transition." WTA's definition of 'transhuman' precisely questions this broad description of the transhuman by FM-2030, whose "diagnostics are of dubious validity" (Bostrom 7).⁴⁶ The WTA eventually discards the concept for being "too vague" given the lack of consensus on when one would cease to be a human to become a transhuman, or cease to be a transhuman to become a posthuman. The latter concept, instead, raises much greater interest amongst them.

⁴⁵ "Transhumanism is the idea that new technologies are likely to change the world so much in the next century or two that our descendants will in many ways no longer be 'human'."

⁴⁶ This sentence does not appear in the latest version of the FAQ, which presents FM-2030's work in more nuanced terms.

The WTA definition of 'posthuman' delineates what it is and, most interestingly, what it is *not*.⁴⁷ Concerning what it is, the FAQ first provides a general definition – “possible future beings whose capacities so radically exceed those of the present humans as to be no longer unambiguously human by our current standards” – and then a series of technologies by means of which we could reach such a state: “advanced nanotechnology [,] genetic engineering, psychopharmacology, anti-aging therapies, neural interfaces, advanced information management tools, memory enhancing drugs, wearable computers, and cognitive techniques.” The FAQ also considers the possibility of posthumans being “completely synthetic artificial intelligences, or [...] enhanced uploads.”⁴⁸ Besides these elements of definition, the FAQ takes on a rather prescriptive tone to reject other definitions of 'posthuman':

Care must be taken to avoid misinterpretation. “Posthuman” does not denote just anything that happens to come after the human era, nor does it have anything to do with the “posthumous.” In particular, it does *not* imply that there are no humans anymore.

In this case, the FAQ only rejects a couple of uses of 'posthuman' that might have occurred in isolated, sometimes hastily written or simply earlier (academic) texts. The confusion between 'posthuman' and 'posthumous' is very rare, but the use of 'posthuman' that implies the extinction of the species may have come up occasionally, but less and less frequently as transhumanism (and posthumanism) has become more popular over the years. In that case, the standardisation intended by the writing of this FAQ might have finally succeeded. However, one interpretation of 'posthuman' that

⁴⁷ The Extropian FAQ definition of 'posthuman' does not present similar criticism of posthumanism but the rest of it seems to be, for once, in line with the WTA's FAQ. Greater emphasis was placed on the removal of all human limitations in the former definition of 'posthuman' while the WTA's FAQ rather insists on the remains of humanity and the threshold beyond which there would not be any.

⁴⁸ In the transhumanist jargon, an upload is the result of “transferring an intellect from a biological brain to a computer.”

they dismissed has resisted so far and gained its own popularity. In the even more normative passage, the FAQ laments:

Some authors write as though simply by changing our self-conception, we have become or could become posthuman. This is a confusion or corruption of the original meaning of the term. The changes required to make us posthuman are too profound to be achievable by merely altering some aspect of psychological theory or the way we think about ourselves. Radical technological modifications to our brains and bodies are needed.

This comment is a direct reference to posthumanism, especially to Hayles's claim in *How we Became Posthuman* (1999) that "we have always been posthuman" (*How We Became* 279). The posthumanist notion of the posthuman indeed reflects a complex change in the concept of humanity while the transhumanist posthuman describes, *simply*, the human of the future. In trying to bring out the superficiality and misconceptions of posthumanism – suggested by words such as "simply," "confusion," "corruption," "merely" – transhumanists are building a narrative in which their view is legitimate and any other interpretation is a shallow misreading of their texts or downright misinformation about their existence.

Critical, Ethical and Social Concerns

Before Bostrom's FAQ, ethics had merely been hinted at in transhumanist writings: once in Natasha Vita-More's 1983 manifesto (see above) and once in "The Transhumanist Declaration" (1998), which shyly alludes to the ethical dimension of transhumanism by mentioning the need to consider the negative uses and outcomes of technology.⁴⁹ After the FAQ, however, a growing portion of transhumanist works has been adopting a more critical perspective upon human enhancement, and even upon transhumanism itself.

⁴⁹ "In planning for the future, it is mandatory to take into account the prospect of dramatic technological progress."

Departing from a more ideological transhumanism, which mainly seeks to convince and convert, critical transhumanists make room for a reflexive dialectic that allows ethical considerations. For instance, some, like Ingmar Persson and Julian Savulescu, have been working towards not only the physical and cognitive but also moral enhancement of the human species. Others, like James Hughes, have been applying an ethical perspective on transhumanist topics and issues (Nayar 7). The latter has indeed popularised a form of transhumanism that is as far from bioconservatism as it is from libertarian transhumanism. In his early 2000s writings, he mainly refers to it as “democratic transhumanism,”⁵⁰ but acknowledges that most scholars nowadays use the term “technoprogessivism” (Hughes, *Democratic* n.p.) especially since he has drawn up the “Technoprogessive Declaration,” which was ratified at the *TransVision* annual meeting in 2014 (and updated in 2017). Technoprogessivists – a term that is therefore deemed both more elegant and more acceptable than “democratic transhumanists” – are transhumanism in that they campaign for the use of technology to improve and extend human life, but part of their militancy is devoted to pushing for the regulation of and universal accessibility to enhancing technologies (Hughes, *Technoprogessive* n.p.).

However, presenting this shift as one towards a ‘moral transhumanism’ would imply that there is a version of transhumanism that is not concerned with morality or that is downright immoral – which would legitimate bio-conservative criticism. Nothing is less true: transhumanism actually rests upon the “moral conviction that [...] transcending human’s biological limitations is desirable” (Ranisch 153). Moreover, as an ideological movement, transhumanism presupposes an underlying discourse of its own *goodness*; it

⁵⁰ See “Democratic Transhumanism 2.0” (2002) and *Citizen Cyborg* (2004): <http://www.changesurfer.com/Acad/DemocraticTranshumanism.htm>

contains a moral dimension because it implicitly carries a set of values according to which one should act. With self-improvement and evolution as core values, transhumanists argue that humans should (be allowed to) technologically enhance themselves. However, such normativity is precisely what distinguishes morality from ethics (Ricoeur 207); ideological transhumanists can, and usually do, justify their propositions morally, but do not necessarily ground their morality in an ethical reflection, contrary to the more critical transhumanists. The latter's "ethical ambition" – as defined by Ricoeur as "aiming for the good life, with and for others, in fair institutions"(my translation)⁵¹ – is thus not just a presupposition to, but also the object of their developments. This kind of critical transhumanism does not 'rest upon' some predetermined moral code to develop, present or promote human-enhancement technologies, but actually explores, with the tools provided by ethics, the morality of such technologies. In other words, earlier forms of transhumanism were rather ideological, hence normative but, as time passes, transhumanists have become more and more reflexive and, therefore, critical.

However, this shift is sometimes conveniently forgotten or silenced by the detractors of transhumanism, who stereotypically depict it as a homogeneously uncritical, ultraliberal, or even libertarian group of mad scientists. This does not mean that absolutely no transhumanist matches such a description; a few of them indeed do, but these represent the most extreme fringe of the movement, thereby the most publicised one too: Elon Musk's eccentricities overshadow the whole, more reasonable, transhumanist scholarship; Zoltan Istvan's 2016 presidential campaign popularised a

⁵¹ "visée de la 'vie bonne', avec et pour les autres, dans des institutions justes" (Ricoeur 202).

heavily libertarian version of transhumanism which silenced other, less radical, more critical branches of transhumanism. Because of such figures, transhumanism is commonly misinterpreted as a blindingly techno-enthusiast movement and is recurrently attacked for its alleged negligence of human 'nature' and 'dignity'⁵² as well as its similarity to Nazi eugenics⁵³ (Hauskeller 104–05; Carbonell 109; Ranisch 152; Tirosh-Samuelson 164; Weiss 194–96). One of the most notable criticisms came from Francis Fukuyama, who wrote the alarmist book *Our Posthuman Future: Consequences of the Biotechnology Revolution* (2002), followed by the inflammatory article accusing transhumanism of being "the world's most dangerous idea" in a 2004 issue of *Foreign Policy*.

These numerous attacks have eventually tarnished the reputation of transhumanism, and as the latter has become more and more discussed in the mainstream media as well as in academia, paradoxically, the word 'transhumanism' progressively disappeared from the names of organisations, especially Bostrom's. While his first organisation was indeed called the *World Transhumanist Association* (1999), in 2004 he created the *Institute of Ethics and Emerging Technologies*, to which the *Journal of Transhumanism*, previously held by the *World Transhumanist Association*, was transferred and renamed *Journal of Evolution and Technology*; in 2008 he even renamed the WTA into *Humanity+*; in 2005, Bostrom then created a research centre at Oxford University, the *Future of Humanity Institute*, which also leaves out the word

⁵² See *Our Posthuman Future* (Fukuyama, *Our Posthuman*, 2003), "Transhumanism" (Fukuyama, 'Transhumanism', 2009) and *Life, Liberty and the Defense of Dignity: The Challenge for Bioethics* (Kass, 2002).

⁵³ See "American Bioethics: Crossing Human Rights and Health Law Boundaries" (Annas, 2004) and *The Future of Human Nature* (Habermas, 2003).

'transhumanism', in its name as much as in its mission statement: "to bear on big-picture questions about humanity and its prospects" and "to shed light on crucial considerations that might shape our future."⁵⁴ Furthermore, Bostrom has not used the word 'transhumanism' (or its derivatives) in a publication title since 2006⁵⁵; he may have used it in oral presentations, such as in his 2009 "Transhumanism: A Critical Look" (given at the Oxford-Manchester Moral Science Workshop) and "Transhumanism: A Critical Appraisal" (at Pennsylvania University, Center for Bioethics), but those obviously were reflexive perspectives; his detachment from transhumanism becomes apparent when, on his website, he describes transhumanism as a "naïve [...] dogma."⁵⁶ It seems that 'transhumanism' cannot break away from its reputation as an ideological and radical movement, so much so that it may be easier for its more critical representatives to stop using the word altogether. Nevertheless, 'transhumanism' has not fallen out of use: quite the contrary. As mentioned above, transhumanist projects and movements have now become a popular topic in mainstream media as much as in academic circles, which have picked up on the emphasis on ethics.⁵⁷

Interestingly, even though these optimistic yet more critical or ethical perspectives on human-enhancing technologies continue to proudly emphasise their humanistic roots, they nonetheless insist upon their wish to improve the living conditions of non-human species as well. The 2014 "Technoprogressive Declaration" indeed proclaims: "We must join in working for the expansion of rights to all persons,

⁵⁴ <https://www.fhi.ox.ac.uk/>

⁵⁵ <https://nickbostrom.com/cv.pdf>

⁵⁶ <https://nickbostrom.com/>

⁵⁷ For example, in 2015 the francophone world saw the creation of the first research chair devoted transhumanism at the Catholic University of Lille, France. Entitled "Ethics and Transhumanism", this chair has

human or not"; and the 2017 update clarifies that "as technology provides greater levels of sentience and sapience to non-human animals and synthetic life forms, we stand ready to extend the rights of personhood to these enhanced brethren of ours on the journey to greater consciousness and greater enlightenment" (n.p). These remarks might echo the will for these transhumanists to convey less anthropocentric views on the enhancing potential of technology, bringing critical transhumanism one step closer to another set of critical discourses prompted by the possible existence of posthumans: posthumanism.

Chapter 2

Posthumanism in the Twentieth Century

Before Posthumanism, After the Human

If Bostrom wanted to debunk the formulations of 'posthuman' that, he felt, were undermining his own, claiming that the 'posthuman' could not be used to refer to an era following the extinction of the human species was the right move because the prospect of the end of our species may have been the ultimate trigger for a great cultural shift that participated in setting the path to posthumanism and most of the other 'posts' (postmodernism, poststructuralism, postcolonialism, etc.). As Günther Anders argued in 1960, the atrocities of the Second World War, especially the nuclear bombing of Hiroshima and Nagasaki, forced humankind to consider the possibility of its own end. This realisation, which led humans to envision what would remain afterwards and in which form, provoked a transformation of our metaphysical status (Anders 12) so

powerful that many thinkers have identified it as a decisive moment in the development of the posthuman.

'Posthuman' could therefore describe a post-extinction, humanless era as well as a post-apocalyptic species, either modified to survive a catastrophe (like the Crakers in Atwood's *Oryx and Crake*, or the clones in Houellebecq's *The Possibility of an Island*) or mutated after – or because of – the said catastrophe. It is no coincidence that one of the first occurrences of the word 'posthuman', namely "Post-Human Intelligence" (1977) by Robert Jastrow, is related *not* to the enhancement of the human, but to the surpassing of the human by informatics.

Jastrow's article starts with an observation about the exceptionality of human intelligence similar to some comments that can be found in transhumanist writings: he explains that our distant cousin *Australopithecus* had already distinguished itself from other primates by having, proportionally to its size, a bigger brain and that our own ancestor, *Homo*, with whom *Australopithecus* co-existed for a while and who saw the size of its brain increase even more – which might explain why our ancestor species survived our cousin's (12). The correlation between the size of the brain and the survival and development of the species worked, until then, in favour of the humans, but Jastrow argues that the species is on the verge of being surpassed. Since the size of our brain has not grown significantly in the past hundred thousand years, we may have reached the end of our evolution (Jastrow 16), and the so-called "post-human intelligence" will in fact be achieved by computers. The computers available in the 1970s have not measured up to the human brain yet; they surely work faster, but do not have much memory capacity and cannot form connections similarly to the brain.

Nevertheless, Jastrow contemplates future computer development, based on the speed of previous development (from the 1950s onwards) and concludes that the memory and reasoning capacities of artificial intelligence might eventually exceed ours, by far (18). Jastrow mentions several studies, but only one of them is shared by scholarship of the posthuman; by way of conclusion, Jastrow indeed quotes “the leader in artificial intelligence research” (18): Marvin Minsky.

At that point, Minsky had already risen to fame thanks to his article “Steps Toward Artificial Intelligence” (1961), and his books *Computation: Finite and Infinite Machines* (1967) and *Artificial Intelligence. Progress Report* (1972). He had also been one of Stanley Kubrik’s advisors for *2001: A Space Odyssey* (1968) and even had his name mentioned in the concomitant, original novel by Arthur C. Clarke (Rifkin n.p.). Mainly known for announcing the domination of humankind by intelligent machines, Minsky had become a household name by 1977, not only in computer science and artificial intelligence, but also in foreshadowing the achievements of future technology. Minsky’s pessimism had already been reported by Robert Ettinger as early as 1964 in *The Prospects of Immortality* (107) and has been mentioned in several further writings on the posthuman, in both the post- and transhumanist traditions.¹

Jastrow’s understanding of ‘post-human’ might be partly intuitive (crafted by a simple prefix, leading to two meanings: *after the human* and *the human of after*) partly

¹ Minsky was briefly alluded to in many works about the posthuman, such as Bruce Sterling’s epistolary short story “The Beautiful and the Sublime” (June 1986), in F.M. Esfandiary’s *Are You a Transhuman?* (1989), Ed Regis’s *Great Mambo Chicken and the Transhuman Condition* (1990), Scott Bukatman’s *Terminal Identity* (1993), Andy Clark’s *Natural-Born Cyborgs* (2003) and Katherine Hayles’s *My Mother was a Computer* (2005). His work is explained and put into perspective with later scientists by Katherine Hayles in her seminal work *How We Became Posthuman* (1999), and Robert Pepperell acknowledges the importance of his work regarding artificial intelligence in *The Posthuman Condition* (2003). His theories, especially those of the brain as a machine, artificial intelligence and brain transplant, are also mentioned by Daniel Dinello in *Technophobia!* (2005). Minsky himself later contributed to the scholarship with an article in *The Transhumanism Reader* (2013).

informed by the intellectual atmosphere of his time, bursting with technological breakthroughs. In the scholarship of the posthuman, however, his article remains rather anecdotic; and so does the understanding of 'posthuman' as referring to a post-extinction, humanless time. The acknowledgement of the possibility of such a time, initially forced by nuclear threats, fostered reflections *not* about what it would look like, but about how to prevent it. Regarding this urgent matter, computer science has been less of a threat than an ally, as scientists and thinkers have considered using it to the feasibility of surviving a catastrophe by, for example, mind uploading.

Posthumanism, Under Construction

In the 1999 "Transhumanist FAQ", Nick Bostrom strictly and normatively delineated the concept of 'posthuman' by excluding its competing interpretations: the posthuman as the result of the extinction of the human race and the posthuman as the result of a renewed conceptualisation of the human. Despite his efforts to delegitimise other definitions of the term 'posthuman', these competing definitions eventually led to a fruitful, more critical tradition that should not, and will not, be overlooked in this study: posthumanism.

An intellectual genealogy of posthumanism was masterfully established by Pramod K. Nayar in *Posthumanism* (2014). Nayar insists upon the multidimensionality of posthumanism (see Chapter 3), which has philosophical, cultural and political implications, and attributes it to the many and diverse roots of posthumanism, which he groups together under the label "critical humanism": poststructuralist anti-humanism, feminist critiques, technoscience studies and critical race theory.

Foucauldian relativisation of humanism, which is Nayar's first item, has widely been considered to be the premise of posthumanism, as Foucault greatly influenced Ihab Hassan in his article "Prometheus as Performer" (1977), which contains the first occurrence of the word 'posthumanism' that introduces a new concept of the human. Many scholars settle for quoting Foucault's famous lines –

One thing in any case is certain: man is neither the oldest nor the most constant problem that has been posed for human knowledge. Taking a relatively short chronological sample within a restricted geographical area – European culture since the sixteenth century – one can be certain that man is a recent invention within it. [...] As the archaeology of our thought easily shows, man is an invention of recent date. And one perhaps nearing its end. (385-386)

– accounting for Foucault's influence by the simple fact that this quotation questions humanism as a valid concept of the human. However, Foucault's influence is not limited to that quotation or even to the conclusion to *The Order of Things* in which it appears; Foucault's whole project is to "investigat[e] the histories of disciplines in the social sciences in which the human subject was formed" (Nayar 13), and he therefore concludes that "the subject does not pre-exist the discourses" but "is formed within (and subjected to) the orders of discourses in the human sciences" (Nayar 14), which undermines the very notions of human nature and human agency – its "sovereignty" in Foucault's words (Nayar 15) – two pillars of humanism. Note that other poststructuralists have been frequently alluded to in these histories of posthumanism, such as Gilles Deleuze and Felix Guattari for their *body without organs* and Jacques Derrida's deconstruction and *differance*.

Besides Michel Foucault, Donna Haraway is undoubtedly the other most recurring author to be cited as the main influence of posthumanism, and through her, feminist critiques. Similarly to Foucault, in the historiography of posthumanism, Haraway

has usually been reduced to a couple of quotations and her concept of the *cyborg*: “By the late twentieth century, our time, a mythic time, we are all chimeras, theorised and fabricated hybrids of machine and organism” (Haraway, ‘Manifesto’ 8). What has been mainly remembered from her *Manifesto of Cyborgs* is her rejection of dualist ontology, which nowadays constitutes, for some scholars, the dominant aspect of posthumanism (Ranisch and Sorgner 15):

Late-twentieth-century machines have made thoroughly ambiguous the difference between natural and artificial, mind and body, self-developing and externally designed, and many other distinctions that used to apply to organisms and machines. Our machines are disturbingly lively, and we ourselves frighteningly inert. (Haraway 11)

The dichotomies between mind and body, animal and human, organism and machine, public and private, nature and culture, men and women, primitive and civilized are all in question ideologically. (Haraway, ‘Manifesto’ 22)

Unconventionally but rightly, Nayar discusses Haraway’s contribution to posthumanism *not* as coming from her materialist feminism, but from her theories of technoscience. Regarding feminist critiques, Nayar rather uncovers how they conveyed a criticism of humanism. Influenced by Foucault’s writings, Susan Bordo, Nancy Hartsock Judith Butler, Lila Abu-Lughod, Luce Irigay and Hélène Cixous defined gender as a mere cultural construct, a discourse amongst others. They also rejected the way ‘male’ is set as a norm for the ‘human’, which establishes “the woman’s subjectivity [...] as derivative, secondary and incidental to any discussion of the human subject” (16). The same goes for non-whites, which is why posthumanism has its roots in critical race theory too, especially in Fanon, Hall and Gates Jr.’s criticism of “a humanism based on exclusion and traditional categorizations” (Nayar 27). Such criticism comes from the recognition that there is an “undeniable link between Enlightenment humanism, racism and

capitalist modernity, dating back to the early modern period's great slaving voyages, whereby members of particular races or ethnic groups were denied their citizenship, rights and dignity" (Nayar 26). The influence of critical race theory on posthumanism is also rarely alluded to in histories of posthumanism, unless the scholar has a postcolonial background, such as Rosi Braidotti, who published *The Posthuman* in 2014.

Despite Haraway's popularity as a forerunner of posthumanism, scholars rarely mention the influence of technoscience studies explicitly, even though the latter might have brought up the main argument in favour of posthumanism: technological progress has shown that the human is not (and has never been) the impermeable, bounded, homogenous and potent entity once presented by humanism. Instead, the human is porous with the non-human, the non-organic and the disembodied because, on the one hand, humans have always used prostheses to enhance their capacities² and, on the other hand, greater knowledge of the human body – thanks to, for example, advances in biotechnology and genetics – has led to analogies with the workings of machines and informatics, popularised by cybernetic theories.

Nayar's theorisation and intellectual history have very few matches because rarely do scholars acknowledge so clearly the various roots of posthumanism. Depending on their fields of expertise, scholars usually emphasise only one or two of these influences: for example, Francesca Ferrando heavily draws on feminist critiques, although she briefly mentions Heidegger's *The Question of Technology*, whereas Clarke & Rossini tie posthumanism to poststructuralist concepts by Foucault and Derrida. Such

² See, for example, discussions of *homo faber* such as in Henri Bergson's *Creative Evolution* (1907), Georges Bataille's *Prehistoric Painting: Lascaux, or The Birth of Art* (1955), Hannah Arendt's *The Human Condition* (1958), is Bernard Steigler's *Technics and Time* (1998).

partial views of posthumanism have been both the result of and a contributing factor in the confusion, which can hardly be solved in current research conditions encouraging speed and quantity rather than depth and accuracy. For this reason, Nayar's comprehensive and straightforward book is a godsend for the posthumanist scholarship; or, at least, the English-speaking one. Many French theories of the posthuman are indeed based upon a different terminology and trace a different genealogy for these concepts (cf. "The French Cultural Exception")

However, beyond poststructuralist, feminist, technoscience and critical race theories, the development of the posthumanist thought was influenced by the postmodern as a whole. As Granger Remy states:

The postmodern does not precede the posthuman, it is its germ, its matrix. [...] What the postmodern achieves in theoretical terms, the posthuman provides a practical application of it. The postmodern according to Lyotard corresponds to a state of knowledge, and narratives as tools to legitimize a state of the world (socially, politically, and philosophically speaking). The posthuman is that world. It is the material accomplishment of these ideological mutations. (Granger Remy 41, my translation)³

In other words, the posthuman (which is, in Granger Remy's terms, both a type of character and a new literary genre) would be the result of the postmodern thought, which is itself, as Jean-François Lyotard postulated, the result of, not just technological progress, but its deadliest consequences: Auschwitz and the A bomb (qtd. in Granger Remy 41). Incidentally, the first occurrence of 'posthumanism' appears in a text written by one of the main theorists of postmodernism, Ihab Hassan.

³ "Le postmoderne ne précède pas seulement le posthumain, il en est le germe, la matrice. [...] Ce que le postmoderne accomplit en termes théoriques, le posthumain en fait l'application pratique. Le postmoderne selon Lyotard correspond à un état du savoir, et des récits comme outils de légitimation d'un état du monde (sur le plan social, politique, et philosophique). Le posthuman est ce monde. C'est l'accomplissement matériel de ces mutations idéologiques."

Ihab Hassan (1977)

Hassan first uses the word 'posthumanist' in the 1974 preface of his experimental book *Paracriticisms: Seven Speculations of the Times* (1975). It starts with notes on postmodern literature, but Hassan quickly moves to the heart of the matter: "At the center of my concerns is an awkward vision of change, a pressing query about the destiny of our race. What role will expanding human consciousness play in the universe?" (Hassan, *Paracriticisms* x) The change to which he alludes seems to be affecting our ways of thinking, moving away from a humanist framework (xi); and Hassan seems to welcome this change – he indeed describes a tension between the stagnation of traditional Humanities and the innovation of postmodernism. 'Posthumanist' is thus used to describe a form of criticism that is no longer humanist and no longer situated and operating within the traditional Humanities.

This text oscillates between reflections about literature and culture, on the one hand, and, on the other hand, more general interrogations and comments about the human nature. Nevertheless, Hassan concludes that "struggling for a sense of what it means to be human in the cosmos" (xiii) is not sufficient a goal for literature and criticism: "'human' is not enough. [...] Perhaps we live for life. And life? [...] life is simply change" (xv). Right there, in the early stages of the concept of posthumanism, one notices how the latter is poised between acknowledging cultural change (*i.e.* questioning the dominant culture of humanism), metaphysical change (*i.e.* a renewed understanding of the human species), and physical change, (*i.e.* the transformation of that species through technology).

In 1977, Hassan expands upon posthumanism in "Prometheus as Performer: Towards a Posthumanist Culture?", an article written in the form of a short play in five scenes. Its characters – Pretext, Mythotext, Text, Heterotext, Context, Metatext, Posttext and Paratext – discuss the ancient Promethean myth, and the way in which the latter is a metaphor for the progressive erasure of boundaries between, on the one hand, the one and the many, the concrete and the universal and, on the other hand, science and imagination, technology and myth. This fictional discussion leads to the announcement of the emergence of "posthumanist culture" and this oft-quoted Foucauldian statement:

We need first to understand that the human form – including human desire and all its external representations – may be changing radically, and thus must be re-visioned. We need to understand that five hundred years of humanism may be coming to an end, as humanism transforms itself into something that we must helplessly call posthumanism. (Hassan, 'Prometheus' 843)

Hassan argues that the reappraisal of the relationship between scientific knowledge and fiction, and their increasing merging, announces the emergence of "posthumanist culture" (831). Yet, as he explains his understanding of posthumanism, he does not clarify why this merging constitutes a movement beyond humanism; on the contrary, he even alludes to emblematic Renaissance thinkers (such as Leonardo Da Vinci) who embody the geniuses of both science and imagination. Besides this incoherence, Hassan seems to conclude that, because two events occur simultaneously – on the one hand, the merging of science and imagination that has been happening since the Antiquity (836) and has been increasing significantly in contemporary culture (839), and, on the other hand, a change concerning the human drastic enough to shift our

perspectives on the world and ourselves – they are causally related. Unfortunately, again, he does not provide arguments to support this thesis.

Hassan's concept of posthumanism thus remains briefly explored, as he is often quoted for merely being *the first*. Yet, the foundations of posthumanism are all present in Hassan's article; not just the questioning of traditional notions of the essence and place of the human that constitutes humanism, but also the fact that such questioning of the concept of 'human' is caused by a radical change that affects the human body, and, finally, the blurring lines in dualist ontological categories. Thus posthumanism is not just a revision of humanism that has stemmed from witnessing tenacious social inequalities or questioning the subject, as poststructuralists did. It was also born of the delusions caused by scientific discoveries, which Freud called "the three severe blows" to the "universal narcissism of men": Copernic's findings about astronomy displaced humans from the centre of the universe; Darwin's findings about evolution placed them within the animal kingdom; and Freud's findings about the subconscious tore apart their sense of sovereignty over their own body (Freud 3612).⁴ Delusions like these have only piled as technoscience has thrived, and have eventually reached a breaking point where the structures to apprehend human nature must be reconsidered. Technoscience is essential to posthumanism, which is why its clear-cut division into 'philosophical' or 'critical' posthumanism (*post-humanism*) vs. 'popular', 'cultural', 'scientific' posthumanism (*posthuman-ism*) is not tenable.⁵ Similarly, the study of posthumanism cannot be separated from that of transhumanism: these movements may have divergent

⁴ Qtd. in Bruce Mazlish's "The Fourth Discontinuity", which argues that to Freud's three discontinuities can be added the one between human and machine, which should and will also disappear (Mazlish 3)

⁵ See Chapter 3.

methods and ideologies, but both are concerned, ultimately, with the relationship between humans and technology, and its product, the posthuman. Just like in his earlier text, Hassan underlines the hybridity of the posthuman: he acknowledges that “Foucault and Levi-Strauss [...] mean not the literal end of man but the end of a particular image of us” (845), but then argues that the literal end of man is conceivable given that the species is currently evolving. This inherent hybridity contained in ‘the posthuman’, which Nayar formulates as “not only the ontological condition but also a vision of the human” (6), has thus been constitutive of posthumanism since very early on.

Posthumanism is thus bound to be entangled with technoscience studies; some even claim that the emphasis on technologies is the only thing that distinguishes posthumanism from postmodernism (Ranisch and Sorgner 8). As Granger Remy argues, posthumanism indeed draws heavily on postmodernism, and Hassan’s article epitomises such filiation. Hassan himself is a literary theorist known for his writings on postmodernism, which occupied his entire career,⁶ and particularly for his table listing the changes in the transition from modernism to postmodernism:

Modernism	Postmodernism
Romanticism/Symbolism	Pataphysics/Dadaism
Form (conjunctive, closed)	Antiform (disjunctive, open)
Purpose	Play
Design	Chance

⁶ Here is a selection of Hassan’s work on postmodernism: *The Dismemberment of Orpheus: Toward a Postmodern Literature* (1971), “POSTmodernISM: A Paracritical Bibliography” (1971), “The New Gnosticism: Speculations on an Aspect of the Postmodern Mind” (1973), “Joyce, Beckett, and the Postmodern Imagination” (1975), “Prometheus as Performer: Toward a Posthumanist Culture?: A University Masque in Five Scenes” (1977), “Culture, Indeterminacy, and Immanence: Margins of the (Postmodern) Age” (1978), “The Question of Postmodernism” (1980), “Desire and Dissent in the Postmodern Age” (1983), “The Critical Scene: Issues in Postmodern American Criticism” (1985), “The Culture of Postmodernism” (1985), “Pluralism in Postmodern Perspective” (1986), “Making Sense: The Trials of Postmodern Discourse” (1987), *The Postmodern Turn: Essays in Postmodern Theory and Culture* (1987), “On the Problem of the Postmodern” (1988), “Beyond Postmodernism? Theory, Sense, and Pragmatism” (1989), “The Expense of Spirit in Postmodern Times: Between Nihilism and Belief” (1997), *Postmodernism Revisited: A Personal Account* (1997).

Hierarchy	Anarchy
Mastery/Logos	Exhaustion/Silence
Art Object/Finished Work	Process/Performance/Happening
Distance	Participation
Creation/Totalization	Decreation/Deconstruction
Synthesis	Antithesis
Presence	Absence
Centering	Dispersal
Genre/Boundary	Text/Intertext
Semantics	Rhetoric
Paradigm	Syntagm
Hypotaxis	Parataxis
Metaphor	Metonymy
Selection	Combination
Root/Depth	Rhizome/Surface
Interpretation/Reading	Against Interpretation/Misreading
Signified	Signifier
Lisible (Readerly)	Scriptible (Writerly)
Narrative/Grande Histoire	Anti-narrative/Petite Histoire
Master Code	Idiolect
Symptom	Desire
Type	Mutant
Genital/Phallic	Polymorphous/Androgynous
Paranoia	Schizophrenia
Origin/Cause	Difference-Differance/Trace
God the Father	The Holy Ghost
Metaphysics	Irony
Determinacy	Indeterminacy
Transcendence	Immanence

(Hassan, 'Toward a Concept of Postmodernism' 280–81)

This table, which appears in the 1987 article "Toward a Concept of Postmodernism", echoes posthumanism in more than one way.

On the one hand, several entries seem to point towards changes which, applied to the human, are between the conceptual and the physical; in the so-called posthumanist era, the human 'form' undergoes 'deconstruction', its 'boundaries' fade, it becomes 'open', 'polymorphous', 'schizophrenic', a hybrid 'combination', a 'mutant'; or

as the author puts it: "Through all these signs moves a vast will to unmaking, affecting the body politic, the body cognitive, the erotic body, the individual psyche – the entire realm of discourse in the West" ('Toward a Concept of Postmodernism' 282). Hassan indeed highlights the last two elements of this table – indeterminacy and immanence – as the defining characteristics of postmodernism. Indeterminacy, which encompasses "ambiguity, discontinuity, heterodoxy, pluralism, randomness, revolt, perversion, deformation" (282), seems to be a part of the postmodern state of mind by which the posthumanist thought may have been influenced, since the latter is, ultimately, a questioning of the human as a homogenous, closed, and potent entity. The postmodernist deconstructive attitude may have been what initially allowed the unmaking of this humanist concept of the human – or at least such was clearly the case for Hassan, as is obvious from his earlier allusions to posthumanism. Paradoxically, the other defining characteristic of postmodernism, immanence, rather reminds one of the transhumanist discourse; as the humans' ability to constitute themselves and their environment through symbols (especially language), Hassan's concept of immanence somehow conveys an image of our species – this "*homo pictor* or *homo significans*" – as omnipotent, even though it also contradicts the transhumanist ideal of transcendence.

Besides giving "posthumanism" its most common meaning, Hassan also uses the expressions "posthuman philosophy" (845) and "transhumanization" (849): the former refers to the need to seriously consider what has later been called 'the technological Singularity' (i.e. intelligent machines taking over), and the latter refers to humankind's transcendence of its current state and limitations thanks to technology

("cloning, parthenogenesis, transplants, prosthesis; [...] the alteration of memory, intelligence, and behaviour, of the creation of chimeras, androids, and cyborgs"). Such remarks prove, once again, that Hassan's early conceptualisation of posthumanism is grounded in the acknowledgment of the possibilities allowed by technological progress, thereby resting upon a twofold interpretation of the posthuman, as the coming technological being and the renewed concept of the human.

Bruce Sterling (1983-85)

Between 1977 and 1991, there are no noteworthy occurrences of the terms 'posthumanism' or 'posthuman' in theory, but novelist Bruce Sterling uses them both in his science fiction. It is in his Shaper/Mechanist short stories, precisely in "Cicada Queen" (1983) and "Sunken Garden" (1984) – first published in various SF magazines and then in the 1989 anthology *Crystal Express* – and in his later novel *Schismatrix* (1985), that Sterling describes a future in which humanity masters galactic travel and colonisation and has evolved into various species.⁷ These stories focus on the two main factions, forced to live together under the same queen, but bearing animosity towards each other: genetically enhanced humans, *i.e.* Shapers, and mechanically enhanced humans, *i.e.* Mechanists. Both groups call themselves "posthumans" and differentiate themselves from "normal humans," meaning those who have not had their bodies enhanced. In that way, they correspond to the understanding of the posthuman as an enhanced and evolved human being. Regarding posthumanism, it is presented as a philosophy for Sterling's posthumans. Neither the short stories nor the novel provide

⁷ Sterling's "Shapers/Mechanist" short stories and his novel *Schismatrix* were compiled in the 1996 anthology *Schismatrix Plus*.

extensive information about the nature or history of this philosophy but sparse, unsatisfying mentions, fragments of descriptions. Some of them seem to indicate that Sterling's posthumanism follows that of his predecessors:

Admit it, Yevgeny. C-K is blooming in a new moral and intellectual climate. It's unquantifiable and unpredictable, and, as a scientist, that frightens you. Posthumanism offers fluidity and freedom, and a metaphysic daring enough to think a whole world into life. ('Cicada Queen' n.p.)

Early posthumanists such as Ihab Hassan or even anti-humanists such as Michel Foucault indeed acknowledge the advent of a "new moral and intellectual climate" replacing the culture that has been dominant in the West "since the sixteenth century" (Foucault 385), namely "five hundred years of humanism" (Hassan, 'Prometheus' 843). Moreover, much of the posthumanist theory that came after Sterling's fiction has insisted upon the "fluidity and freedom" of the posthuman, generally being inspired by Haraway's notion of the cyborg: "Late-twentieth-century machines have made thoroughly ambiguous the difference between natural and artificial, mind and body, self-developing and externally designed, and many other distinctions that used to apply to organisms and machines" (Haraway, 'Manifesto' 11). This frequently quoted sentence epitomises the importance of eroding boundaries and consequent ontological fluidity in posthumanism. Ranisch and Sorgner precisely note: "posthumanism actively tries to overcome the predominant dualistic paradigm and seeks for a new ontological framework." (22) Whether this has been "a metaphysic daring enough" remains open to judgement, but all agree upon the posthumanist metaphysic being quite a departure from the humanist norm.⁸ With

⁸ The meaning of 'post' in 'posthumanism' – and therefore the relationship between humanism and posthumanism – has been debated over, precisely whether it is a reinterpretation of or a significant departure from humanism. Yet, one must recognise that posthumanism certainly cannot be considered as a mere continuation of humanism.

this quotation, Sterling therefore seems to have anticipated several aspects of posthumanism, to which he gave – quite hopefully so – a world-changing power.

It is precisely the idea of change that is central to Sherryl Vint's interpretation of Sterling's novel as posthumanist. Vint indeed considers Sterling's protagonist's ability and tendency to adapt to changing worlds and societies as essential to the survival of the (post)human species and as "the mark of posthumanism" (175). It is not clear, however, whether she alludes to posthumanism in general or to Sterling's use of the word. She indeed writes later on: "The Sterling posthumanist recognizes that human was only ever a temporary category in the first place" (175), which implies that Sterling's posthumanism is somehow different from other posthumanist currents, but nonetheless establishes him as part of the contributors to the construction of the concept. Her conclusion that "human was only ever a temporary category" shows that Vint's interpretation of the *Schismatrix* stories is, for that matter, very posthumanist, in line with Foucault and his followers' thinking.

However, critics such as Bruce Clarke or Curtis Carbonell note that some aspects of Sterling's stories do not fall into line with current definitions of posthumanism: Clarke notices traces of Humanism in the way the Shapers/Mechanists opposition "retails an all-too-human oppositionalism between living and non-living systems" (160) and in the "rugged Western ideal of being self-sufficient" (161) conveyed by Sterling's aquatic posthumans; and Carbonell praises Sterling for "work[ing] outside [the] narrow parameters [of critical posthumanism]" (10). Strangely enough, they seem to imply that Sterling's stories could have been more posthumanist, thus underestimating the earliness of these stories. Indeed, at the time they were being written, between 1982

and 1985, theoretical developments labelled “posthumanist” were limited to Ihab Hassan’s 1977 article. In the introduction to *Schismatrix Plus*, Sterling shares the books that have inspired him his Shapers/Mechanists stories, and Hassan’s article is not one of them. Whether Sterling actually read Hassan before 1982 is, of course, unverifiable, but seems quite unlikely. Moreover, Hassan’s early theorisation of posthumanism is but a first step in the construction of posthumanism as it is known nowadays; it does not develop some of its essential implications such as questioning (Cartesian, but not only) dualistic ontology or stripping humanism of its Eurocentrism⁹ —those being the aspects put forward by Clarke when he argues, thus quite anachronistically, against Sterling’s stories being posthumanist.

A final clue regarding Sterling’s influences resides in the references to actual thinkers and scientists in his stories, especially the Russo-Belgian chemist and physicist Ilya Prigogine, for his writings on complexity: “Posthumanism schooled us to think in terms of fits and starts, of structures accreting along unspoken patterns, following the lines first suggested by the ancient Terran philosopher Ilya Prigogine” (Sterling, ‘Cicada Queen’ n.p.). Sterling’s “jargon-ridden [...] baroque techno-babble” (Bukatman, ‘Postcards’ n.p.) and (pseudo-)scientific theories might convey the impression of complexity and accuracy but were in fact used more for their effects than their meanings. There are more comments about Prigogine in “Cicada Queens”: “[Prigogine’s] book boasted some of the most awesomely beautiful scientific jargon that I had ever witnessed in print. The writing was of such dense, otherworldly majesty that it resembled Scripture” and later admits that his use of Prigogine’s terminology “had

⁹ These two aspects of posthumanism are respectively developed, amongst many others, by Rosi Braidotti and Stefan Sorgner (see Chapter 3).

nothing whatever to do with [Prigogine's] Nobel Prizewinning breakthroughs in physical chemistry."

Consequently, Sterling's coinage of 'posthumanism' seems like a happy coincidence rather than a conscious choice to contribute to a reflection and discussion that were barely at an embryonic stage in those early 1980s. However, as Vint writes that the ultimate message of Sterling's *Shaper/Mechanist* stories is that mankind simply *must* evolve in order to survive, she relates this message to extropianism, the early form of transhumanism (176). Interestingly, transhumanism – which had its own understanding of 'posthuman' (see Chapter 1) – started to grow and spread just a few years after the publication of Sterling's stories. There might be a trigger common to it all, but it might not be a precise (set of) text(s); instead, thinkers, writers, and scholars have likely been inspired by a wider cultural mind-set resulting from Post-WWII scientific-technical revolution, from the 1940s to the 1970s, and the prospects of the nascent information and telecommunications revolution, from the 1980s to the end of the century (Šmihula). For science fiction,¹⁰ the post-WWII – especially post-A-bomb – era is marked by scepticism about progress leading to a more reflective, ironic and caustic science fiction, with J.G. Ballard as figurehead (Langlet 134–35); and the 1970s as especially marked by accelerating technological progress, which places science fiction in the spotlight, because what it depicts suddenly seems more possible. Combined with globalisation (hence, translations) and cinematographic adaptations,

¹⁰ In her comparative study of histories of science fiction, Irène Langlet notices that most of these histories depict five main development stages: 1) Nineteenth-century forerunners (Shelley, Verne, Wells); 2) 1910s and 20s Gernsback's pulps, most notably in *Amazing Stories*; 3) 1930s and 40s golden age, with more scientifically rigorous magazines such as Campbell's *Astounding Science*; 4) Post-WWII scepticism about progress; and 5) From the 1970s onwards, growing global popularity and rise of the cyberpunk (Langlet 134–35).

science fiction achieves an enormous popularity. Those are also the birth years of cyberpunk, which also saw the growing diversification and codification and SF's subgenres. It is barely any wonder that this popularity reflected upon these decades' philosophical, theoretical and ideological production, which have been just as much impacted by technological acceleration. As seen in Chapter 1, first transhumanist texts indeed dates from the 1960s and 1970s; but those same decades also saw the rise of a more critical theoretical posture (post-structuralism, postmodernism) which, as mentioned above, is the main breeding ground of posthumanism.

This cultural climate could therefore explain why similar ideas developed in both theory (Hassan) and fiction (Sterling). However, while Hassan is usually mentioned as the first who proposed the neologism 'posthumanism', Sterling's contribution is hardly ever acknowledged. Could it have been overshadowed by the following contemporaneous author?

Donna Haraway's Cyborg (1985)

Donna Haraway's *Manifesto for Cyborgs* (1991) drew the attention of the scholarly world to the cyborg and, incidentally, the posthuman, as her work is still widely considered fundamental to the corresponding scholarship.¹¹ Even though the *Manifesto* does not contain the terms 'posthumanism' and 'posthuman,' it has had a significant influence on the theorists of posthumanism. As a short form of "cybernetic organism", the cyborg is "a harbinger of the posthuman that remains expressive of a particular experience of (techno)embodiment" (Hollinger 273), that is, the articulation of the organic and the

¹¹ In 2006, the journal *Theory, Culture and Society* published a retrospective study of the *Manifesto* that evaluates its legacy regarding studies of the posthuman (Hollinger 277). Besides an interview with the author, the issue also features articles by N. Katherine Hayles and Rosi Braidotti, two prominent theoreticians of the posthuman.

mechanical. However, Haraway expands the boundaries-blurring power of the cyborg. Branding it as “an effort to build an ironic political myth faithful to feminism, socialism and materialism” (‘Manifesto’ 7) and insisting that the cyborg is a metaphor for “women’s experience in the late twentieth century” (‘Manifesto’ 8), has misled some of her readers to thinking that it was not anything more than that. Those readers may have been the ones who later pictured the cyborg, and then the posthuman, as a pure concept, remote from the technological being fantasised in science-fiction stories. However, as Nayar points out, and as attested by the multitude of references to Haraway in theories of the posthuman, the Manifesto was relevant to technoscience studies at least as much as it was to feminism. Haraway’s cyborg, this proto-posthuman, is poised – if not torn – between two meanings, referring either to a new *form* or to a new *concept* for the human: “The boundary is permeable between tool and myth, instrument and concept, historical systems of social relations and historical anatomies of possible bodies, including objects of knowledge. Indeed, myth and tool constitute each other” (‘Manifesto’ 23). Such ontological ambivalence of the cyborg as both a narrative and a body (as detailed in the Chapter 4), which echoes that of Hassan’s posthumanism, may lie behind the bifurcations that resulted in the variety that characterises posthumanist scholarship.

Early in her essay, Haraway clarifies that her cyborg is no longer science fiction only; it is now part of modern medicine. She then comments on cyborg reproduction, on how it differs from human organic reproduction because it is replicative and generates more power (‘Manifesto’ 8). Her focus then shifts from the scientific to the socio-political, when she adds that “[m]odern production seems like a dream of cyborg

colonisation of work, a dream that makes the nightmare of Taylorism seem idyllic" ('Manifesto' 8). Her social and feminist commitments are also emphasised in other parts of the Manifesto: in "The Homework Economy" ('Manifesto' 25–29), she notices that, under the "new industrial revolution" led by new economies and technologies, male workforces tend to decrease whereas female workforces are still growing, thus being more likely to become the main source of income for the household; in "Cyborgs: A Myth of Political Identity" ('Manifesto' 31–39), she insists that the cyborg is merely another "Other", i.e. another non-white-male individual confronted with the dominant Western patriarchal culture.

This latter point has led to a particular version of post-humanism, which was popularised by Rosi Braidotti's 2013 *The Posthuman*. In this book, Braidotti argues that posthuman theories can be divided into three subcategories: reactive, analytical and critical. The reactive ones (such as Martha Nussbaum's) reaffirm the value of humanism "as the guarantee of democracy, freedom, and the respect for human dignity" (Braidotti 38). The analytical theories, coming from science and technology studies, consider how "contemporary science and biotechnologies affect the very fibre and structure of the living and have altered dramatically our understanding of what counts as the basic frame of reference for the human today" (40). Incidentally, Braidotti highlights the difference between the Humanities and the Sciences regarding the treatment of the posthuman: whereas the former keep on dealing with epistemological, political and moral consequences (40), the latter remain strictly analytical and neutral, which is what Braidotti deplors:

The pride in technological achievements and in the wealth that comes with them must not prevent us from seeing the great contradictions and the forms of social

and moral inequality engendered by our advanced technologies. Not addressing them, in the name of either scientific neutrality or of a hastily reconstructed sense of the pan-human bond induced by globalization, simply begs the question. (42)

The third type of posthumanist theories, which Braidotti labels as 'critical', stems from her "own tradition of anti-humanist philosophies of subjectivity" (38), as well as post-colonialism, feminism and environmental studies. Within post-colonial studies, Humanism can be seen as both in contradiction and in connection with colonialism (46), because it is rather its failure – leading to European fascism and colonialism – that is criticised (Gilroy, qtd in Braidotti 47). Regarding ecology and environmentalism, their relevance to posthumanism comes from their notions of interconnection between the self and the other, (whether human or not) and their rejection of mankind's domination over nature (48). Braidotti eventually declares herself in favour of collectivity and subjectivity, and opposed to the Humanist "individualism, [...] relativism or nihilistic defeatism" (49). Braidotti's posthuman therefore echoes two strands of criticism: post-humanism¹² undermines the supremacy of Man as "white, urbanized, speaking a standard language, heterosexually inscribed in a reproductive unit and a full citizen of a recognized polity" while post-anthropocentrism does likewise with Man as a "hierarchical, hegemonic and generally violent species" (65). Braidotti's emphasis on post-humanism and post-anthropocentrism as two aspects of posthumanism (unhyphenated) is thus deeply rooted in Haraway's early conceptualisation of the cyborg. The latter actually represents the initial shift in perspective, from the previous,

¹² Conventionally, 'post(-)humanism' is not hyphenated, unless in order to highlight that it should clearly be understood in reaction to humanism. Similarly, should one want to stress that a specific interpretation of 'posthumanism' does not refer to humanism whatsoever, the form 'posthuman-ism' can be used. Let us note that Braidotti herself follows these implicit conventions in *The Posthuman*, in which she uses both 'posthumanism' and 'post-humanism'. Regarding 'post(-)human', the unhyphenated form has been used increasingly and is now the norm, as noted by Robert Pepperell in the 2002 preface of his 1995 book *The Posthuman Condition*.

more intuitive definitions of the posthuman (Hassan's, Sterling's and the transhumanists'), which is limited to the (technology-driven) evolution of the human species, to one that encompasses what Braidotti later calls "sexualized, [...] racialized [and] naturalized others" (66).

Signalled as "faithful to feminism" (7), Haraway's cyborg is clearly informed by the developments in feminist (science) fiction and feminist thinking that took place in the 1970s, and contributes to the feminist edifice, for example, by postulating a reevaluation of female labour – and women in general – in the new technological era. From then on, presenting, discussing, speculating on and theorising the posthuman – being, era and theory – in terms of potential female and, more widely, minorities empowerment, has been mostly done by women. The next important work on posthumanism, *Posthuman Bodies* (1995), was published by Judith Halberstam and Ira Livingston; major contributions to the field were then made by Anne Balsamo and Katherine Hayles with, respectively, *Technologies of the Gendered Body* (1996) and *How We Became Posthuman* (1999). More generally, Jane Donawerth argues that "[f]eminist theory [...] and sf by women have been intimately connected" since "the first Western theories of women's right" and the writing of *Frankenstein; or, the Modern Prometheus* in 1818 by Mary Shelley (214).¹³ Haraway herself affirms this connection (and highlights the one between feminism and critical race studies) by evoking, at the end of her Manifesto, "two overlapping groups of texts for their insight into the construction of a potentially helpful cyborg myth: constructions of women of color and

¹³ For example, Veronica Hollinger, who wrote the chapter on "Posthumanism and cyborg theory" in the *Routledge Companion to Science Fiction*, also wrote the article "Feminist Science Fiction: Breaking Up the Subject" (1990); Austin Boothe and Mary Flanagan edited the collective work *Reload: Rethinking Women + Cyberculture*¹³ (2002); and Patricia Melzer wrote *Alien Constructions: Science Fiction and Feminist Thought*¹³ (2006).

monstrous selves in feminist science fiction” (37). Feminists indeed used the posthuman to challenge accepted but constructed boundaries and (gender) roles as “[t]he cyborgs populating feminist science fiction make very problematic the statuses of man and woman, human, artefact, member of a race, individual identity, or body” (Haraway, ‘Manifesto’ 36). By reflecting upon the cyborg, a hybrid creature of human and machine, Haraway looks into the dichotomies that are traditionally relied upon to define humanity: “The dichotomies between mind and body, animal and human, organism and machine, public and private, nature and culture, men and women, primitive and civilised are all in question ideologically” (‘Manifesto’ 22).

Haraway’s ultimate goal is to prove that “[b]y the late twentieth century, our time, a mythic time, we are all chimeras, theorised and fabricated hybrids of machine and organism; in short, we are cyborgs” (Haraway, ‘Manifesto’ 8). She thus introduces the following table, which shows how, since the technological revolution, the world has changed – and so have humans –

from the comfortable old hierarchical denominations to the scary new networks [...] called the informatics of domination:

Representation	Simulation
Bourgeois novel, realism	Science fiction, post-modernism
Organism	Biotic component
Depth, integrity	Surface, boundary
Heat	Noise
Biology as clinical practice	Biology as inscription
Physiology	Communication engineering
Small group	Subsystem
Perfection	Optimization
Eugenics	Population control
Decadence, <i>Magic Mountain</i>	Obsolescence, <i>Future Shock</i>
Hygiene	Stress management
Microbiology, tuberculosis	Immunology, AIDS
Organic division of labor	Ergonomics/cybernetics of labor
Functional specialization	Modular construction

Reproduction	Replication
Organic sex role specialization	Optimal genetic strategies
Biological determinism	Evolutionary inertia, constraints
Community ecology	Ecosystem
Racial chain of being	Neo-imperialism, United Nations humanism
Scientific management in home/factory	Global factory/Electronic cottage
Family/Market/factory	Women in Integrated Circuit
Family wage	Comparable worth
Public/Private	Cyborg citizenship
Nature/Culture	Fields of difference
Cooperation	Communication enhancement
Freud	Lacan
Sex	Genetic engineering
Labor	Robotics
Mind	Artificial Intelligence
World War II	Star Wars
White Capitalist Patriarchy	Informatics of Domination (20)

This table has already been mentioned in comparison with, first, FM-2030's table in *Are You a Transhuman?* (1973), and then Ihab Hassan's table in "Toward a Concept of Postmodernism" (1987). These three charts share a few commonalities¹⁴ (for example, FM-2030's "Boyfriend-girlfriend" vs. "Friend-lover", Haraway's "Organic sex role specialization" vs. "Optimal genetic strategies" and Hassan's "Genital/Phallic" vs. "Polymorphous/Androgynous" all convey the rejection of gender differentiation) but present a significant difference: while FM-2030's list simply suggests syntagmatic changes (that is, new ways of naming certain things), Haraway's and Hassan's rather attest paradigmatic changes (that is, actual mutations amongst societies and people).

Furthermore, Haraway's and Hassan's tables, which were respectively published in 1985 and 1987, seem to describe *the same* paradigmatic shift – from modernity to post-modernity – but from different perspectives, or with different emphases: Hassan's

¹⁴ See Chapter 1.

observations seem to be related to literature, linguistics and psychoanalysis, and their transformations under postmodernism, Haraway's describes how new technologies affect the social, the political and the cultural. However, Haraway offers observations about literature ("Bourgeois novel, realism" vs. "Science fiction, post-modernism") and psychoanalysis ("Freud" vs. "Lacan"), while some of Hassan's entries could apply beyond his fields of expertise ("Hierarchy" vs. "Anarchy", "Centering" vs. "Dispersal", "Selection" vs. "combination", "Root/Depth" vs. "Rhizome/Surface", "Type" vs. "Mutant" or "Genital/Phallic" vs. "Polymorphous/Androgynous"). More generally, the difference between Haraway's and Hassan's tables originates in the driving force of the change that they describe: postmodernity (with technological progress as an impulse) for the former, postmodernism for the latter.¹⁵

A few years later, Donna Haraway presented the paper "Ecce Homo: Ain't (Ar'n't) I a Woman, and Inappropriate/d Others: The Human in a Post-Humanist Landscape"¹⁶, which explicitly debunks the humanist definition of the 'human' as:

the man, the figure of humanity (Latin), the sign of the same (the Greek tones of homo-), indeed, the Sacred Image of the Same, but also the original mime, the actor of a history that mocks especially the recurrent tales that insist that 'man makes himself' in the deathly onanistic nightdream of coherent wholeness and correct vision. ('Ecce Homo' 52)

Haraway's understanding of 'post-humanism' is therefore a reaction to two humanist suppositions: on the one hand, "humanity's face [being] the face of man," ('Ecce Homo'

¹⁵ According to Yves Bonny, 'postmodernity' indicates a certain *state of the world* resulting from a historical mutation of or break from modernity (i.e. a type of society born in the 16th and 17th centuries in the West) while 'postmodernism' describes a group of *cultural and intellectual movements* that constitute a reaction to modernism (i.e. a positive attitude towards what is 'modern', meaning not 'traditional', 'ancient' or 'classical') (135–36).

¹⁶ The paper was first presented at the 1989 American Anthropological Association meeting in Washington, DC and then published in *Feminist Theorize the Political* (Routledge, 1992), edited by Judith Butler and Joan W. Scott.

47) especially *white* man, leading to the othering of women and non-whites; on the other hand, humans' alleged homogeneity ('sameness') and wholeness as subjects provided with agency:

the Enlightenment figures of coherent and masterful subjectivity, the bearers of rights, holder of property in the self, legitimate sons with access to language and the power to represent, subjects endowed with inner coherence and rational clarity, the masters of theory, founders of states, and fathers of families, bombs, and scientific theories [...]. (48)

The "post-humanist landscape" Haraway refers to seems to correspond to the post-WWII world, with its "modernist, postmodernist, and amodernist ways of constructing 'the human'," (48) and to be marked by "three groups of powerfully universalizing texts": UN human rights discourses, 1980s gender roles discourses, and genetic engineering breakthroughs (48-49). To feed her study, and eventually her argument that the humanist understanding of the human must be overcome, Haraway is much less focused on technology than she was in "Manifesto for Cyborgs" and uses primarily religious and postcolonial historical figures (Jesus and the black abolitionist woman Sojourner Truth). It probably explains why "Ecce homo" is much less present in histories and genealogies of posthumanism and/or the posthuman, even though, unlike the "Manifesto for Cyborgs", it contains the word "post-humanist". Nonetheless, it should be noted that, beyond the "Manifesto", it is Haraway's overall legacy that pervades posthumanism, as the rehabilitation of the Other (non-male, non-white, non-human, non-organic, non-embodied) in an otherwise patriarchal Western society.

Science Fiction Studies and Scott Bukatman (1991 & 1993)

In November 1991, the scholarly journal *Science Fiction Studies* published a special issue on science fiction and postmodernism, with a focus on Jean Baudrillard. This issue

invited its contributors to consider so-called 'postmodernist science fiction' and provide a postmodernist perspective on science fiction. This issue's editor, Istvan Csicsery-Ronay Jr., contributes with a focus on Jean Baudrillard and Donna Haraway's theories, which he describes as two representatives of postmodernism. While Donna Haraway's *cyborg* has already been established as one of the first theorisations of the posthuman, Baudrillard's *Simulacra and Simulation* represents an important contribution to the postmodern thought that postulates the overtaking of reality by *hyperreality*, a simulation based on "models of a real without origin or reality" (*Simulacra 1*)¹⁷. Baudrillard claims the disappearance of reality even further in "Simulacra and Science Fiction":

Until now, we have always had large reserves of the imaginary, because the coefficient of reality is proportional to the imaginary, which provides the former with its specific gravity. This is also true of geographical and space exploration: when there is no more virgin ground left to the imagination, when the map covers all the territory, something like the reality principle disappears.¹⁸

The more profound knowledge of the world generated by scientific progress, simultaneously, the infinity of possibilities brought by technological progress have destroyed the possibility of imagination and therefore "the principle of reality". By erasing the difference between reality and fiction, hyperreality has erased them altogether.

The instrumental role that has been played by postmodern thinkers and theories in the development of posthumanism has been evoked above, as I discussed Hassan's

¹⁷ "La génération par les modèles d'un réel sans origine ni réalité" (Baudrillard, *Simulacres* 10).

¹⁸ Translated by Arthur B. Evans. Original: "Nous avons toujours eu jusqu'ici une réserve d'imaginaire — or le coefficient de réalité est proportionnel à la réserve d'imaginaire qui lui donne son poids spécifique. Ceci est vrai de l'exploration géographique et spatiale aussi : lorsqu'il n'y a plus de territoire vierge, et donc disponible pour l'imaginaire, lorsque la carte couvre tout le territoire, quelque chose comme le principe de réalité disparaît" (Baudrillard, *Simulacres* 181).

contribution to both postmodern and posthumanist theories. However, the postmodern impulse to posthumanism goes well beyond Hassan's theorisations, as evidenced by the explicit references to postmodern thinkers and concepts present in posthumanist theories.¹⁹ The general *indeterminacy* postulated by Hassan – “ambiguity, discontinuity, heterodoxy, pluralism, randomness, revolt, perversion, deformation” (Hassan 282) – generates a questioning attitude that does not spare humanism (Hutcheon 7). This scepticism is what leads postmodern thinkers like Foucault and Hassan to express their incredulity towards that specific masternarrative. In turn, they led Haraway and her followers to famously question ontological dualist categories. For example, In that late-twentieth-century digital turn, underminings of reality and fiction such as Baudrillard's pervade postmodern theories in a protean way.²⁰ For example, Jean-François Lyotard grounds *The Postmodern Condition* (1979) in “the disbelief of meta- and masternarratives” (*Postmodern* 7) such as humanism or bourgeois liberalism, which implies that what is given the value of *truth*, what is held for *real*, is in fact a narrative. As such, it questions the very notion of reality in light of the realisation that reality is constructed through self-legitimizing discourses. In the same way, Linda Hutcheon's *A Poetics of Postmodernism* (1988) insists upon the importance of historiographic metafiction as a typical form of postmodernist novel because of “its theoretical

¹⁹ Almost all posthumanist theories cite Foucault's 'Death of Man', but many of them also draw heavily on Gilles Deleuze and Felix Guattari ('becoming-machine', 'body-without-organs') and Jacques Derrida's '*différance*' and his deconstruction of Eurocentrism and anthropocentrism. Such is the case with Neil Badmington, Cary Wolfe, Stefan Herbrechter, Rosi Braidotti, Francesca Ferrando, and all of these scholars whose background is essentially philosophical. This homogeneity amongst posthumanist theories is not just the consequence of the hegemony of postmodernism, but can also be explained by the overwhelming popularity of French Theory in American (and, more widely, thanks to globalisation, English-speaking) campuses, as described thoroughly in Cusset's *French Theory* and alluded to in the introduction to Rabaté's *The Future of Theory*, which also tied the recurrence of references to the necessities of the the text-based intellectual activity that is theory (Rabaté 9).

²⁰ More on this topic in the first part of Françoise Lavocat's *Fait et Fiction*.

awareness of history and fiction as a human construct" (5). Such awareness destroys the notion of history and fiction as transparent windows onto past or present truths, therefore interrogating the (im)possibility of second-hand access to reality altogether. As Sorgner concluded, posthumanism therefore inherited from a certain postmodern "conception of truth": "As genealogically posthumanists are immediately connected to postmodern thinkers what posthumanists aim for is mere plausibility" (33). With such a perspectivist approach, pure truth no longer matters because it is inaccessible (33). This loss is the consequence of the postmodern rejection of "the unified rational self" (40), which itself results from the rejection of the Enlightenment's ideals.²¹

Mentioning the *Science Fiction Studies* special issue in the context of a historical account of posthumanism seems fitting given the presence, amongst the contributors, of one of its famous theorists, N. Katherine Hayles, as well as the repeated mentions, in several articles, of Donna Haraway. One particular article was not just relevant but pivotal for posthumanism: Scott Bukatman's "Postcards from the Posthuman Solar System," which uses a concept of the posthuman that expresses the ambivalence of future developments in the field.

Indeed, in 1991, Hassan's foray into posthumanism remained relatively unknown, the set of ideas that will later be labelled 'posthumanism' had not formed a coherent whole yet, and the first few transhumanists still had not developed their own notion of 'posthuman' or 'posthumanism'. At that point, the concept of 'posthuman' was mostly limited to its simplest understanding – a future evolution of the human – and novelists (amongst whom Bruce Sterling) were the ones who speculated about the variety of

²¹ More on posthumanism, the posthuman and postmodern theory in Bukatman's *Terminal Identity* (*Terminal* 1993), Sorgner's "Pedigrees" (2014) and Herbrechter's "Postmodern" ('Postmodern' 2017)

forms that the posthuman could take. This issue of *Science Fiction Studies* therefore stands at a crossroad in the development of the posthuman, as Bukatman innovatively gathers scattered, comparable reflections on both the human and humanism, under the banner of 'posthumanism'. Countless posthumanist works will indeed feature a similar blend of science-fiction references, reflections on the human and/or humanism, and postmodern theories.

In this article, Scott Bukatman analyses the posthumans of several novels – *Crash* by J.G. Ballard, *Limbo* by Bernard Wolfe and, above all, *Schismatrix* by Bruce Sterling – and puts the cyberpunk movement in perspective with Surrealism, focusing on the body and its materiality. Coming out of an era governed by cybernetics and its emphasis on information – whose disembodiment has traditionally been opposed to materiality, either the machine's or the body's – Bukatman considers new ways to contemplate the modern human body: "The body is no longer simply the repository of the soul; it has become a cyborg body, one element in an endless interface of bio-technologies" ('Postcards' n.p.). At first, the "posthuman future" mentioned in the title simply refers to a future in which the human species as we know it no longer exists, either because it has been replaced by something else – computers, for example – or because it has improved its body with technology. However, to carry out his analysis, Bukatman resorts to Donna Haraway's cyborg (and, to a lesser extent, Norbert Wiener's), Stelarc's performances and Gilles Deleuze and Felix Guattari's *Body without Organs*, which are concepts and thinkers that inform many further posthumanist studies on the posthuman (see Chapter 3).

Besides, and more importantly, Bukatman acknowledges two different definitions of the posthuman: "'posthuman' in biological terms, and in the ideological sense of 'human' as a particular mythos of 'natural' individualism". He senses that Sterling's posthuman was quite not like Haraway's cyborg, yet each of these figures encompassed both definitions of the posthuman. This differentiation foreshadows the shape that posthumanism takes afterwards, not only in its content, but also in its inspirations, its genealogy. Bukatman indeed goes on to cite Foucault's "oft-quoted passage" in *The Order of Things* about how 'Man' might have turned into an outmoded concept (see Foucault 386). Never before had the ambiguity of the posthuman been expressed so clearly, and, unfortunately, few of the scholars following Bukatman bore such clarity, instead producing confused and confusing studies of the posthuman (see Chapter 3). Retrospectively, Bukatman's article turns out to be a valuable piece to understand the genealogy and recall the construction of the contemporary notions of the posthuman and posthumanism. The conceptual apparatuses chosen to analyse fictional posthumans unearth the postmodern roots of posthumanism, and the text eventually studies the posthuman in a way that is very similar to what is being done in the contemporary field of the posthuman.²²

Cary Wolfe (1995)

Four years after the publication of the *Science Fiction Studies* special issue, Cary Wolfe's "In Search of Post-Humanist Theory" (in *Cultural Critique*) similarly

²² Bukatman's study of the posthuman continues in his first book, *Terminal Identity: The Virtual Subject in Postmodern Science Fiction* (Terminal 1993), which analyses discourses about subjectivity in the technological culture through a corpus of science fiction (mostly cyberpunk) and postmodern writings, both fictional and theoretical.

acknowledges the influence of the postmodern thought on the increasing questioning and undermining of humanism (33). This overview of "post-humanist" theory therefore accounts for texts that "critique the ethical and political separation of the human from the nonhuman" on the basis of all Bruno Latour has recently called the "magnificent features that the moderns have been able to depict and preserve" (34). As this citation foreshadows, Wolfe identifies Latour's theory as a significant contribution to the post-humanist thought:

Humanist modernity, [Latour] argues in his recent study *We Have Never Been Modern*, is predicated upon a kind of paradox. On the one hand, modernity "creates mixtures between entirely new types of beings, hybrids of nature and culture." On the other, it "creates two entirely distinct ontological zones: that of human beings on the one hand; that of nonhumans on the other" (Wolfe 37)

Such kind of anthropocentrism, especially the epistemological place and nature of human subjectivity, is precisely what is discussed, starting unsurprisingly with Michel Foucault's *Archaeology of the Human Sciences*, but also, Wolfe mentions, in Theodor Adorno's *Negative Dialectics* (34-35), in "recent work in cognitive ethology, field ecology, cognitive science, and animal rights philosophy" (35), and, most importantly, in Donna Haraway's then recent works. Her "Manifesto for Cyborgs" is valued for the way it famously brings the blurring of ontological boundaries to light, while "Situated Knowledges" epitomises the attempt, by feminist philosophy of science, to "rehabilitate the notion of objectivity" (Wolfe, 'In Search of Post-Humanist Theory: The Second-Order Cybernetics of Maturana and Varela' 38), alongside Sarah Harding and Evelyn Fox Keller. Yet, besides this detour by the likes of Haraway, this article is mainly devoted to Maturana and Varela's second-order cybernetics, which (as prefigured by its focus on

subjectivity and objectivity early on) specifies Wolfe's "Search" as one towards a post-humanist theory of *knowledge*.

The role of this article in the development of posthumanism is quite ambivalent and singular. It does not exactly represent the variety of this field, as the non-human with which he deals is primarily *animal*.²³ Wolfe may acknowledge this variety (36), especially when he mentions Haraway, but then identifies the resulting theories as a "sort of 'cyborg' post-humanism" (37). Nonetheless, it contains most of the theoretical background of further theories, including Hayles's seminal *How We Became Posthuman*, which is published four years later and revolves around the three stages of cybernetics (see further in this chapter), and whose influence and popularity are incomparable with that of Wolfe's article. As I shall point out in Chapter 3, his later books *Animal Rites*, but above all *What is Posthumanism?* have not gone unnoticed and, for the latter, Wolfe even manifest a shift towards a more encompassing kind of posthumanism.

Judith Halberstam & Ira Livingston (1995)

That same year Judith Halberstam and Ira Livingston put together *Posthuman Bodies*, the first scholarly collection to theorise the posthuman. In this book, which features articles as well as short stories, the word 'posthuman' makes it to the title – which highlights its conceptualisation – and its meaning becomes the object of a more thorough reflection. As early as the preface, the two scholars question and deconstruct the 'posthuman' – the signifier and the signified – to eventually expand its meaning: "the "post" of "posthuman" interests us not really insofar as it posits some subsequent

²³ Wolfe's later publications confirm his emphasis, within his own take on posthumanism, on *animal* non-humans (see Chapter 3).

developmental state, but as it collapses into sub-, inter-, infra-, trans-, pre-, anti-” (viii).

The plurality of the concept is explicitly acknowledged.

In their introductory essay, Halberstam and Livingston compile various stories of complex, mixed or shifting identities, with an emphasis on gender and sexual identity but also some reflections on how humans build their identity against animals and machines. Their essay aims to reveal the intricacies of the concept of identity in order to depart from the binaries that usually shape our identity framework. Therefore, their posthuman is not so much the result of technological incursions into the human body so much as a new formulation of being human, a new concept of identity, thus new perspectives for self-definition:

The posthuman does not necessitate the obsolescence of the human; it does not represent an evolution or devolution of the human. Rather it participates in re-distributions of difference and identity. The human functions to domesticate and hierarchize difference within the human (whether according to race, class, gender) and to absolutize difference between the human and the nonhuman. The posthuman does not reduce difference-from-others to difference-from-self, but rather emerges in the pattern of resonance and interference between the two. (10)

Since Halberstam and Livingston tie the concept of identity to that of difference, their notion of the posthuman has developed according to that of the Other. Their posthuman is thus a new way to conceptualise otherness, which they recurrently divide into two categories: otherness amongst humans and otherness between humans and non-humans. Such understanding and categorisation of the posthuman will have major repercussions on later theories —most notably those of N. Katherine Hayles and Rosi Braidotti, which will, in their turn, earn their place in the canon of posthuman/ist theoretical writings. The posthuman as not only the evolution of humankind in an increasingly technological age, but also as a new perception of the human is one of

Hayles's central ideas in *How We Became Posthuman* that has been most picked up on. The division into two categories of posthumans will also be preserved on in further theories, sometimes implicitly – by choosing to focus on either one category or the other, for example – and sometimes more explicitly, as in Braidotti's *The Posthuman*, in which she likewise distinguishes between post-humanism and post-anthropocentrism.²⁴ Such polysemy of the term 'posthuman' might have been the cause of a certain amount of diversification in further developments of this field.

As already mentioned, the plurality of the posthuman is acknowledged as early as the preface, in which Halberstam and Livingston describe their book as "an open invitation to engage discursive and bodily configurations that displace the human, humanism, and the humanities" (vii). This "invitation" allows the reader to apprehend two aspects of the posthuman.

On the one hand, the posthuman corresponds to the result of a physical change in the human body ("bodily") as much as a new interpretation of the latter ("discursive"). This new interpretation has led to new narratives concerning the human. As examples of obsolete narratives of the human body, the editors mention constructivism, humanism, proletarianisation, automatisisation and autonomy, but "[p]osthuman bodies are not slaves to [these] masterdiscourses" (2). Instead, they "emerge at nodes where bodies, bodies of discourse, and discourses of bodies intersect to foreclose any easy distinction between actor and stage, between sender/receiver, channel, code, message, context" (2). With this reference to Roman Jakobson's *functions of language* ("sender/receiver, channel, code, message,

²⁴ See Chapter 3.

context”),²⁵ the centrality of discourse and narrative to the development of the posthuman is made even clearer: the posthuman challenges bodies as much as discourses because it is itself a renewed body as well as a renewed discourse. Michel Foucault’s 1960s anti-humanism was already proclaiming humanism as an obsolete self-defining narrative, which is the reason why he is widely considered as one of the forerunners of posthumanism. Yet, even though humanism does appear in their list of obsolete “masternarratives” (4) that are replaced by posthuman narratives (2) Halbertram and Livingston’s posthuman creates a displacement much wider than this. As mentioned above, they have a notion of the posthuman that is multiple and always refer to “posthuman narratives” in the plural because there is not one single narrative of the human to be *post-ed*. There have been many narratives of the human, but the posthuman can be considered as a new series of narratives (some of them being updates of previous narratives), and what marks the difference between posthuman narratives and older “masternarratives” (4) might be this very acknowledgement of their plurality, and the awareness of their subjectivity and, ultimately, their obsolescence. This way, beyond negating the previous, successive “masternarratives,” they object to the very idea of having one single “masternarrative” of the human. Through the recognition of the plurality of the posthuman, they actually emphasise the plurality of the human.

On the other hand, the displacement that constitutes the posthuman concerns not just one, but three concepts: “the human, humanism, and the humanities” (vii).²⁶ At

²⁵ Jakobson detailed the *functions of language* in his 1960 article “Linguistics and Poetics.”

²⁶ The use of the word “displace” echoes one of the most important conceptions of posthumanism as a new Copernican revolution where the human, who had so far been at the centre of our system of values from humanism onwards, has been displaced, from the centre to the periphery, and has regained a position of equality with respect to other life forms.

the level of “the human”, as mentioned above, the displacement could result, on the one hand, in a reassessment of our notion of humanity and, on the other hand, in speculations about an actual, physical change within the human body. On the “humanism” level, the displacement applies to the presuppositions entailed by humanism. In this early work, these presuppositions remain quite unclear: they seem to concern otherness in general –

We have rehearsed the claim that the posthuman condition is upon us and that lingering nostalgia for a modernist or humanist philosophy of self and other, human and alien, normal and queer is merely the echo of a discursive battle that has already taken place (19)

– and might assert that human identity is homogenous and contained within the human body. Posthumanism as a reassessment or contradiction of humanist presuppositions is the understanding shared and spread by most subsequent posthumanist theories, but the nature of these presuppositions will vary according to the theorist. Quite interestingly, even though by then barely anything had been written on “posthumanism” except for Ihab Hassan’s aforementioned article, the editors seem to present posthumanism as an already established discourse by citing it alongside other already legitimate discourses: “*Posthuman Bodies* represents attempts to keep up with the present and to process the identities that rub up against the body and then dissolve in the maelstrom we call postmodernism, posthumanism, poststructuralism, postcolonialism, postindustrial capitalism” (4). Lastly, on the “humanities” level, the displacement takes, again, the form of the erasure of boundaries; this time, those between academic disciplines. Initially, ‘posthumanities’ seems to refer to the study of the posthuman, but the editors explain that such a study is bound to be interdisciplinary, given the inherent plurality of the posthuman itself (viii). According to

Hablerstram and Livingston, “[p]osthumanities emerge [...] out of a disenchantment that is both anti-aesthetic and anti-scientific. It is in this volatile market that the medical/aesthetic disciplinary monopoly on “the body” is being challenged” (2). In other words, the study of the (posthuman) body cannot be carried out properly from medical or artistic perspectives only; it needs approaches from other disciplines as well. What those other disciplines might be is not stated explicitly, but the introductory essay applies knowledge from philosophy, sociology and psychology. Consequently, posthumanities would not only be a new area of study within the humanities but also a new perception of the humanities altogether. The epistemological stakes of such a reflection are expanded on later theories, as in Stefan Herbrechter’s *Posthumanism: A Critical Analysis* (with the chapter “Interdisciplinarity and the Posthumanities”) or Braidotti’s *The Posthuman* (with the chapter “Posthuman Humanities: Life beyond Theory”).

The editors’ main source of influence to elaborate on their concept of the “posthuman body” is without a doubt Donna Haraway. The legacy of her “Manifesto for Cyborgs” pervades their remarks, as they build a notion of the posthuman body similar to Haraway’s cyborg. They conclude their introduction by stating: “lingering nostalgia for a modernist or humanist philosophy of self and other, human and alien, normal and queer is merely the echo of a discursive battle that has already taken place” (19). Claiming the irrelevance of dualist ontological categories reminds one of Donna Haraway’s assumptions in the “Manifesto for Cyborgs” about the fading boundaries underlying various dichotomies, such as “natural and artificial, mind and body, self-developing and externally designed” (Haraway 11) and “animal and human, organism

and machine, public and private, nature and culture, men and women, primitive and civilized” (22). However, Halberstam and Livingston’s way of associating these irrelevant, obsolete dualist ontological categories with humanism is rather original and has become a more and more common tendency in later posthumanist theories.²⁷

Lastly, similarly to Ihab Hassan, Halberstam and Livingston identify postmodernism as the intellectual climate that stimulated the development of posthumanism. To them, a consequence of postmodernism seems to be the rise of multiplicity: “The old humanist party line is sublated in the postmodern partyline, dogma mutated into a floating multiple conversation, couplings into switchboards” (2). This comment goes hand in hand with their interpretation of the posthuman as the acknowledgement of the plurality of narratives of the human. However, the authors also assert that the posthuman could have had a role to play in the development of postmodernism:

[p]osthuman bodies are the causes and effects of postmodern relations of power and pleasure, virtuality and reality, sex and its consequences. The posthuman body is a technology, a screen, a projected image; it is a body under the sign of AIDS, a contaminated body, a deadly body, a techno-body; it is, as we shall see, a queer body. The human body itself is no longer part of “the family of man” but of a zoo of posthumanities. (3)

This definition of the posthuman body emphasises its hybridity – with technology, with other living beings (here, viruses) and, within the species itself, a mix of genders – and even identifies this hybridity as a trigger for the postmodern. The reflexivity that governs the relationship between the posthuman and the postmodern does not come across as surprising, given that these two concepts seem to have emerged from the same

²⁷ For example, it will become Ranisch and Sorgner’s corner stone when defining posthumanism in 2014 (see Chapter 3).

assessments regarding the society of the second half of the twentieth century, that is, as Linda Hutcheon puts it, the questioning of “that entire series of interconnected concepts that have come to be associated with what we conveniently label as liberal humanism: autonomy, transcendence, certainty, authority, unity, totalization, system, universalization, center, continuity, teleology, closure, hierarchy, homogeneity, uniqueness, origin” (57). In her *Poetics of Postmodernism*, Hutcheon also highlights the overlap of postmodernism with Marxism, feminism and poststructuralism (Luebbe 1113), which are part of the genealogy of posthumanism as well. Sharing the same roots as well as the same purpose, posthumanism and postmodernism were bound to intersect and to inspire and influence each other, so much so that some scholars argue that they are virtually indistinguishable. For example, Ranisch and Sorgner claim that the only thing allowing one to distinguish between the two is the posthumanist emphasis on technology (8). However, this could be countered by arguing that scientific progress is constitutive of postmodernity and therefore of all of its discourses. Lyotard indeed described the importance of scientific progress regarding the postmodern condition in a similarly reflexive way: “I define postmodern as incredulity toward metanarratives. This incredulity is undoubtedly a product of progress in the sciences: but that progress in turn presupposes it”²⁸ (*Postmodern* xxiv). To reuse Halberstam and Livingston’s wording: scientific progress is the cause and effect of the postmodern condition. As a technologically enhanced human, the posthuman is part of scientific progress, and therefore may have stimulated postmodern reflections. As a questioning of traditional notions of humanism and the human, however, it stems from previous discourses (some

²⁸ “On tient pour «postmoderne» l’incrédulité à l’égard des métarécits. Celle-ci est sans doute un effet du progrès des sciences; mais ce progrès à son tour la suppose” (Lyotard, *Condition* 7).

of them coinciding with postmodernism) and is therefore more of a semi-direct effect of postmodernity. It could thus be said that the reflexive relationship between the postmodern and the posthuman is allowed by the ambivalence of the latter.

Halberstam and Livingston therefore frame a concept of the posthuman that is as ambivalent and ambiguous as those described by their predecessors. Their posthuman is both a renewed concept and a renewed body for the human, with the former stemming from the possibility of the latter. In line with feminist theories of the cyborg (Donna Haraway, of course, but also Anne Balsamo 1996 *Technologies of the Gendered Body: Reading Cyborg Women*), feminist and queer theories *tout court* (with, amongst other inspirations, Judith Butler), postmodern philosophical discourses (Derrida's 'différance' and Deleuze and Guattari's 'Body without Organs'), Halberstam and Livingston pass on a version of the posthuman that is deeply rooted within a body of (mostly postmodern) works, which contributes to building a canonical narrative of the origins of the posthuman (see Nayar, Ranisch & Sorgner, amongst others).

Robert Pepperell (1995)

Yet, that same year, Robert Pepperell published *The Post-Human Condition*, which passed on a similarly plural formulation of the posthuman without alluding to this genealogical narrative. The book indeed opens with Pepperell's understanding of 'Post-Human' (which has been unhyphenated from the 2003 edition onwards):

Firstly, it is used to mark the end of that period of social development known as Humanism; in this sense it means 'after Humanism'. Secondly, it is used to refer to the fact that our own view of what constitutes a human being is now undergoing a profound transformation. We no longer think about what it is to be a human in the same way that we used to. Thirdly, the term refers to the general convergence of organisms and technology to the point where they become

indistinguishable. Taken collectively, these could be said to represent a new era in human development — the Post-Human era. (*The Post-Human Condition* i)

This threefold definition of the posthuman widely echoes the plurality of the concept, as emphasised throughout its previous theorisations (except for Sterling): it acknowledges humanism as a framework against which to develop and conveys the ambivalence of the posthuman as both a new concept and a new form of humanity. Even though Pepperell signals that “t]he term is starting to gain wider currency and may be used in a number of different senses,” (*The Posthuman Condition: Consciousness beyond the Brain* n.p.) his definition nonetheless captures and encapsulate the different theoretical directions that the posthuman may take. These directions may have laid varying degrees of emphasis on technology (see Chapter 3), but Pepperell’s posthuman has clearly been triggered by technological progress. In his introduction, Pepperell indeed lists the technologies that may turn out to have a massive “impact [...] on our sense of human existence” (ii): virtual reality, global communication, robotics and prosthetics, neural networks (*i.e.* cybernetics), nanotechnology, genetic manipulation, and artificial life. All of these technologies question generally accepted notions of reality, ontology, artificiality, and, of course, humanity, and Pepperell’s aim is to fully explain how and why.

As mentioned earlier, Pepperell’s genealogy of the posthuman differs from Hassan’s, Haraway’s, Bukatman’s, or Halberstam and Livingston’s, these theorists rather tying the posthuman to postmodernism, poststructuralism, postcolonialism, and feminism. Yet, Pepperell’s point of view is very similar to all of these authors’ (chiefly, the posthuman as the erosion of binary or hierarchical views in favour of relativism and equality), but he seems to get to it by following a different track. Instead of the usual

Foucauldian references, Pepperell mostly alludes to scientists, some of whom are recurrently cited in transhumanist writings as well, such as Marvin Minsky (*The Society of Mind*), Eric Drexler (*Engines of Creation*) and Richard Dawkins (*River Out of Eden*). He even quotes the extropian definitions of 'transhuman', 'transhumanism' and 'posthuman', and states that "the Post-Human condition and the Extropian vision share a common idea of the future of humanity" (175). The notes of optimism in Pepperell's book also echo transhumanist writings: science and technology are presented as the enablers of greater knowledge and understanding of the world, so great that they lead to the final realisation that certainty can never be reached: "Certainty, like belief, only arises in the absence of full information." (174) By providing humans with better information about the world, science and technology doomed them to uncertainty, but Pepperell argues that such uncertainty "is nothing to fear;" is it much better than a "false sense of certainty" (174). The acknowledgement of uncertainty and unpredictability, which characterises "the shift into Post-Humanism", forces us to "realise that our capacity to order and control the universe is ultimately limited, that randomness, ambiguity and disorder are as integral to the cosmic process as their opposites" (171).

This last quotation also indicates that Pepperell uses both "Post-Human" and "Post-Humanism," and even carefully reading his book does not allow one to perceive the difference between the two expressions. 'Post-Human' is most commonly used as an adjective. When it modifies the words "condition," "era," "technologies," "machines," "art" and "sciences," it seems to refer to the "post-biological" state of these entities. Yet, when it modifies "terms," "concept(ion)", "thesis", "(point of) view,"

"implications," "argument," "thought," or "Manifesto," it rather seems to indicate a set of ideas, a philosophy, a discourse. As a name, "Post-Human" seems to characterise, precisely, those who subscribe to such posthuman philosophy.²⁹ Most of today's scholars agree that, in the latter case, the use of 'posthumanism' is preferable to 'posthuman', in that posthumanism is the *discourse* that relates to the posthuman, who is thus the *object* of this discourse (Herbrechter, *Critical Analysis* 36). Yet, throughout his book, Pepperell does not clarify the difference between "Post-Human" and "Post-Humanism." Despite his definition of "Post-Humanism", as "the net effect of these developments [i.e. Post-Human technologies]" which "leads us to ask how [we will] distinguish between the artificial and the real, the real and the simulated, the organic and the mechanical" (xi), the choice of using "Post-humanism" or "Post-human" (especially when the latter modifies words such as "(point of) view," "concept(ion)," "implications," etc.) seems arbitrary. Another clue that may indicate that Pepperell uses "Post-Human" and "Post-Humanism" interchangeably can be found in the index, which only features one entry for both: "posthuman(ism)" (206).

Despite this minor lack of terminological precision, the importance of Pepperell's book to the posthuman scholarship cannot be understated. Even though he does not refer to Hassan's, Haraway's or Bukatman's theories, which were themselves inspired by previous philosophical works, Pepperell – who nonetheless acknowledges the

²⁹ For example: "Post-Humans believe that this view of consciousness being located in the brain cannot any longer be sustained" (3); "As Post-Humans we know that it is a mistake to separate 'the thing that thinks and the thing that is thought about'" (25); "The Post-Human sees no dichotomy between mind and matter. It is only a 'problem' to those who maintain the distinction. Post-Humans deny the existence of any distinctions other than those that arise in the mind" (26); "Algorithms are logical and, as Post-Humans know, logic is an idealisation which has been developed by human imagination" (147); "Post-Humans believe that machines (or what we now know as machines) will acquire mental capacities comparable to those we recognise in humans. In this sense Post-Humans agree, in principle, with the advocates of strong AI, but disagree on how this will happen. Unlike the advocates of strong AI, Post-Humans do not accept that algorithmic models of 'the brain' programmed on digital computers will be able to think" (151).

speculative nature of some of his statements³⁰ – makes the same observations as his predecessors’ but rather out of concrete, scientific theories. Moreover, his book is the first one to provide a definition of the posthuman that explicitly acknowledges the plurality of the concept. Yet, this early but relevant attempt at theorising the posthuman has gone quite unnoticed: until the revised edition of 2003, Pepperell’s book was only discreetly listed in the footnotes or “further readings” section of Neil Badmington’s early 2000s writings (see Chapter 3) as part of the scholarship on posthumanism; after the revised edition – in which “Post-Human” and “Post-Humanism” lost their hyphens and capital letters – the book was cited in 2006, in *Cyberculture, Cyborgs and Science Fiction: Consciousness and the Posthuman* by William S. Haney II and from then on received occasional (sometimes, quite superficial) mentions. In any case, it has not achieved the same widespread recognition as the two following authors’ works.

R.L. Rutsky and Katherine Hayles (1999)

1999 indeed saw the publication of two major contributions to the field: R.L. Rutsky’s *High Technè: Art and Technology from the Machine Aesthetic to the Posthuman* and N. Katherine Hayles’s *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*. Both preserve the understanding of ‘the posthuman’ as an ambivalent being/concept that emerges in discussions about the impact of technology on both the human body and human self-conception. Like Halberstam and Livingston, and Bukatman before them, Rutsky relates the posthuman to the alien, the mutant and, especially, Haraway’s cyborg, which he defines as “an attempt to represent this

³⁰ “I do not claim that anything stated in this book is the truth. I only claim that the ideas which I put forward could be useful” (xi).

mutation of identity [away from the human as a controlling subject], to figure a new, hybrid, and science-fictional positionality from within a techno-cultural world or space" (Rutsky 19). The focus of *High Technè* is, precisely, this techno-cultural mutation induced not by "changes in technology per se" but by changes "in the very conception of technology, of what technology is" (1): the conceptualisation of technology shifts from one in terms of instrumentality and functionality to one in terms of aesthetics (9). Rutsky then notices how this conceptual mutation regarding technology echoes another one, which affects the human and, eventually, leads to the posthuman (19). Contrasting the minimalist aesthetics of technological devices with the complexity of their workings, Rutsky shifts his focus from aesthetics to this complexity, the increase of which deprives humans of its control and understanding and, at the same time, foreshadows the agency of technology itself. It is precisely in this context that Rutsky alludes to the posthuman: "If modernity has defined "the human" by its status as a subject—that is, by its presumed mastery over the world—then the growing acceptance of a notion of autonomous technological agency necessarily brings that status into question" (19).

Whereas Rutsky's book seems to be an attempt at grasping the essence of techno-culture through its artistic representations and theoretical discussions, N. Katherine Hayles provides an orderly account of the three waves of cybernetics and their corresponding literary representations, thus furthering the concept of the posthuman. Indeed, besides the feminist and poststructuralist roots of the posthuman, Hayles also emphasises the contribution of techno-science studies, famously making the claim that "you've already become posthuman [since you have been integrated] into a cybernetic circuit that splices your will, desire, and perception into a distributed

cognitive system in which represented bodies are joined with enacted bodies through mutating and flexible machine interfaces" (*How We Became* xvi). In her prologue, Hayles actually alludes to what happens to humans taking the Turing test, but seems to imply that it actually applies to humans in general. The rest of *How We Became Posthuman* is a plea against a disembodied vision of information and the clear-cut polarisation of the embodied and the virtual: "it is not a question of leaving the body behind but rather of extending embodied awareness in highly specific, local, and material ways that would be impossible without electronic prosthesis" (*How We Became* 291). In other words, the virtual helps the embodied to survive, just like, as Hayles then argues, the posthuman helps the human and "the other life-forms" to survive (*How We Became* 291).

Hayles's first chapter starts with Ihab Hassan's oft-quoted annunciation of posthumanism, which thus situates her work within the posthumanist tradition (i.e. the posthuman not just as a technological body but also a way to question the humanist concept of the human). She acknowledges the variety encapsulated in 'the posthuman', but nonetheless signals that her overview of cybernetics only focuses, quite logically, on the one that emerges from the relationship between the human and the machine, "the cybernetic posthuman" (Hayles, *How We Became* 4). She describes it as follows:

What is the posthuman? Think of it as a point of view characterized by the following assumptions. [...] First, the posthuman view privileges informational pattern over material instantiation, so that embodiment in a biological substrate is seen as an accident of history rather than an inevitability of life. Second, the posthuman view considers consciousness, regarded as the seat of human identity in the Western tradition long before Descartes thought he was a mind thinking, as an epiphenomenon, as an evolutionary upstart trying to claim that it is the whole show when in actuality it is only a minor sideshow. Third, the posthuman view thinks of the body as the original prosthesis we all learn to manipulate, so that extending or replacing the body with other prostheses

becomes a continuation of a process that began before we were born. Fourth, and most important, by these and other means, the posthuman view configures human being so that it can be seamlessly articulated with intelligent machines. In the posthuman, there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals. (*How We Became* 2–3)

Hayles's posthuman therefore implies the deconsecration of embodiment and consciousness as well as the questioning of the body as irreplaceable and impermeable. More importantly, Hayles insists that the posthuman is "a point of view," which emphasises how the posthuman is a specific perspective on the human rather than an actual new kind of human. This falls in line with the very title of the book – *How We Became Posthuman* – as an attempt at conveying the idea that the human has not started to merge with technology *just now*, but has always done so. Surely, the high tech age has changed the human drastically, but the posthuman discusses the effects of these changes less on the human body than on the conception of what it means to be human:

Whether or not interventions have been made on the body, new models of subjectivity emerging from such fields as cognitive science and artificial life imply that even a biologically unaltered *Homo sapiens* counts as posthuman. The defining characteristics involve the construction of subjectivity, not the presence of nonbiological components. (Hayles, *How We Became* 4)

Hayles thus clarifies that the posthuman is not necessarily an actual cyborg, but rather a 'new model of subjectivity' allowed by scientific breakthroughs. Her cybernetic posthuman stems from the cybernetic stance of "understand[ing] human being as a set of informational processes," and she explicitly describes it as the continuation of the criticism of the "liberal humanist subject" expressed in poststructuralist (Foucault), feminist, postcolonial and postmodern (Hassan, Deleuze and Guattari) theories (4). However, Hayles distinguishes such criticism, which could be called "posthumanism,"

from “the more radical idea of the posthuman” (293). ‘Posthuman’ is indeed how she labels a set of theories emerging within cultural studies – Bukatman, Halberstam and Livingston, but also Roseanne Stone Allucquere’s *The War of Desire and Technology at the Close of the Mechanical Age* (1995) and Anne Balsamo’s *Technologies of the Gendered Body: Reading Cyborg Women* (1996) (293) – that seem to share the aforementioned posthumanist background but lay greater emphasis on technology. Let us note, however, that the present account shows that those exclusively using the concept of ‘posthumanism’ (such as Hassan’s) unequivocally tied it to scientific and technological progress as well; from its earliest occurrence, posthumanism has therefore been presented as the new perspective on the human that was prompted by such progress. Surely some theories identified this impact more explicitly, or described it more extensively, than others, but the impact has always been at least acknowledged, even in Haraway’s or Halberstam and Livingston’s most metaphoric or conceptual uses of the term.

Most of the scholarship, up to now, has identified *How We Became Posthuman* as the most significant contribution to the construction of the posthuman as a viable, challenging and ambitious reconceptualisation of what it means to be human.³¹ Before then, discussions on the posthuman had seemed to go in two main directions – an optimistic one called ‘transhumanism’ and a critical one called ‘posthumanism’ – which underwent different developmental processes. As extropians (who would later become transhumanists) were aware of their status as representatives of an intellectual movement, the identity of ‘transhumanism’ has been settled from early on and the

³¹ More on this in Chapter 3.

movement has been able to build itself upon shared notions. On the contrary, posthumanism, as shown in this chapter, emerged out of separate individuals, who did not self-consciously form a coherent group (let alone a movement). It could almost be seen as the outcome of a multiple discovery process,³² i.e. different people having the same idea at the same time, as if prompted less by a common set of theories than by the general (postmodern) *Zeitgeist*. In this case, the post-war scientific and technological revolution may have provided new information on the human that challenged the way the latter had been perceived and conceptualised so far. However, with Hayles, the posthuman became the object of a theory that finally incorporated its plural, complex and ambiguous meanings, origins and implications – a theory both subtle and stable enough to become the basis of many further studies. Consequently, Hayles’s influence on the trajectory of the posthuman as more than just a science-fiction character has been considerable. For example, her explicit distinction between ‘posthumanism’ and the ‘posthuman’ based on their degree of emphasis on technology, along with her favouring ‘posthuman’, may have contributed to the popularisation of the latter term.³³

Paradoxically, with that comment (which only appeared in an endnote and may have gone unnoticed by many), Hayles also heralded the crux of most of the discordance within the scholarship. On the one hand, the lack of consensus about the use of ‘posthumanism’ and ‘posthuman’ has persisted: some have privileged or

³² “Multiple” or “ simultaneous discovery” is a science history thesis, first mapped out in 1922 by William Ogburn and Dorothy Thomas, according to which an idea, an invention, or a discovery may not always proceed from the workings of a single, particularly inspired or genius mind, but can instead arise in the minds of different, unrelated people, probably as the result of a particular cultural climate. One of the most famous ‘multiples’ is the simultaneous invention of the telephone by Edison and Bell (Gladwell n.p.).

³³ See Appendix 2.

encouraged the use of only one of these two terms, others have tolerated their co-existence while clearly differentiating them in meaning, and others have used both interchangeably, just like most of the authors that have been presented so far, except for Hayles. On the other hand, despite the fact that posthumanism has been the result of a philosophical approach of the relationship between the human and technology at almost every step of its development, many works downplay or sometimes even fail to bring out either the philosophical or the technological aspect of that reflection. In other words, whereas posthumanist writings have historically been somewhere between *post-humanism* and *posthuman-ism*, part of the scholarship tends to be closer to either one of these two radical positions. This turn of event shall be the topic of the following chapter.

Chapter 3

The Posthuman in the Twenty-First Century

In this history of the posthuman through that of its two main discourses, I wanted to emphasise how transhumanism and posthumanism were prompted by the new possibilities offered by the technological progress of the 1980s and 1990s, marked by the “information and telecommunications revolution” (Šmihula 51) and the subsequent transition to the digital age. The intensification of technological progress has gone hand in hand with the popularity of such discourses about the meaning of being human. In academia, posthumanism generated more and more interest, leading to the creation of networks of scholars.¹ Transhumanism, for its part, was progressively abandoned by academic circles but persisted, if not thrived, in mainstream publications with wider audience. It has indeed not been unusual to see transhumanists (or their opponents) in

¹ These groups are organised around recurring events such as the Beyond Humanism Network, research projects, such as *Posthuman Aesthetics* at Aarhus University or *The Posthumanities Hub* at Linköping University, or even institutes, such as the Posthumanism Research Institute at Brock University. There are also state initiatives such as The Posthumanities Network: The Next Generation, an international network funded by the Swedish Research Council.

magazines, newspapers and mainstream conferences (while this kind of publications features posthumanists much less commonly). Moreover, for reasons set out at the end of the previous chapter, the meaning of 'transhumanism' as well as the transhumanist use of 'posthuman' has remained intact since the early 1990s. On the contrary, self-proclaiming posthumanist theories or theories using this notion feature an immense variety of significations for 'posthumanism' and 'posthuman', depending on the background of its user, the topic or the type of publication, and the target audience. This part provides an overview of these different uses by placing them on a spectrum of writings whose notion of 'the posthuman' ranges from a purely philosophical concept (*post-humanism*) to purely material being (*posthuman-ism*).² But right before that, let us have a closer look at the first publication of the twenty-first century, which attests to an important change regarding posthumanism.

Neil Badmington's Reader, or the Illusion of Consensus (2000)

The length of the formation and definition process of posthumanism, along with the current confusion still present in the scholarship, is something that this study has highlighted repeatedly. However, as early as 2000, Neil Badmington implicitly presented it as a coherent, established concept by publishing an anthology – a “reader” – of what he considered to be its founding texts.

In *Posthumanism*, which is part of MacMillan's *Readers in Cultural Criticism* collection, Neil Badmington outlines a twofold genealogy: besides the selected texts, which contribute to emphasising the variety of ideas and theories that can be

² This hyphenation-based terminology is borrowed from Stefan Herbrechter, who distinguished between a posthumanism « predominantly driven by technology » (*Critical Analysis* 17) – posthuman-ism – and one descending from the questioning of humanism occurring in philosophy and cultural studies – post-humanism.

assimilated to posthumanism, his introduction presents a set of even earlier notions that paved the way for such questioning of humanism: Marx and Engels's materialism, Freud's unconscious, Lacan's undermining of subjectivity, and Althusser and Foucault's *Death of Man*. However, Badmington sees another contributing factor in posthumanism that has nothing to do with these philosophical concepts: popular culture. According to him, even though popular science fiction presents humans in a crisis that they usually manage to solve – thus reaffirming humanist ideals of human sovereignty – such science fiction narratives may also be seen as signs of anxiety prompted by the end of the humanist culture, or, therefore, an attempt at reaffirming or safeguarding humanism (Badmington, *Posthumanism* 8).

As a *Reader*, Badmington's book allows for several assumptions about the state of posthumanism in 2000. The MacMillan collection of which it is part is introduced as such:

Readers in Cultural Criticism demonstrates a variety of perspectives about current cultural issues. Each anthology contains a summary of the topics and debates in question and a range of essays which become progressively more sophisticated and challenging for the reader. With lively introductions, glossaries, concise notes and suggestions for further reading, these books will provide accessible and thought-provoking guides to current cultural issues.³

Posthumanism is therefore a "current cultural issue," which implies that it is fashionable, interdisciplinary, and plural enough to lead to a "variety of perspectives" but not too plural so that it can be contained and explained within its 11-page "lively introduction." Clearly the *Reader's* aim is to simplify a topic in order to make it "accessible" to an audience of novices, probably students. In the process, posthumanism therefore needs to be presented as a coherent, established tradition. Such a narrative contributes to the

³ <https://www.macmillanihe.com/series/readers-in-cultural-criticism/14519/page/privacy-policy/>

illusion of posthumanism as being a stable concept, with clear roots and branches. Nothing is less certain, however, as the present study has been demonstrating.

The publication of this *Reader* nonetheless marks a turning point in the scholarship of posthumanism, as it attests to its solidification as a concept. Badmington's *Reader* is indeed representative of the epistemological shift taking place around 2000: while twentieth-century writings have produced conceptions of posthumanism that were either original or developing from the limited number of these original (but sometimes uncertain) theoretical propositions, twenty-first century works tend to build upon the legacy of those writings and treat posthumanism more as an established tradition and less as the set of scattered propositions it used to be. From that moment on, theorisations of posthumanism or the posthuman have multiplied and, of course, competed increasingly; and the most widely shared notions of posthumanism have owed their success less to their relevance or accuracy than to the influence of their creators.

1. Post-*Humanism*

In his introductory essay, Badmington does not spell out the meaning of 'posthumanism' (and does not use 'posthuman' at all); he rather describes it, implicitly, as the end of the Cartesian implications of humanism (rationality, subject sovereignty, universality and the body/mind divide). However, although he claims that posthumanism is "about the millennial fears of the future of humanity" (2), technological progress is conspicuously absent from Badmington's understanding of posthumanism. Even when he alludes to science fiction, the motif that he chooses as an example – alien

invasion – seems to have been selected precisely for being a metaphorical threat to human sovereignty. At the same time, technology’s potential to impact human identity and self-understanding – which is usually rather represented by motifs such as artificial intelligence, cyborgs, genetic engineering or cloning, amongst others – seems to have been overlooked. The content of the *Reader* conveys a similar conclusion, as only few of the cited authors – some of whom have already been discussed in the previous part, such as Halberstam, Haraway and Bukatman – argue for overcoming humanism necessarily through technological progress.

Such kind of writings on posthumanism, where discourse on technology is at best secondary, became quite popular in the early 2000s. They mainly rest upon an interpretation of Haraway’s “Manifesto for Cyborgs” that focuses on the destruction of dichotomies and the rehabilitation of non-human subjectivity but silences the role of technology in these processes. The year 2003 saw the publication of three of these works: Karen Barad’s article “Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter” in which she “propose[s] a specifically posthumanist notion of performativity – one that incorporates important material and discursive, social and scientific, human and nonhuman, and natural and cultural factors” that is heavily influenced by Haraway’s work (Barad 808); Cary Wolfe’s *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory*, which emphasises the antispecist implications of Haraway’s posthumanism (Wolfe, *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory* 1); and Floyd Merrel’s *Sensing Corporeally: Toward a Posthuman Understanding*, which similarly “swim[s] against the current of linear, mechanical, quantitative, dualistic, Boolean logical and rational

thinking" (Merrell vii), yet surprisingly fails to mention any part of the tradition that was outlined in the previous chapter. These works have been so influential that they conveyed the notion of posthumanism relatively deprived of technological considerations, which Cudworth & Hobden would later call "philosophical posthumanism" (18). Wolfe's book, in particular, was the basis of several writings on posthumanism, especially those using the concept from an ecological perspective, laying great emphasis on the subjectivity of non-human life and the environment;⁴ but more widely, this strand of posthumanist writings – which includes, amongst others, Cudworth & Hobden's *Posthuman International Relations* (2011), Stephan Herbrechter's *Posthumanist Shakespeare* (2012) and Jennifer Koosed's *Bible and Posthumanism* (2014) – differentiates from the others by maintaining a focus on the overcoming of humanism, more than anything else.

However prevalent this more philosophical strand of posthumanism may have been in the early 2000s, it remained a minor part of posthumanism, especially from the moment Wolfe himself, in his 2010 *What Is Posthumanism?*, switched to an interpretation of posthumanism that was much more inclusive of the material technological aspect of the posthuman, so much so that it even diverged from the *traditional* line of posthumanism, which has been carried on in the following group of writings.

⁴ See the collection of essays *Animal Subjects: An Ethical Reader in a Posthuman World* (2008) edited by Jodey Castricano.

2. Aligning with Forerunners

What I call “the traditional line of posthumanism” (quite clumsily so, as there has not been a coherent, self-acknowledging group of “posthumanists”) refers to the writings that participated in the development of the posthuman and/or posthumanism in the late twentieth century and were described throughout Chapter 2. These writings are forerunners to the extent that they have established a concept of the posthuman that has been deep enough to pave the way for the emergence of an entire new field of studies. However, in most narratives of how posthumanism and the posthuman came about, only part of these forerunners were acknowledged as such. Beyond describing similar genealogies – anti-humanism, feminism, technoscience studies and critical race studies, as has been aptly described by Nayar (see Chapter 2) – these narratives usually identify, in the developmental stage of posthumanism, the same two protagonists: Haraway and Hayles. This might have been the result of both intellectual and pragmatic factors.

Haraway was an early and serious theorist: her 1985 *Manifesto for Cyborgs* emphasised the impact of technology on the way humans conceptualise themselves. In that way, she went further than Hassan and Sterling, who proposed a rather underexploited concept of posthumanism, theoretically speaking. Her cyborg has contributed to our current understanding of the posthuman to an undeniably large extent. However, Haraway’s unique style left a lot of room for interpretation, which therefore hindered progress from her cyborg to a unified notion of ‘the posthuman’; the field was in need of a just as ambitious but more explicit theorisation. Even though the concept took shape progressively, with each publication refining an aspect of it that had

been neglected by the previous ones, most scholars agree on the dominant influence of Hayles's *How We Became Posthuman*, sometimes with explicit praise.⁵ Nowadays, the posthuman that they mention is, implicitly, Hayles's posthuman: a different "point of view" on the human, emerging from "new models of subjectivity", which themselves are the result of cybernetic theories that draw an analogy between the human body and the machine.

These writings chiefly inspired by Haraway and Hayles constitute a large portion of the scholarship on posthumanism and/or the posthuman. Book-length contributions to it abound. Catherine Waldby's *The Visible Human Project: Informatic Bodies and Posthuman Medicine* (2000) shows how the Visible Human Project and the Human Genome Project might seem to reinforce, yet actually undermine, the "idea of the human as a stable, knowable 'species', an organic integrity whose limits can be positively specified" (n.p.). Chris Hables Gray's *Cyborg Citizen* (2001) perfectly captures the plurality of the posthuman as it is presented as "both a social construction of what it means to be human in the present as well as a technological construction of a new type of techno-bio body in the near future through cyborgization" (15). Elaine L. Graham's 2002 *Representations of the Posthuman* starts off from the similarly nuanced premises that "new technologies have complicated the question of what it means to be human in a number of ways" and goes on to exemplify such an assessment in terms of "technologization of nature," "blurring of species boundaries," "technologization of human bodies and minds," "creation of new personal and social worlds," and "tools, bodies and environments" (2-6). Similarly, in her 2002 study of fetishism, Amanda

⁵ Chris Hables Gray called her a "brilliant literary theorist" (n.p.) and Arthur Kroker described her theorisation as "eloquent" (5).

Fernbach notes that “fantasies of transformation [...] signal an increased cultural fascination with the hybrid technologized body of the future and indicate the physical and conceptual end of the natural body in a world of postmodernism” (n.p.). Neil Badmington’s 2004 *Alien Chic* emphasises both Haraway (Badmington, *Alien Chic: Posthumanism and the Other Within* 87–88) and Hayles (Badmington, *Alien Chic: Posthumanism and the Other Within* 110–11) as the most influential input into posthumanism. Kim Toffoletti’s 2007 *Cyborgs and Barbie Dolls*, which cites Haraway and Braidotti’s theories, investigates “how useful [pop culture representations of the posthuman] might be for thinking about the subject in an age of biotechnologies, information networks and digital worlds” (1). Similarly, in *Cyborg Selves: A Theological Anthropology of the Posthuman* (2012), Jeanine Thweatt-Bates states that “the posthuman is not any one particular thing; it is an act of projection, of speculation about who we are as human beings, and who we might become” (1). All of these works convey an interpretation of posthumanism and/or the posthuman where the plurality of the posthuman as both a philosophical concept and a technological being is fully acknowledged and where the emphasis lies on how the questioning of humanist premises is stimulated by technological progress. In a Harawayan fashion, this questioning most often applies to ontological boundaries (according to the oft-quoted passage: “Late-twentieth-century machines have made thoroughly ambiguous the difference between natural and artificial, mind and body, self-developing and externally designed, and many other distinctions that used to apply to organisms and machines” (Haraway, ‘Manifesto’ 11)).

In these works, posthumanism usually serves as a framework for the analysis of a specific object or issue (see Chapter 5). However, amongst the most recent publications in this line of works, some are entirely devoted to posthumanism and the posthuman as concepts or theories and therefore venture a more reflexive point of view. Nayar's 2014 genealogy and cartography of posthumanism has already been mentioned and praised, but one should also signal the similar efforts made by Rosi Braidotti in her oft-quoted 2013 *The Posthuman*, and, especially, by Francesca Ferrando in several writings of the same period.

Contrary to some other authors who take the posthuman as an opportunity to develop a new perspective on their usual topics, Ferrando has so far devoted her entire academic career to the concept. Her PhD dissertation, entitled "The Posthuman: Philosophical Posthumanism and its Others" (submitted in 2013), several of her articles – "Towards a Posthumanist Methodology: A Statement" in a 2012 issue of the Dutch literary studies journal *Frame* entitled "Narrating posthumanism"; "Transhumanism, Antihumanism, Metahumanism, and New Materialisms: Differences and Relations" in the 2013 Fall issue of *Existenz* (an American journal originally devoted to Karl Jaspers); and "Posthumanism," in the 2014 issue of *Tidsskrift for kjønnsforskning* (a Norwegian gender studies journal) – and her 2016 book, *Il Postumanesimo filosofico e le sue Alterità* (and its forthcoming English version *Philosophical Posthumanism*), convey Ferrando's overriding ambition to provide accurate definitions, genealogies and typologies for 'the posthuman' and the variety of related terms (a variety that she precisely tries to put in order). In this respect, her input to the scholarship has been

valuable, as she offers a synthesis of the various ramifications of the topics and seeks to locate and dissolve recurring confusions.⁶

In 2012, she publishes “Toward a Posthumanist Methodology”, which conveys an interpretation of posthumanism that generally follows the line of Haraway and Hayles; *i.e.* posthumanism as a post-anthropocentrism prompted by the challenge that new technologies pose to humanist epistemology (see Chapter 2). Early on, this article explicitly addresses the terminological issue:

The notions of ‘posthuman’ and ‘posthumanist’ are interrelated, but not synonyms. ‘Posthuman’ applies to a broad field of studies, including advanced robotics, nanotechnology and bioethics. ‘Posthumanist’ mainly refers to a shift in the humanistic paradigm and its anthropocentric *Weltanschauung*. A posthuman text shall imply a posthumanist perspective, and *vice versa*.” (‘Methodology’ 10)

This attempt at clarification describes the difference between the two concepts less as one in meaning than one in scope: ‘posthumanist’, in a narrow sense, would correspond to a specific *worldview* and would thus be limited to the Humanities, precisely unlike ‘posthuman’, which would be applicable to all fields, including the scientific ones. However, such a case of terminological distinction solely based upon the field of use, coupled with the vagueness (or haste) of expressions such as “posthuman text” or “and *vice versa*”, falls short of the reader’s expectations. Unfortunately, the rest of the article fails to provide further elements to distinguish these terms more sharply and, even worse, uses them in ways that seem inconsistent and arbitrary. Indeed, in contexts that,

⁶ Yet, many scholars seem to miss out on her work, in favour of more established, more famous, or more local theorists of the posthuman. As an indicator, one could consider how her *Google Scholar* citation rate (435) is no match for certain more partial theories, such as Wolfe’s *Animal Rites* (940) or Badmington’s works (792) (even though the true champions in that matter remain Hayles’ *How We Became Posthuman* (7556) and Haraway’s “Manifesto for Cyborgs” (4142)). Furthermore, as such a discrepancy could be related to the relatively early stage of her career, one could also consider how she remains remarkably absent from most recent works on the concept.

according to her own definition, would clearly require the qualifier 'posthumanism', the author uses 'posthuman': "posthuman paradigm shift" (9), "posthuman approach" (9, 13, 15, 16), "posthuman epistemology" (10), "the posthuman refusal of the ontological primacy of human existence" (10), "the posthuman extensive inclusion of perspectives" or else "the posthuman perspectivist approach" (12). Moreover, some parts of the article make an adjacent use of both terms without any apparent reason for the use of one over the other:

In this statement, I will present Posthumanism, the reasons why posthuman theorists should reflect on methodology, and which methodological risks they may encounter, with a special focus on essentialism. I will also address what it entails to adopt a posthumanist methodology, and how a posthuman approach marks ground for a radical reflection in the field of applied philosophy and normative ethics. ('Methodology' 9)

In this extract, "Posthumanism" – with a capital letter – refers to a school of thought, to which the subsequent "theorists" can be reasonably expected to belong; however, these "theorists" receive the qualifier "posthuman", not "posthumanist." At the same time, the second sentence contains the terms "posthumanist methodology" and "posthuman approach", whereas 'posthumanist' would suit both "methodology" and "approach" best, according to Ferrando's own standard. The following passage epitomises the confusion between those terms:

The posthuman refusal of the ontological primacy of human existence, invites a review of practices such as uncritical omnivorism, overharvesting, and the unrestricted consumption of nonrenewable resources. Posthumanism reflects on the terms of human sustainability, but it does not dismiss the significance of human survival. ('Methodology' 11)

As stated above, the use of "posthuman" for "refusal of the ontological primacy of human existence" is inconsistent because the latter phrase precisely points to the stakes of *posthumanism*, especially in this context, which focuses on the negative impact of the

humanist sense of human supremacy on wildlife and the environment and makes no mention of technology. Furthermore, the second sentence – which, in the absence of transition, logically amounts to an addition to or an explanation of the first one – starts with “Posthumanism”, which implies that what is described in the first sentence equates posthumanism.

Nevertheless, given that this was Ferrando’s first article on the matter, this confusion may be understandable and remains of minor importance compared to the insights that are provided into this complex and, at that point, quite un-theorised field. Indeed, one of Ferrando’s main achievements is to recognise the distinction between the two discourses that are posthumanism and transhumanism and thereby the ambivalence of the word ‘posthuman’, whose meaning changes according to the discourse in which it appears: “Note that Transhumanist theorists use the term “posthuman” in a specific exception, referring to the condition which might follow the transhuman phase” (‘Methodology’ 10). This comment unequivocally alienates transhumanism from posthumanism – and even visually so, as it appears as a side note. Yet, Ferrando’s following work is not that categorical: whereas the previous article presents the posthumanist posthuman as strictly distinct from the transhumanist posthuman, her following articles – “Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms: Differences and Relations” (2013) and “Posthumanism” (2014) – describe ‘posthuman’ as

an umbrella term to include (philosophical, cultural, and critical) posthumanism, transhumanism (in its variants as extropianism, liberal and democratic transhumanism, amongst other currents), new materialisms (a specific feminist development within the posthumanist frame), and the heterogeneous landscapes of antihumanism, posthumanities, and metahumanities. (‘Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms’ 26)

Subtly, what used to be two different posthumans becomes one posthuman on which each discourse has a specific “take” (*Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms*’ 27). Simultaneously, transhumanism leaves the side notes to get treated on an equal footing with posthumanism, a movement that intensifies as Ferrando keeps writing on the topic,⁷ contributes to volumes devoted to transhumanism,⁸ and weaves links with transhumanist milieus by including presentations on transhumanism alongside others on posthumanism or by having transhumanists as keynote speakers in her events.⁹ Ferrando’s growing interest in transhumanism is typical of the shift made by several scholars and that has impacted the field entirely.

3. Including Transhumanism

This group of scholars attaches more importance to the technological aspect of the posthuman, to the extent that technology’s potential to question the implications of humanism is but one of the many perspectives on the posthuman. They indeed interpret the posthuman as a figure devoid of discourse. Hayles’s, Braidotti’s or early Ferrando’s posthuman figure/discourse gives more and more ground to this neutral figure that can be used by various discourses, some of them with opposite premises, views and goals – such as posthumanist’s and transhumanist’s respectively critical and lenient attitude towards humanism.

⁷ For example, “Post- and Trans-Humanism” In *Posthuman Glossary*, edited by Rosi Braidotti and Hlavajova, M. (Bloomsbury Academic, 2017, pp. 266-8).

⁸For example, “The Body” in *Post- and Transhumanism: An Introduction*, edited by Robert Ranisch and Stefan Lorenz Sorgner (Peter Lang, 2014, pp. 213-226); “Are We Becoming Gods? Transhumanism, Posthumanism, Antihumanism and the Divine” in *Religious Transhumanism and Its Critics*, edited by Green, B., Gouw, A., Peters, T. (Lexington Books, forthcoming).

⁹ For example, keynotes at her 2016 Global Symposium were Natasha Vita-More and James Hughes, and through the Beyond Humanism Network, she has recently collaborated with the Catholic University of Lille’s Ethics and Transhumanism research group.

The posthuman thus becomes the cornerstone that allows scholars to deal with a greater variety of perspectives, including the posthumanist and transhumanist ones, giving rise to “Posthuman Studies”¹⁰:

The concept “posthuman studies” might be even more promising to refer to a discipline which deals with post- and transhumanist questions, as the concept “posthuman” is employed in both traditions, even though the meaning of this term is employed in different ways. Thereby, the word “posthuman” serves in an integrative way. By being concerned with its *[sic]* meaning, members of both movements step outside of the limited borders of their own discourses and get acquainted with different perspectives. (Ranisch and Sorgner 14–15)

To account for their concept of Posthuman Studies, Ranisch and Sorgner seem to argue that the confusion created by the ambivalence of “posthuman” might be fruitful, as it would lead scholars of each field to learn about the other field. Let us note that advocating a concept such as “Posthuman Studies” also leads to combining posthumanist and transhumanist discourses, thereby mobilising the scholars of the two fields all at once, which strategically increases the visibility and popularity of the entire field. Its main architect is Stefan Lorenz Sorgner, whose ambition to appeal to both traditions – with the creation of the *Beyond Humanism* network and annual conferences, the *Journal of Posthuman Studies*, the Peter Lang book series *Beyond Humanism: Trans- and Posthumanism* and the forthcoming Schwabe book series *Posthuman Studies* as well as countless articles joining both perspectives – improves the popularity of his collective and personal endeavours.

Bringing in more and more scholars and artists into one same network might sound opportunistic, but Sorgner’s projects seem to nonetheless have a positive impact on the field. Posthumanism and transhumanism indeed have great interests in feeding

¹⁰ Note that Ferrando mentioned Posthuman Studies as well in her 2012 article (9, 13, 14), but her understanding of the concept was closely tied to posthumanism.

off each other. On the one hand, the transhumanist focus on technology may have contributed to the increasing importance of technology in posthumanist writings, which has ensured the relevance of posthumanism altogether. On the other hand, the critical premise of posthumanism and its advocacy of non-dominating perspectives may have contributed to the rise of a more critical transhumanism, no longer concerned with human enhancement exclusively, but also with its social, political and environmental implications.

Since the scholars collaborating with the *Beyond Humanism* network are supposedly united behind this notion of the posthuman as a mediating figure between several discourses, they normally share the understanding of transhumanism and posthumanism that has been outlined in Part 1. However, this network has substantial competition: another group of scholars who initially clustered around a series of academic events and publications, recently became an actual network under the name *Critical Posthumanism* with, at its head, Manuela Rossini, Stefan Herbrechter and Ivan Callus. The particularity of this network is that most of its members share an interpretation – or rather, a taxonomy – of posthumanism (and, consequently, a treatment of transhumanism) that differs from the one that has been outlined so far. Posthumanism is indeed used as a general term that encompasses two main lines of discourses: on the one hand, *popular, technological, apocalyptic or complacent posthumanism* and, on the other, *critical, theoretical, philosophical or cultural posthumanism*.

Ironically, it is Neil Badmington, whose work is firmly grounded in the Haraway-Hayles line, who is the one to introduce such taxonomy. In “Theorizing Posthumanism”

(published in the 2003 special issue of *Cultural Critique* on posthumanism), and later in *Alien Chic* (2004), he mentions that “N. Katherine Hayles has, of course, done much to reveal the dangers of what might be called apocalyptic or complacent posthumanism”¹¹ (Badmington, ‘Theorizing Posthumanism’ 11) which is “the counterpart, the terrible twin, to what Jill Didur usefully names [...] critical posthumanism” (Badmington, ‘Theorizing Posthumanism’ 23). Such “apocalyptic or complacent posthumanism” refers to Hans Moravec’s mind-uploading theory, which is a form of transhumanism, though Badmington does not make this connection. This taxonomy is reused by Bart Simon who, in an article of the same issue, renames it “a popular and a more critical posthumanism”, referring to transhumanists Max More, Hans Moravec and Ray Kurzweil (Simon 2) as proponents of and Francis Fukuyama (*Our Posthuman Future*) as an opponent of popular posthumanism. Similarly, Sheryl Vint characterises posthumanism as having several “versions” (10) or “models” (11): on the one hand, the “post-body versions” (10), such as extropianism, transhumanism or liberal humanist views on the self, which “[posit] a specific sort of embodied existence – which historically has meant male, white, and propertied – as the ‘essence’ of all human identity” (11); on the other, “embodied”, “ethical” or “critical” posthumanism, which is firmly grounded in Haraway’s, and even more so, Hayles’s theories (Vint 182–83). Therefore, Vint’s description of this latter posthumanism sounds quite familiar:

an embodied posthumanism [...] remains focused on a subjectivity embedded in material reality and that seeks to be responsible for the social consequences of the worlds it creates. This posthumanism will struggle to be post to the emphasis on the universal individual as the centre of meaning and worth. (182)

¹¹ In *Writing Posthumanism, Posthuman Writing*, Sidney Dobrin mistakenly attributes the idea of “complacent posthumanism” to Hayles herself, probably due to a misreading of Badmington (4).

In my view, ethical posthumanism needs to move away from this subject of humanness; the 'post' of post-humanism should not be a post-biological embodiment. The 'post' of posthumanism should be a 'post' to the heritage of humanism, which makes humans the only subjects in a world of objects. An ethical posthumanism must work against this boundary of the human from the non-human, refusing this final ground of abjection. An ethical posthumanism which acknowledges that self is materially connected to the rest of the world, in affinity with its other subjects, is an accountable posthumanism. It is a posthumanism that can embrace multiplicity and partial perspectives, a posthumanism that is not threatened by its others. (189)

Then, in the 2010 book *What is Posthumanism?*, Cary Wolfe – who, just like Badmington and Vint, follows in the Haraway-Hayles tradition – acknowledges the confusion surrounding 'posthumanism', yet decides that it comprises transhumanism, as "the best-known inheritor of the "cyborg" strand of posthumanism" (Wolfe, *What Is Posthumanism?* xiii). This is a puzzling claim since Haraway's cyborg (which is the one he refers to) is diametrically opposed to the "intensification of humanism" that transhumanism is, in Wolfe's own words (*What Is Posthumanism?* xv). However different their terminologies may be, these authors all identify the same two great types of posthumanism and explicitly present transhumanism as one of them, thus conveying a vision of posthumanism that corresponds to all discourses about the posthuman; a *posthuman-ism* that is not always *post-humanist*.

The taxonomy, which is originally based on the degree of criticism (complacent vs. critical), is therefore also structured around the distinction between discourses (the different types of posthumanism) and their object (the posthuman). As early as 2006, Castree and Nash had already identified the two uses of posthumanism – "to describe a historical condition and to signal a theoretical perspective" (501) – but had not included transhumanism as a possible "theoretical perspective", and neither had they distinguished between 'popular' and 'critical posthumanism'. Yet, this was precisely

Stefan Herbrechter's reasoning regarding terminology when, in *Posthumanism: A Critical Analysis* (published in 2009 in German and in 2013 in English), he provides the following definition of 'posthumanism': "namely the entire discourse, critical or less critical, enthusiastic or sensationalist, ironic or alarmed, which embraces the 'posthuman' as a possibility and thus brings it to life, so to speak, as a discursive object: *posthuman-ism*" (*Critical Analysis* 16). He also acknowledges that 'posthumanism' can denote another category of discourse that is not necessarily tied to the posthuman but instead focuses on the questioning of humanism: "post-humanism" (*Critical Analysis* 16).¹² Nayar's 2014 *Posthumanism* followed the same line of inquiry by signalling that posthumanism can be an "ontological condition but also a vision of the human" (Nayar 6) and identifying two strands of posthumanism: "pop posthumanism" which "is usually referred to as 'transhumanism' (6) and "critical posthumanism", or "posthumanism with a philosophical approach" (8).

Evidently, the popular vs. critical polarisation set out jointly by Didur and Badmington in 2003 has persisted and thrived, to the extent that it gave its name to the *Critical Posthumanism* network, whose members hardly ever deviate from this official taxonomy. However, many of them seem to have found the *discourse/object* divide more fruitful, and emphasise more the difference between 'posthuman' and 'posthumanism' than the one between 'popular' and 'critical' posthumanisms. *The Cambridge Companion to Literature and the Posthuman*, edited in 2017 by two heads

¹² Note that he makes one more distinction, this time between "post-humanism" and "post-humanism": "To 'position' oneself 'after' [the humanist] tradition – post-humanism – means (in strict analogy with postmodernism and the idea of postmodernity) to embrace a conscious ambiguity that lies in two possible forms of accentuation: the undeniable experience that a certain humanism has reached its end (*post-humanism*); and the certainty that this humanism because of its own plurality and slipperiness cannot just be classified without remainders and repressions but needs to be 'worked through' in a critical deconstructive sense (hence, *post-humanism*)." (16)

of the network Bruce Clarke and Manuela Rossini and featuring articles by its members, presents the posthuman as an “imagery” – i.e. “images and figurations in literary and cultural productions, in various genres and periods, of states that lie before, beyond or after the human, or into which the human blurs when viewed in its essential hybridity” (Clarke and Rossini xiii–xiv) – and “posthumanism philosophies” or “critical posthumanism” as “reflecting and critical discourses”. Revolving around a similar *figure vs. discourse* divide, the *Companion* does not distinguish between popular and critical posthumanisms; or at least not explicitly. One indeed notices that the definition of ‘the posthuman’ leaves room for both popular and critical posthumanism to exploit the term, as “transhumanist visions” are even mentioned (xiv), but that “posthumanist philosophies” are, by default, critical. Accordingly, the expression ‘critical posthumanism’ is of no use; yet, it is employed, though parsimoniously and only to emphasise this critical component.¹³ There seems to be no point in keeping such a redundant denomination for the theories and for the network, other than the need to distance themselves from those conveying a supposedly more popular, more complacent version of posthumanism, one that includes transhumanism.¹⁴

These authors thus have a paradoxical attitude towards transhumanism: they include it as a type of posthumanism, only to reject it because it is not the type of

¹³ ‘Critical’ is used with ‘posthumanism’ and its derivatives once in the book summary (i), once in Clarke and Rossini’s introduction (xiv) and once in Herbrechter’s chapter on the Postmodern (65).

¹⁴ Note that some isolated scholars recount different genealogies or establish other taxonomies. It is impossible to list them all, but one of them stands out as particularly original: in their introduction to *The Posthuman Condition: Ethics, Aesthetics and Politics of Biotechnological Challenges* (2012), Kasper Lippert-Rasmussen, Mads Rosendahl Thomsen and Jacob Wamberg consider posthumanism as the “less radical forerunner” of the posthuman, which is “a move from posthumanism’s agenda, which was purely conceptual, to a mixed field of theory and practice where interventions of biotechnology supposedly will change the human species to something clearly separate from the human being we know” (Lippert-Rasmussen et al. 7). In this context, they even refer to the “transhuman” which signifies individuals that bear strong non-human traits, as for example cyborgs or chimeras, which is unpopular in the transhumanist tradition and simply absent from the posthumanist one.

posthumanism that they wish to deal with. This is quite incongruous, as transhumanism has produced reflexive accounts much earlier than posthumanism, and transhumanists have not claimed any ties with the posthumanist tradition. Quite the contrary, they have only used the word 'posthumanist' in a specific, unrelated understanding that referred to posthumanism in no way: while Max More simply sees it as the next stage in our species' evolution, after the transhumanist phase, Nick Bostrom actually laments Hayles's and other scholars's picking up of the term, supposedly corrupting its transhumanist original meaning (*Transhumanist FAQ*, n.p.).¹⁵ Why, therefore, have posthumanist thinkers, who clearly descend from the Harawayan and Haylesian line of posthumanism, decided to incorporate transhumanism into posthumanism, against transhumanists' own wishes? There might be an element of strategy – on the one hand, it establishes the symbolic dominance of posthumanism; on the other hand, posthumanism thus takes advantage of the popularity of transhumanism – but I believe it is due, above all, to the *discourse vs. object* conceptualisation, which eventually brings all discourses together.

The *discourse vs. object* way to organise the field puts the figurations of 'the posthuman' at the centre.¹⁶ These figurations are to be described, interpreted, or even used for certain purposes – these actions constitute the variety of discourses – but they are, by themselves, blank, neutral. They just *are*. This justifies bringing in this variety of

¹⁵ See Chapter 1 on the sixth issue of More's *Extropy* and on Bostrom's "Transhumanist FAQ".

¹⁶ See, for instance, Mads Rodendahl Thomsen's *The New Human in Literature*, which defines the posthuman in a way that is close to what can be found in transhumanist and techno-phobic discourses: "The term 'posthuman' designates a species different from humans, but evolved from them. This should not be confused with posthumanism, which is a broader idea regarding how humans value themselves and their environment (Badmington 2010)" (39). The author is aware of the posthumanist tradition but brushes it aside and explicitly subscribes to an all-technological definition of the posthuman. Confusingly though, as he situates himself in line with the more conservative Habermas and Fukuyama, he also claims to be in line with Haraway's, Hayles' and Graham's theories.

discourses. In this endeavour, the project behind the *Beyond Humanism* network may be more relevant because it does not reject transhumanism as a uniformly complacent, ideological, ultraliberal or utilitarian movement. As explained earlier, these scholars invite transhumanists to the table, to listen to and discuss their perspectives, and share their own. Focusing on the posthuman figure actually tears down the borders between its various discourses; it thereby allows them to feed off one another, to influence and enrich each other, or to *become with* each other, one could say, in a truly Harawayan fashion. Blurring boundaries is what the posthuman has been meant to do, and there is no reason why its discourses would be spared.

Furthermore, the *discourse vs. object* conceptualisation may shed light on the deficiencies of both *Beyond Humanism* and *Critical Posthumanism*. As a formulation mainly spread by Herbrechter, it has been more popular amongst *Critical Posthumanism* members, even though its accuracy allowed it to appeal to many scholars outside the network. However, even though *Beyond Humanism* uses the posthuman as a unifying concept, it does not fully subscribe to its description as a pure object (or figuration, image, ontological or historical condition); instead, Sorgner argues that there are two distinct posthumans, depending on the discourse 'the posthuman' is part of:

If the transhumanist's notion "posthuman" implies the membership in a new species, then the concept of the "posthuman", with which posthumanist's are [sic] being concerned, is different, as the notion of the posthuman in this case represents the attempt to put forward a new understanding of human beings [...].
(32)

This fosters the idea that transhumanism is necessarily tied to enhanced human figurations, but that posthumanism does not necessarily rely on this futuristic imagery. This view eludes the importance of the posthuman-as-post-biological-human (and

technology altogether) to posthumanism, and conveys the idea that posthumanism is, first and foremost, post-humanist. Yet, the *discourse vs. object* axis also makes obsolete the *Critical Posthumanism* scholars' all-encompassing notion of posthumanism. The redundancy of the expression 'critical posthumanism' has already been exposed, but so should the inaccuracy of using 'posthumanism' to name all discourses about the posthuman, as if 'posthumanism' was first and foremost 'posthuman-ism'. As a consequence, they seem to neglect the entire tradition of critical humanisms (anti-humanism, feminism and critical race studies) that had little to do with the posthuman yet led to the birth posthumanism – the same tradition that, in fact, greatly informs their inquiries. Had the *discourse vs. object* taxonomy been taken into account, what they call 'posthumanism' would have been named 'discourses of the posthuman', amongst which posthumanism and transhumanism would have been on an equal footing. Similarly, both groups still fail to accept aspects of posthumanism, philosophy and technology, as inextricable, even though they have coexisted within the concept itself since its early stages.¹⁷

However confusing and confused, these writings are not the ones that destabilises the scholarship the most. The next and last category includes writings that convey simplistic, intuitive definitions of 'posthuman' or 'posthumanism', some of them not even taking into consideration the posthumanist philosophical heritage that has been described so far, let alone its predecessors. Instead, it conveys the understanding of 'posthuman' or, in the worst cases, 'posthumanism,' solely as the possibility of the technologically-enhanced human.

¹⁷ See Chapter 2.

4. *Posthuman-ism*

The joint consequence of (1) the popularity of transhumanism, (2) the lack of knowledge of the posthumanist scholarship and (3) the misguided intuition of some scholars, is that a small part of the writings on posthumanism or the posthuman focuses on the possibility of human enhancement through technology but lacks the critique of humanism or the reconceptualisation of the human. Instead, these works study the social, ethical, philosophical, political, economic implications of technological enhancement or, even more widely, new technologies. Some of these studies may lead to the questioning of what it means to be human, but this occurs thanks to ideas and theories different from those featured in the actual posthumanist tradition.

The first and maybe most famous example of this trend is Francis Fukuyama's *Our Posthuman Future: Consequences of the Biotechnology Revolution* (2002). Fukuyama's 'posthuman' is typically the enhanced human brought by technological advancement in four fields: knowledge of the human brain and human behaviours, neuropharmacology, life extension, and genetic engineering (Fukuyama, *Our Posthuman* 16). Being conservative, Fukuyama's treatment of the posthuman is unsurprisingly alarmist: he warns his readers about the posthuman threat to human rights, nature and dignity, and troublesome policing and legal handling of biotechnological progress. The book is mainly practical, except its second part, "Being Human", which the author himself invites to skip if readers are not interested in more theoretical discussions to skip (*Our Posthuman* 16). Surely, the posthuman makes Fukuyama consider what it means to be human, though leading not to the questioning but the reaffirmation of human nature.

Besides Fukuyama's pessimistic account, a lot of works propose analyses and case studies of a posthuman that is exclusively technological. Daniel Dinello's *Technophobia! Science Fiction Visions of Posthuman Technology* (2005) neither contextualise nor defines the author's understanding of posthuman and does not mention posthumanism. Brent Waters' *From Human to Posthuman. Christian Theology and Technology in a Postmodern World* (2006) uses 'posthuman' "to refer to a loose confederation of writers and intellectuals who envision a day when humans will virtually merge with their technology, thereby creating a new and superior posthuman species" (Waters x). William S. Haney II conveys a notion of 'posthumanism' that would rather correspond to a specific type of 'posthuman' – "Posthumanism is defined as a human-technology symbiosis" (Haney 2) – and postulates that "posthuman biotechnology" is a threat to consciousness (Haney vii). Asher Seidel's works *Inhuman Thoughts (Inhuman Thoughts: Philosophical Explorations of Posthumanity* 2008) and *Immortal Passage* (2010) "speculat[e] on the possibility that humanity evolve to a posthuman state" (*Immortal Passage: Philosophical Speculations on Posthuman Evolution* n.p.) and the latter associates 'posthumanism' with transhumanist writers such as Nick Bostrom and James Hughes. Fortunately, such misleading definitions of these concepts remain inconsequential compared to the size and level of institutionalisation of the corresponding Anglophone scholarship. Francophone scholarship, for its part, features more of these misleading texts – a phenomenon that I wish to describe and explain by formulating hypotheses about the specificity of the Francophone context and tracing the reception of discourses about the posthuman in Francophone academia.

5. The French Exception

The first recurring discrepancy between Anglophone and Francophone scholarship is the general absence of reference to the more critical traditions of posthumanism – either by unawareness, unfamiliarity or disregard. This prompts a fairly intuitive understanding of ‘*posthumanisme*’, which is mostly a derivative of ‘*posthumain*’ and ‘*posthumanité*’, and simply denotes a philosophy for human enhancement, with a strong emphasis on technology and no mention of the philosophical tradition outlined in Chapter 2. This tendency has been present since the earliest works in French using this terminology and has persisted today; for example, see *Humain posthumain* (Lecourt, 2003), *Les défis du cybermonde* (Fischer, 2003), *L’homme biotech: humain ou posthumain?* (ed. Béland, 2006), *Le nouvel homme nouveau* (Robitaille, 2007), *Demain les posthumains?* (Besnier, 2009), “Le posthumain, la barbarie qui vient” (Godin, 2013), *L’humain et ses prefixes: Encyclopédie du transhumanisme et du posthumanisme* (Hottois et al., 2015), *Trois utopies contemporaines* (Wolff, 2017). The amount of works conveying this vision of ‘*posthumanisme*’ – which remains marginal in the corresponding Anglophone scholarship – is too large to go unnoticed or uncommented; therefore, let us consider the potential reasons for such a discrepancy.

The first of them may have to do with the degree of popularity of transhumanism, which might be the consequence of its earlier organisation and institutionalisation (see Chapter 1), and its ability for controversy, and which has made its spread to non-Anglophone spheres more successful. Indeed, when in 2003 the first works in French mentioning ‘*posthumain*’ or ‘*posthumanisme*’ were published, transhumanism – with its manifestos and FAQs and ready-made definitions for

'transhumanism', 'transhuman', 'posthuman' and 'posthumanism' – had been around since the 1980s. Posthumanism, on the contrary, had its first serious attempts at theorising in the early 2000s and did not gather groups of scholars until the late 2000s. Thus, French-speaking scholars and thinkers are more likely to have come across transhumanist writings rather than posthumanist ones. Lecourt, for example, devotes a chapter to *techno-prophètes* in which he mentions transhumanists such as Hans Moravec, Ray Kurzweil and Marvin Minsky, but makes no mention of the posthumanist tradition. Similarly, Robitaille uses 'posthumanisme' and 'transhumanisme' without distinction; his part "*Définitions*" is explicitly inspired by the transhumanist definitions of 'posthuman' and 'posthumanism' as the final stage of the transition, from human to transhuman to posthuman (Robitaille 12), just like Béland a year before him (Béland 47) or Godin and Wolfe, in their respective 2013 and 2017 pamphlets against trans- and posthumanism. More surprisingly, the 2015 *Encyclopédie* by Hottois et al. gives a definition of 'posthuman' that corresponds to the transhumanist notion (105), and only mentions the actual tradition of posthumanism (from Hassan to Badmington) in a digression under '*Transhumain*' (158). This tendency – which must only have been intensified by the publications about *le transhumanisme*, whose quantity has increased exponentially in the 2010s¹⁸ – has made it almost impossible to discuss '*posthumanisme*' in Francophone

¹⁸ *Bienvenue en Transhumanie: Sur l'homme de demain* (Ferone and Vincent, 2011); *La tentation transhumaniste* (Damour, *Tentation*, 2005); *Le transhumanisme: Faut-il avoir peur de l'avenir?* (Jousset-Couturier, 2016); *Le Transhumanisme est un intégrisme* (Terence, 2016); *Transhumanisme et posthumanisme: Nos futurs... en mode "cyber"?* (Nachez, 2016); *Technoprog, le transhumanisme au service du progrès social* (Coeurnelle and Roux, 2016); *Hominisation et transhumanisme* (Godfraind, 2016); *La Révolution transhumaniste* (Ferry, 2016); *Le transhumanisme* (Dijon, 2017); *Le Christianisme est un transhumanisme* (de Gramont, 2017); *Transhumanisme, marchands de science et avenir de l'homme* (Njoh Mouelle, *Transhumanisme*, 2017); *Leurres et malheurs du transhumanisme* (Rey, 2018); *Le transhumanisme: Quel avenir pour l'humanité?* (Damour and Doat, 2018); *Quelle éthique pour le transhumanisme ? Des "hommes augmentés" et des "posthumains", demain, en Afrique?* (Njoh Mouelle, *Quelle Éthique*, 2018) and *Critique de la raison transhumaniste* (Folscheid et al., 2018).

academia coming from an Anglophone background: 'posthumanism' and 'posthumanisme' cannot be considered the identical.

Besides the popularity of transhumanism, which may have influenced all French-speaking scholars of the posthuman, other justifications have to be located in France specifically, and at least two of the country's specificities: the recent history of French intellectualism and language policies.

French intellectualism, which has dominated Western Culture since Voltaire, Rousseau, Hugo, Zola and De Beauvoir, and more recently Foucault, Lévi-Strauss, Sartre and Fanon, faced the rise of a neo-reactionary trend of intellectuals, the *intellectuels médiatiques* (Hazareesingh). This cultural shift is usually considered to have arisen from the disenchantment with Marxism that followed the publication of *The Gulag Archipelago* by Aleksandr Solzhenitsyn in 1973 (Cusset 324; Usul2000). This led to the formation of a group of intellectuals calling themselves "*les Nouveaux Philosophes*" led by Bernard-Henry Lévy. These intellectuals, who sold a surprising amount of copies at the time and still do so, condemned totalitarian and fascist regimes and, by extension, revolutionary thought, and pleaded for renewed attention to Human Rights (Cusset 325). In doing so, they turned against and twisted the words of the philosophers who once were their mentors and teachers: Foucault, Derrida, Deleuze, Baudrillard, etc. (Cusset 326). Unfortunately, the latter, who could have easily defended themselves through scholarly articles, either did not even deign to respond or lacked the communicative skills to do so in the mainstream media, which the "*Nouveaux Philosophes*", for their part, mastered. Television indeed barely tolerates scholars'

nuance and circumspection, preferring the assertive, impactful but simplistic style of "BHL" and his associates (Cusset 328; Usul2000; Sapiro).

The consequences of this cultural landscape for the scholarship on the posthuman are twofold. On the one hand, the *Nouveaux Philosophes*, who started to be pejoratively called '*intellectuels médiatiques*', put forward "superficial, derivative" reasoning but also, a somehow more problematic "starkly pessimistic state of mind" caused by a sense of nostalgia for brighter days, when France was the economic and intellectual centre of the West (Hazareesingh). This led to their "rightisation" ("*droitisation*"): their rejection of May 68 ideals of Nietzscheism and antihumanism became, probably as a result of aging, a form of cultural conservatism that is, at best, moralisingly humanist, and, at worst, nationalist or downright islamophobic (Hazareesingh, Sapiro). Even though these neo-reactionary intellectuals are now derided by many French people and most French scholars (Usul2000), their propensity to comment on all topics, on which they rarely are experts, turns out to be as financially profitable as it is theoretically counterproductive. Indeed, it did not take long before they noticed the marketing potential of the posthuman when at the turn of the century the *Human Genome Project* and the successful cloning of Dolly the sheep made biotechnologies very much in the spirit of the times. '*Le posthumain*', '*le posthumanisme*' or '*le transhumanisme*' thus became the perfect candidates for the mainstream publications of these "*intéllectuels médiatiques*", especially because these words prompt immediate intuitive understanding and, at the same time, arouse hope, anxiety or angst. These intellectuals' conservatism is not itself problematic, but these public figures are part of a wider media system that values Manichaeism, simplicity and

rapidity, so their books usually consist of under-investigated, one-sided and sometimes populist content, with an alarmist rhetoric about the loss of our precious and unique human nature owing to technological progress, in line with Fukuyama.¹⁹ Luc Ferry, who definitely has had a technosceptic moment these past few years, with the publication of *L'Innovation destructrice* (2014), *Prométhée et la boîte de Pandore* (2015) and *La Révolution transhumaniste. Comment la technomédecine et l'ubérisation du monde vont bouleverser nos vies* (2016), epitomises this phenomenon: in the last book, he categorises and depreciates the “deconstructionist, egalitarian, anti-speciesist, and ecologist ideology” (my translation)²⁰ conveyed by transhumanism, but actually assimilates transhumanism to posthumanism, by quoting a passage of *Le transhumanisme est-il un humanisme?* where Gilbert Hottois describes... posthumanism (Ferry 60). This is representative of another *intellectuels médiatiques'* typical attitude that may have impacted the reception of posthumanism in France.

On the other hand, the scholars rejected by the *intellectuels médiatiques* were representatives of what has been called, outside France, ‘French Theory’,²¹ and were precisely the same scholars that provided the theoretical and philosophical basis for a fair share of the posthumanist thought. Even if the *intellectuels médiatiques* were rarely taken seriously by scholars, their criticism of French Theory was not met with strong public opposition but a few erudite and sometimes hermetic publications and (even less

¹⁹ Note that the media promotion of extreme opinions also lays the groundwork for equally under-researched and sensationalist books in favour of technological enhancement, such as *La mort de la mort: Comment la technomédecine va bouleverser l'humanité* (Alexandre, *La Mort de La Mort: Comment La Technomédecine va Bouleverser l'humanité*, 2011), *La défaite du cancer* (Alexandre, *La Défaite Du Cancer: Histoire de La Fin d'une Maladie*, 2014) and *Les robots font-ils l'amour?: Le transhumanisme en 12 questions* (Alexandre and Besnier, 2016).

²⁰ “Une idéologie « déconstructionniste », égalitariste, antispéciste et proécologiste” (n.p.).

²¹ More information on this topic in *French Theory* (2003) by François Cusset.

frequently) interviews of the denigrated theoretists. Moreover, postmodernism, with which French Theory is associated, gradually became the target of criticism and ridicule, coming from more than just these few *intellectuels médiatiques*; French theory was also marginalised within French universities, which could not or would not handle its inherent interdisciplinarity (Cusset 334–35). The conjunction of these elements may have dissuaded a lot of French scholars from diving back into French Theory, though the latter had not lost any of its splendour outside France's borders. As a philosophical trend largely inspired by French Theory, the situation might have made it difficult for posthumanism to be taken seriously in France.

The other dimension of France's specificity is not cultural or ideological, but linguistic and institutional. French academia still mainly functions in French, which is the mandatory language of "teaching, (competitive) examination as well as thesis and master's dissertations in public and private institutions".²² Note that this law allows "exceptions justified by the necessities of regional or foreign language and culture teaching, or whenever teachers are associate professors or foreign guests" (my translation), but universities usually opt for stricter language policies. Take the case of English studies dissertations: as the law stands, they could be written in English, but most universities require them to be in French anyway. This law may be just one of the many measures that have been implemented to protect the French language against what the French perceive as a global incursion of English into all spheres of society. When, in 2013, Minister of Higher Education and Research Genevieve Fioraso suggested adopting a law allowing more space for teaching in other languages (notably

²² This has been part of the art. L121-3 of the French code of education since 2003, but used to be part of the art.11 of the law "Loi n° 94-665 du 4 août 1994 relative à l'emploi de la langue française."

with English in mind), she stirred up controversy and faces strong opposition, mainly from the very normative and protective *Académie Française*.²³ With a warlike rhetoric, where the grandeur of the once so influential French language is presented as facing a neo-imperialist invasion of the despised, cultureless enemy, the *Académie* contributes to maintaining a kind of chauvinism yet so incompatible with the very nature of research. Already in 1966, Gérard Genette lamented the way French intellectuals remained unaware of what was then being done outside their borders, which he attributed to poor language skills; in "*Raisons de la critique pure*," he writes that the French waste a lot of energy making what they could have simply imported (Lorent n.p.).²⁴ Genette's explanation may be just one side of the story – as the situation is probably the result of a conjunction of elements that would deserve its own study – but his assessment is surely not inaccurate.

However, a lot has changed since the 1960s. Globalisation and the Internet have made the boundless circulation of ideas unavoidable and undermined French ostracism; and if their language skills were ever to blame, the French have found an ally on the other side of the Atlantic. A survey of the Francophone scholarship on the posthuman indeed shows that Quebec researchers may have acted as passers for Anglophone theories. From their unique linguistic and cultural position, scholars from Quebec managed to break through the language barrier and made Anglophone theories available to a wider French audience. The first French-speaking attempt at presenting a 'posthumanism' that is more than just a synonym for 'transhumanism' can indeed be

²³ The *Académie Française* published an official declaration on March 21st, 2013 (available on their website: <http://www.academie-francaise.fr/actualites/declaration-de-lacademie-francaise-du-21-mars-2013>)

²⁴ "C'est un peu la manie française du bricolage: nous fabriquons à grands efforts ce qu'il suffirait peut-être d'importer tout-à-fait" (Genette, qtd. in Lorent).

found in a 2005 collection of essays published by University of Quebec, *Art et biotechnologies*. This anthology, entirely written in French, contains articles authored mainly by Canadian and American (and a few French, Brazilian, Russian and Welsh) scholars and artists. Unsurprisingly, the first French-speaking theorisation of posthumanism that is most akin to (one of) the current Anglophone consensus(es) actually came from an American, Eugene Thacker. In "L'incarnation des données. La biotechnologie et le discours du posthumain" (2005), Thacker distinguishes between two forms of posthumanism, which he calls extropianism vs. critical posthumanism (which corresponds to one of the tendencies described in Chapter 3) and identifies a genealogy quite similar to the one described in the present study. By including a majority of North American authors as early as 2005, around the same time as the first formal theorisation of posthumanism and the posthuman by Pepperell, Graham, Badmington or Ferrando, the collection *Art et biotechnologies* could have been the one to introduce these concepts to the French-speaking world. However, the fairly limited amount of citation it generated indicates that it has not achieved the same fame as other less encompassing works. Its limited impact might be the result of its geographical distance from France (which was still problematic in 2005), but also of its focus on artistic practice, which may have been less appealing to the supposedly more rational scientists and philosophers. Such a hypothesis is rather intuitive, since it would be hard to prove, but the fact remains that this work conveys a clear conceptualisation of posthumanism that seems to have been ignored at the time. Instead, it took almost a

decade of confusion and debate for one to see a similar conceptualisation emerge again and spread.²⁵

In this process, a series of collaborations between French and Quebec scholars led to the constitution of a group that seems to broadly share the same understanding of the posthuman. These collaborations resulted from the creation of a joint research project between French, Quebec and English institutions²⁶ called “Les confins de l’humanité.” A first conference entitled “Les frontières de l’humain et le post-humain / Mapping humanity and the post-human,” organised by Hélène Machinal and Gaïd Gérard, took place in September 2012 in Brest, France, with a follow-up in May 2013 in Montreal, Canada, organised by Jean-François Chassay and Bertrand Gervais. These two conferences led to the publication of two collections in 2014: *PostHumains: Frontières, évolutions, hybridités* (Després and Machinal) and *Les frontières de l’humain et le posthumain* (Chassay and Tremblay-Cléroux). Since then, this enlarging group of scholars has gathered every year at conferences and symposiums²⁷ and has proved its

²⁵ The next monograph in French to acknowledge the posthumanist tradition was published, again, by a Quebecois, and yet again, providing an artistic perspective: art historian Maxime Coulombe’s *Imaginer le posthumain. Sociologie de l’art et archéologie d’un vertige* (2009) indeed focuses on the work of seven artists of the turn of the twenty-first century. Like Thacker’s article, it passed relatively unnoticed, perhaps for the same geographic and disciplinary reasons.

²⁶ Maison des sciences de l’homme de Bretagne, Maison des sciences de l’homme de Bourgogne, Maison des sciences de l’homme de Franche-Comté, Université Paris 8, Université de Bourgogne, Université de Franche-Comté, Université de Bretagne occidentale, University of Chester and Université du Québec à Montréal.

²⁷ In June 2013, symposium “Transhumanités” in Paris, organised by Pierre Cassou-Noguès, Claire Larsonneur and Arnaud Regnaud; in March 2014, symposium “Posthumain et Genres” in Lille, organised by Isabelle Boof-Vermeesse and Claire Larsonneur; in April 2014, symposium “Hacker, la fiction du virtuel” in Mulhouse, organised by *Université de Haute Alsace*; in June 2016, conference “Posthumain et Subjectivité numérique” in Cerisy, organised by Sylvie Bauer, Claire Larsonneur, Hélène Machinal and Arnaud Regnaud; in March 2017, conference “Médiation apocalyptique / Imag(i)ning the apocalypse” in Brest, organised by *Université de Bretagne Occidentale*. The project “Le sujet digital / The digital subject” has close ties with this group and, in November 2012 and 2013, most of the participants and organisers of the other conferences and symposiums gathered again for the conferences “Le sujet digital: mémoire, hypermnésie” (2012) and “Le sujet digital: in-scription, ex-scription, télé-scription / The digital subject: in-scription, ex-scription, tele-scription” (2013), in Paris, organised by Pierre Cassou-Noguès Claire Larsonneur, Arnaud Regnaud.

inclusiveness towards the Anglophone scholarship by organising bilingual events featuring invited as well as regular speakers from both French- and English-speaking institutions. The presence of keynote speakers such as Katherine Hayles or Bernard Stiegler at these events shows that this group has always acknowledged that posthumanism is not just a fancy word for 'man of the future' or 'technologically enhanced man' but also refers to a vast critical and philosophical tradition.

However, even though they provide an inclusive genealogy for their concept of 'posthuman', tracing it back to mythological and religious posthumans (though with a more citational rather than explanatory purpose), the organisers do not seem to force their understanding of 'posthuman(ism)' upon the participating speakers or authors, which allows diversity concerning this issue. For example, in *Les frontières de l'humain et le posthumain*, Tremblay-Cléroux and Chassay provide an introduction tying the posthuman to Lamarck and the origins of biology, mythology and religion, and Wiener's cybernetics, but also to Foucault, thus implying the variety of definitions, though without ever being explicit about it. This allows (or forces) each author to clarify their own understanding of these terms, resulting in a few discrepancies: Elaine Després cites Hayles, Wolfe and Wiener (21), Joseph-Vilain chooses Haraway, and Halberstam and Livingston (73), and Dominguez-Leiva cites Wolfe, Badmington and Waldby (129); meanwhile, Klein and Chassay discuss an unproblematised version of the 'posthuman' as the conjunction of human and technology (Klein 55; Chassay, 'Le Génome Est Un Champ de Ruines' 41). It thus seems that the formation of this group has contributed to the spread of a greater variety of 'posthumans' but its leaders managed to create a firm

and coherent theoretical framework only superficially, as it preserves freedom and creativity as much as confusion and, sometimes, contradiction.

Apart from Thierry Hocquet *Cyborg Philosophie* (2011),²⁸ which is an extensive introduction to the cyborg as a philosophical figure (focusing on Donna Haraway and George Canguilhem), direct heirs to the Anglophone posthumanist tradition are thus rather scarce in France. However, this does not mean that the ideas associated with posthumanism in Anglophone spheres have not occurred to French thinkers. Quite the contrary, let us remind that the theoretists that originally inspired posthumanism were Frenchspeakers: chiefly, Michel Foucault, but also Bruno Latour, Gilles Deleuze and Felix Guattari, and Bernard Stiegler. It is only logical that they inspire French-speaking scholars, despite the discredit campaign of which these postmodern philosophers had been the targets in France. French scholars may not have labelled the theories that stemmed from these inspirations 'posthumanist' (except the latest ones), but these works nonetheless contain the substance of posthumanism. In other words, as Genette had observed, they built from scratch a series of ideas that they could have simply imported from the English-speaking scholarship. In this homemade posthumanism, one indeed finds the ingredients of traditional posthumanism: questioning and criticism of humanism, reconceptualisation of the human, and rejections of dualist ontological categories.

Without ever mentioning posthumanism or posthumanist thinkers, Michel Serres' *Hominescence* (2000) questions the way new technologies will affect the nature, the

²⁸ Hocquet was also a keynote speaker at one of the events organised by the France-Quebec group described in the previous pages, which may have contributed to the introduction of the Anglophone posthumanist tradition into that group.

meaning and the concept of 'human'. In *Humain, Posthumain* (2003), Dominique Lecourt unequivocally conveys the transhumanist notions of '*posthumanisme*' and '*posthumain*', which does not prevent him from exploring the philosophical implications of a post-biological or technological human. He thus questions accepted notions of human nature by referring to technoscience philosophers, which are some of the references of posthumanist theories. In a similar vein, Jean-Michel Besnier's 2009 *Demain les posthumains?* conveys the same uncritical, straightforward notion of '*posthumain*', but still ventures into the philosophical ramification of this figure, with references to Peter Sloterdijk's "Rules for the Human Zoo" and cybernetics. Meanwhile, Christian Hervé and Jacques J. Rozenberg's *Vers la fin de l'homme ?* (2006) lays strong emphasis on technology but draws similar conclusions on the meaning and philosophical consequences of such technological revolution. In the next decade, Stanislas Deprez and Jean-Baptiste Lecuit's notions of "*posthumanisme*" and "*posthumain*" in *L'homme, une chose comme les autres?* (2012) are still influenced by transhumanist definitions; yet, they still manage to show how the posthuman undermines the dualism 'subject vs. object'. Starting off with cybernetics, Gérard Chazal's *Philosophie de la machine* (2013) studies how we moved from humanist and then mechanist to neo-mechanist and post-humanist conceptualisations of biological life, leading to similar conclusions about irrelevant dualist categories. Lastly, drawing from Foucault, both Xavier Lambert's *Le post-humain et les enjeux du sujet* (2011) and Henri Atlan's "Les frontières revisitées" (2014) observe the irrelevance of humanism and its dualist premises. Lambert indeed writes:

But the issue of the post-human does not belong to this Darwinian pattern. [...]
The way the post-human implies going beyond the human cannot therefore

concern the species. The human in question here is rather that which is defined by the concept of the human born with Western modernity and resulting from the particular articulation of the concept of subject and that of individual. It is the human taken as a unit of measurement of reality and intellectual constructions, of the world representations stemming from it. But it is also that whose outdatedness by systemic thought Foucault announced in *The Order of Things* in 1966. (My translation)²⁹

As this quotation exemplifies, French scholars produce developments that are very similar to what can be encountered in the Anglophone world by drawing on the same original thinkers. The only aspect missing in order to make it posthumanist might simply be the name, but the substance of posthumanism pervades many of these theorisations of the relationship between human and technology in an era where the latter's incursion into our societies, bodies and daily life is increasing.

In their *Post- and Transhumansim: An Introduction*, Ranisch and Sorgner insist upon the plurality of the posthuman: "there is no commonly shared conception of what posthumans are, and visions range from the posthuman as a new biological species, a cybernetic organism, or even a digital, disembodied entity" (8). Acknowledging this plurality is the only way to cope with the variety of (sometimes contradictory) definitions of the posthuman. Not only is 'posthuman' impacted by the polysemy of its components – 'post' and 'human' – but Ranisch and Sorgner imply that its meaning is dependent on the discourse in which it appears. However, this first part has painted a more complex picture: the posthumanists' posthuman is not always essentially different

²⁹ "Mais la question du post-humain ne s'inscrit pas dans ce schéma darwinien. [...] Le dépassement de l'humain convoqué par le concept de post-humain ne peut donc pas concerner l'espèce. L'humain dont il est question ici est plutôt celui que définit le concept d'humain né avec la modernité occidentale et qui résulte d'une articulation singulière entre le concept de sujet et celui d'individu. C'est l'humain pris comme unité de mesure du réel et des constructions intellectuelles, des représentations du monde qui vont en découler. Mais c'est aussi celui dont Foucault annonçait le dépassement par la pensée systémique dans *Les mots et les choses* en 1966" (Lambert 13)

from the transhumanists'; sometimes, the posthuman denotes the same thing in both transhumanist and posthumanist texts – *i.e.* a (bio-)technological being –, and only its uses and the objectives of these uses differ. By contrast, Chapter 2 and 3 have also shown that, amongst representatives of posthumanism, concepts of the posthuman could vary greatly; especially in terms of how present is technology in these developments. One can therefore conclude that the posthuman is not a polysemic word, that is to say, one signifier with various, alternative signifieds. In fact, the posthuman *is* all of these signified at once: the post-biological being does not cancel the reconceptualisation of the human; quite the contrary, in a text about the posthuman, considering the technological modification of the human or the human creation of non-human sentience inevitably prompts a questioning of traditional notions of human nature, regardless of the mode, the intent, the discipline, the context or the agenda of this text. A theoretician may decide to emphasise only one or two of these signifieds, and might even explicitly dismiss all of the others, but such an endeavour is bound to result in an incomplete representation of the posthuman, because all of these other meanings run deep: their presence eludes the theoretician's control.

PART II

POSTHUMAN TEXTUALITIES

Chapter 4

The Best of Both Worlds: Posthuman Ontology

In describing the posthuman and its discourses' early stages and variety, Part I has conveyed the posthuman's profound hybridity, which is not just tied to the posthumanists highlighting how its definition rests upon the questioning of dualist categories and the blurring of boundaries. Part I has indeed also shown how the posthuman is both the post-biological or technological being that inhabits science-fiction stories and the subsequent reconceptualisation of what it means to be human. Even within these conditions, it remains hybrid: posthuman *beings* are mixes of organic and non-organic materials while posthuman *conceptualisations* combine philosophical and technological perspectives. But the hybridity of the posthuman, *assigned* through theorisation, goes beyond this boundary-blurring-creature-concept that has been described so far. I argue that, on the one hand, hybridity is inherent to the posthuman regardless of theoretical developments, because the posthuman is at once a fictional character and a science-fiction motif. On the other hand, I claim that the posthuman is

not just a bearer, but an *enhancer* of hybridity. In other words, the profoundly hybrid nature of the posthuman forces its discourses to adopt similarly hybrid statuses.

Before going any further, let me clarify what I mean by 'hybrid' and why I find it better fitting than the neighbouring term 'heterogeneous'. On the one hand, using the word 'hybridity' is a way of recalling the nature of the posthuman in most of its fictional and theoretical iterations (*i.e.* the boundary-blurring-creatures-concept) as well as its theoretical genealogy: inspired by science-fiction novels (see Chapter 2), Donna Haraway indeed described cyborgs as "theorised and fabricated hybrids of machine and organism" ('Manifesto' 8) and, in turn, influenced most of the theoreticians of the posthuman to write about its hybridity.

On the other hand, the terms 'hybrid' and 'heterogeneous' differ in terms of emphasis. While they both describe an ensemble made up of different parts, 'heterogeneous', defined as "consisting of dissimilar or diverse ingredients or constituents" (Merriam-Webster), lays emphasis on the *difference* between the constituent elements of that ensemble. By contrast, 'Hybrid', defined as "having or produced by a combination of two or more distinct elements: marked by heterogeneity in origin, composition, or appearance" (Merriam-Webster), rather describes the *result* of combining heterogeneous constituents and emphasises their *blending*. For example, Guido Ipsen explains this nuance in the context of interfacing cultures:

In any process of interfacing, both of the cultural communities will perceive new concepts as foreign first. As soon as old and new concepts are established simultaneously in the cultures, *heterogeneity* is in effect. The own and the foreign are still discernible. If they are approved of, they are adopted easily. If not, they will remain in contrast for a longer period of time. In the course of time, however, the cultural community will become accustomed to the new concepts. It may adopt these and hence undergo a change towards a hybrid culture. (Ipsen n.p.)

Ipsen thus describes interface as a continuum where cultures go from a “State of Separation” to a “State of Hybridity”, and everything in between is in a “State of Heterogeneity” (Ipsen n.p.). The word ‘hybrid’ therefore accounts for the past occurrence of a process including heterogeneous elements as much as it emphasises the harmony of the result of this process. Admittedly, discourses of the posthuman are a heterogeneous group – type-wise, origin-wise or objective-wise – but, as the following chapters show, it is the interface between these discourses that has brought current notions of the posthuman to life; a posthuman stemming from diverse intellectual and cultural traditions, rarely being identifiable as the successor of only one of them. Therefore, the posthuman is truly a hybrid figure, both witness and result of the contact between heterogeneous sources.

Fictional and Fictitious: The Posthuman as a Character

Besides its conceptual power, the posthuman is also (and primarily) a *character*. The questioning of humanism or the feasibility of human enhancement are indeed quite recent compared to the figurations of the posthuman forged by imagination and passed along by fiction. Quite tellingly, the *Cambridge Companion to Literature and the Posthuman* features two chronologies, one for the posthuman (xxv-xxix) and one for posthumanism (xxxi-xxxiv). The former starts no less than one thousand years before the latter. The chronology for the posthuman (which starts with the 865 “Letter on the Cynocephali” by Ratramus of Corbie) is also somewhat longer than the one for posthumanism (which starts with Darwin’s 1859 *Origin of Species*). Of course, these chronologies do not aim at exhaustiveness, but they at least indicate the greater

antiquity of posthuman figurations as well as their high number and their variety in terms of medium (plays, epic poems, novels, films, graphic novels, comic books) and genres (which are not limited to science fiction). The antecedence of the fictional posthuman is relevant to my argument because it contributes to explaining one aspect of the posthuman's hybridity, and maybe the most important one in a discussion focusing on its discourses: the posthuman's ontological hybridity. I have discussed the postmodernist overall deconstructive attitude, its (in)famous *indeterminacy*, which emphasises two things: on the one hand, the ontological boundary-blurring potential of the posthuman, which is hybrid in terms of both identity ('*what one is*') and way of existing ('*how one exists*'); on the other hand, the differentiation between fiction and reality and between textual categories (theory, fiction and its various genres). As postmodernism postulates (and experiments with) the fusion of textual genres, its typical panfictionalism echoes ancient debates about the nature of fiction, especially its relationship to reality; in other words, its ontology, which can be seen as hybrid in many respects. For example, fiction may be associated with falsehood, which conveys an understanding of truth that is limited to 'that which has happened'. As Lamarque and Olsen point out, however, many theories of fiction¹ argue that the latter, despite its *fictitious*² nature, has a way of conveying truth (12), but not so much empirical truth as 'sincerity' or 'verisimilitude' (8). This type of truth is therefore 'unreferential' ("*vérité non-*

¹ More precisely, Lamarque and Olsen mention mimetic, epistemological, moral, integrity and affective theories of fiction (12-14)

² Lavocat notes that in French, theory usually employs the words "*fictionnel*" and "*fictif*" to distinguish that which refers to the cultural narrative artefact from the ontological quality of what does not exist (18). I want to maintain this subtle distinction by using the corresponding English forms "*fictional*" and "*fictitious*". It should nonetheless be pointed out that Lavocat herself doubts the necessity for such a terminology, as a fictional character is always fictitious (18). This is rather disconcerting given that this note appears in a section questioning the "unreferentiality of the fictitious" (my translation); if, as she implies, the fictitious can be referential, is it not contradictory to call it "the fictitious"?

référentielle”, Lavocat, *Fait* 388). Ontologically speaking, fiction thus shows its first sign of hybridity: it can be simultaneously false and true.

At the end of her introduction to *Fait et Fiction*, Lavocat announces the internal and conceptual plurality of fiction and, more generally, the increasing ontological heterogeneity of cultural artefacts (*Fait* 27).³ She expands upon this notion in the third part of her book, using the literary variation of possible-worlds theory: fictions build possible worlds that coexist with each other and with the *actual* world. This fringe of fiction theory therefore investigates the status of these worlds and the modalities of their coexistence. Some critics contemplate a hierarchy between these worlds (with the actual one at the top), while others postulate equal ontology for all worlds (whether actual or only possible) through the relativity of actuality: “the actual world is only actual for itself” (Lavocat, *Fait* 391, my translation).⁴ Possible-world theoreticians such as Lewis or Ryan indeed argue that possible worlds created by fictions can become “actual-for-us”, that is, can be actualised by their readers, spectators, or players (Lavocat, *Fait* 394–95). In this case, the ontological heterogeneity of fiction is related to the potential, for any possible world, including fictional ones, to be *actualised*, if not for real, at least in the audience’s mind.

Understandably, the possible-worlds theory is more of a thought experiment to help rethink (and rehabilitate) the status of fiction than a tool to understand and define

³ This observation does not lead to a total effacement of the border between fact and fiction (which has been quite fashionable in the last decades of the twentieth century) but, on the contrary, to its reaffirmation. Lavocat may indeed be discussing the hybridity of fact and fiction, but, just like Baudrillard stated the need for imagination to affirm the existence of reality in *Simulacra and Simulation*, Lavocat argues that said hybridity can only be acknowledged and studied if the border between fact and fiction remains.

⁴ The nature of the relationship between these possible worlds and the actual one has been conceptualised in various ways (see Lavocat, *Fait* 391).

fiction and its relationship with facts (ontologically speaking) or non-fiction (generically speaking). The solution might instead lie in the notion of referentiality. On the one hand, fiction theoreticians have noted an increasing tendency for contemporary cultural artefacts to blur the limit between fact and fiction; but one may argue that said limit has never been quite clear, as, according to Adams, these artefacts are “imaginarily made from characteristics of the real world” (qtd. in Lavocat, *Fait* 394). It thus seems that fiction, even in its most imaginary representations, cannot escape the presence (persistence?) of references to the actual world. On the other hand, the concept of ‘referentiality’ has also been extended by certain fiction theories to include references, not only to the actual world (*‘extra-référentiel’*), but also to other texts (*‘inter-référentiel’*) and to the world that each fiction builds (*‘intra-référentiel’*) (Lavocat 390). The way for fiction to be referential is therefore plural: it can refer to different worlds and different texts,⁵ which have varying relationships with reality. The persistence and plurality of referentiality thus justifies the ontological hybridity of fiction since the latter can never be totally fictional or totally factual.

Lavocat eventually locates the ontological heterogeneity of fiction less in the ontological heterogeneity of fictional worlds than in that of its characters. If ‘ontology’ denotes the ‘way of existing’, then fiction is heterogeneous because there are several ways of existing in fiction, such as humans, ghosts, myths, etc. Reality, on the contrary,

⁵ The three types of referentiality is a somehow simplified version of Lavocat’s possible-world theory detailed in “Les genres de la fiction”, the first chapter of *La théorie littéraire des mondes possibles*, a collective work that she edited in 2010. In that same chapter, she mentions that fictions do not so much refer to the real world *directly* than to “(actual) worlds defined by factual texts” such as historical, biographical or even religious writings (*Théorie* 28). Much could be argued against the idea that reference is always textual (or that religious texts are factual, for that matter), and it must have been the case as *Fait et fiction* does not make a similar comment; quite the contrary, the designation of the three types of referentiality with the prefixes *‘intra’*, *‘inter’* and *‘extra’* implies that the fictional world is a text in and out of which referentiality can freely travel.

is homogeneous: everybody exists in the same way (*Fait* 403). Lavocat defining the ontology of fiction through that of its characters is surprising because she proves, on countless occasions, that fiction itself is heterogeneous. Characters may have “several ways of existing” (*Fait* 403), but fiction itself has a *hybrid way of existing*: poised between lies and truth, with the potential to oscillate between the two statuses, and to be both simultaneously, thanks to its inescapable referentiality.

One might argue that another way of looking at the ‘fact vs. fiction’ issue is to move away from referentiality and ontology altogether. A portion of fiction theory indeed holds the principle that fiction is never referential, but rather creates imaginary worlds that escape the rules of truth-telling (Lavocat, *Fait* 18–19). Even though this argument is undermined by Lavocat, who suggests that viewing fiction as wholly unreferential implies ignoring fictions with exemplary, didactic or heuristic⁶ vocations (*Fait* 19), it nonetheless allows disregarding fiction’s degree of truth to instead consider fiction as a cultural artefact (a novel, a movie or a game, for example). In this case, the focus is more on the *fictional* than the *fictitious* dimension of fiction, more on genre than ontology. Yet, the various attempts at pinpointing essential differences between fictional and factual cultural artefacts (such as documentaries, memoirs, biographies, etc.) can hardly spare comments on referentiality. Moreover, they have proven that these differences are rather contextual: they depend on cultural, ideological, and philosophical premises (Lavocat 18) as well as, for many theoreticians, on the author’s and the audience’s attitude towards the narrative (see Leiduan 1, 3).

⁶ I could also replace “heuristic” with “cognitive”, after Darko Suvin’s theory of science fiction that establishes, cognition (as both a *reflection of* and a *reflection about* reality) as one of the two founding characteristics for the genre – the other one being estrangement (Suvin and Favier 99–102).

I have postulated earlier that the posthuman might be an *enhancer* of hybridity; in fact, I carefully avoided saying that it was a *creator* of hybridity because a brief look at fiction theory demonstrates that fiction did not wait for the posthuman (or science fiction, for that matter) to manifest its hybrid nature, in terms of ontology and discipline. The tendency for said hybridity to increase in contemporary fiction coincides with the growing importance of hybridity in theoretical, philosophical, sociological and scientific discourses, especially those revolving around the posthuman. One is not the result of the other, as the actual initiator of this tendency might be located in the specificities of the turn-of-the-century era. Post-war (especially post-Auschwitz and post-A-bomb) disillusion, combined with the promises (and then, the actualisation) of a dramatically different society initiated by exponential economic growth, wild consumerism and booming technology (biotechnologies and informatics) led to the postmodern mind-set of overall questioning and deconstruction. The posthuman perfectly embodies this postmodern attitude, not only because the posthuman *concept* is genealogically and conceptually connected to postmodernism; and not only because fiction and the posthuman *character* reciprocally enhance each other's inherent hybridity (or 'indeterminacy' as Hassan would have called it); but also because the posthuman, as a *science-fiction motif*, evokes "the preeminent literary genre of the postmodern era, since [science fiction] alone has the generic protocols and thesaurus of themes to cope with the drastic transformations that technology has wrought on life in the postindustrial West" (305), as Istvan Csicsery-Ronay Jr. wrote in the introduction to the *Science Fiction Studies* special issue on postmodernism, summarising Larry McCaffery's premises to his collection of interviews, *Across the Wounded Galaxies*. In short, the ontological

hybridity of the posthuman is not just reinforced by its postmodern and fictional nature, but also by its science-fiction roots.

Speculative and Rational: The Posthuman as a Science-Fiction Motif

In a short introduction to the genre, David Seed straightforwardly states: “Science fiction is about the writer’s present” (1–2). Such an emphasis on the allegorical function of science fiction is particularly widespread. Marc Angenot, one of the main French theoreticians of genre literature, writes: “By analogy, contiguity or reversal, the paradigms of the empirical world can be paralleled with the SF text and serve as an instrument of interpretation.”⁷⁸ Similarly, Natacha Vas-Deyres describes the aim of SF as “settling the narrative in what is real” even though it is a “literature of the imaginary projected in the future” (25). Reality, the present and “the sociological and historical reflection” are thus heavily involved in reading and interpreting a science-fiction work (Vas-Deyres 24). If science-fiction narratives are stories about the future (or sometimes, the past) that serve as allegories of present situations, one could argue that science fiction presents a *referential* hybridity. According to Lavocat’s referentiality theory, science fiction is simultaneously intra-referential and extra-referential. The SF text indeed builds a world of its own, but also refers to actual scientific and technological breakthroughs and, by means of allegory, to real-world issues.⁹

⁷ The following citations by Marc Angenot, Natacha Vas-Deyres, Roger Bozzetto, Darko Suvin and Simon Bréan have been translated by me.

⁸ “Par analogie, par contigüité ou par renversement, les paradigmes du monde empiriques peuvent être mis en regard du texte SF et servir d’instrument d’interprétation” (Angenot, *Dehors* 231). Angenot implies that interpreting science fiction through the lens of reality can be accurate, but is not mandatory. A science fiction story is rarely but an allegory of a current issue or situation; its interpretation as such coincides with other interpretations that do not seek to establish a connection with the context of writing.

⁹ Note that a SF text may also be inter-referential, with implicit and explicit allusions to other fictions.

Besides the allegorical function of SF, which grounds the connection between SF and reality in interpretation, several theoreticians postulate its specificity (compared to other *genres de l'imaginaire*¹⁰) to be the construction process, both of the genre as a whole – Roger Bozzetto, for instance, attributes the birth and developments of the genre to the various waves of technological revolutions, from the Renaissance onwards, that prompted amongst writers a focus on science (12, 19)¹¹ – as well as of each science fiction narrative. Most scholars indeed stress the importance of plausibility, realism and rationality in this speculative process. Darko Suvin laments that the non-realistic¹² (or, 'anti-mimetic') genres are usually regrouped precisely according to this characteristic – especially in the capitalist book industry (*Poétique* 16) – despite their actual diversity: science fiction indeed is distinct from myths, fairy tales and the supernatural ("*le fantastique*") (*Poétique* 14–16) in that it is based upon a "reasonable hypothesis founded upon plausible laws and observed facts" (*Poétique* 2, my translation). Suvin differentiates SF from the other non-realistic genres by its "knowledgeable, dialectical and cognitive approach" (Suvin and Favier 105). This approach brings SF closer to "realistic literature, naturalist science and materialist philosophy" (105, my translation).

¹⁰ The expression "*littérature de l'imaginaire*" is recurrently used in French-speaking SF studies to denote the groups of literary genres that are not mimetic of the real world (such as SF, heroic fantasy, supernatural fiction, etc.). In English, it seems to correspond to one use of 'speculative fiction', which indeed has "three historically located meanings: a subgenre of science fiction that deals with human rather than technological problems, a genre distinct from and opposite to science fiction in its exclusive focus on possible futures, and a super category for all genres that deliberately depart from imitating "consensus reality" of everyday experience" (Oziewicz n.p.). This umbrella expression (in both French and English) has the advantage of denoting a group of genres without having to decide on the nature of what binds them together (for example, their relationship with reality or representation, or else their share of realism or *mimesis*).

¹¹ Note that Bozzetto also attributes technological progress to the birth of the posthuman: as time passed by, the technological advances that had been imagined by writers started to become a part of reality. Overrun by exponential progress, science fiction authors needed to find new themes and started to focus on the way the inner self was affected by technology (13).

¹² In French, Suvin used the word "*réaliste*", which means both 'realistic' and 'realist,' two polysemic words: 'realistic' may mean 'plausible', 'reasonable,' and 'realist' may refer specifically to the nineteenth-century artistic and literary trend. There is, however, one meaning that is common to 'realist' and 'realistic' and that is probably Suvin's intended meaning: 'representational' or 'mimetic'.

All seek to “provide information on the human condition” or humans’ relationships with each other and with their environment (103). But while the latter disciplines adopt a *mimetic* approach, SF uses *estrangement*.¹³ More recently, Bozzetto has also emphasised the specificity of science fiction compared to other speculative genres and goes further than Suvin by stating that science fiction is, in fact, mimetic:

Among the literatures of imagination, SF falls under what can be called the ‘realistic’ or ‘mimetic’ perspective. It nonetheless differs from mainstream literature, which is ‘mimetic of the present universe’ without any gap, and which shows a world that can be understood without further explanation because it belongs to the “reader’s encyclopedia” (Eco, 1985). [...] SF carries out fictions that are “mimetic of the virtual universe.” (My translation)¹⁴

To these theoreticians, the connection between science fiction and reality, which is questioned and exposed in terms of ‘realism’ or ‘plausibility’, relies upon, on the one hand, the accuracy of a scientific fact or the existence of a technology and, on the other hand, the rationality of their extrapolations. In other words, events in SF stories are, as Suvin puts it, “*non-impossible*” (*Poétique 2*). Simon Bréan has formalised this hypothesis into a taxonomy of genres that is based upon their “ontological status” (“*régime ontologique*”), that is to say the relationship between the worlds they depict and the readers’ own world of reference (26):

¹³ *Estrangement* is a concept that originally comes from Berthold Brecht (*Verfremdungseffekt*) to characterise a performance that *estranges* or *distances* an object, only to provide a new perspective on the still recognisable object (Suvin and Favier 100). *Estrangement* thus necessitates “the creation of a radically or significantly different formal framework – a different spatiotemporal location or different protagonists, escaping all empirical verification” (103, my translation).

¹⁴ “Parmi les littératures de l’imaginaire, la SF relève de la perspective dite « réaliste » ou « mimétique ». Elle se distingue toutefois du roman de littérature générale, qui est « mimétique de l’univers du présent » sans décalage, et qui présente un monde compréhensible sans explications supplémentaires, car faisant partie de « l’encyclopédie du lecteur ». (Eco, 1985) [...] La SF met en œuvre des fictions « mimétiques du virtuel »” (Bozzetto 8).

Ontological status			
<p>Minimalist (the world of the text is the world of reference) This is the status of all texts that are submitted to verification criteria.</p>	<p>Poetic (the world of the text is built by the text) This is the status of all fictional texts.</p>		
	<p>Materialist (the relationship between the world of fiction and the world of reference matters)¹⁵ This status is a particular case of the poetic status.</p>		
	<p>Extraordinary (ostensible break between the fictional world and the world of reference)</p>	<p>Rational (fictitious similarity between the fictional world and the world of reference)</p>	<p>Speculative (the fictional world could replace the world of reference)</p>

(Bréan 28, my translation)

This typology makes generic distinctions similar to Suvin and Bozzetto: SF operates according to a (poetic materialist) *speculative* status, heroic fantasy and the supernatural according to an *extraordinary* one and realist novels a *rational* one¹⁶ (28). Interestingly, though, the extraordinary, the rational, and the speculative statuses all fall under the same “poetic materialist” category, which symbolically relativises the usually wide gaps between mimetic and non-mimetic genres and between each of these non-mimetic genres (Bréan 27). It should also be noted that, since all genres are primarily classified according to their relationships to reality (see the “Materialist” level), plausibility seems, again, to be the defining characteristic of science fiction¹⁷ – and has been so since the earliest days of the genre. Indeed, in 1959, leading figure of the genre and its

¹⁵ “importance d’un rapport entre le monde de la fiction et le monde de reference” (Bréan 28).

¹⁶ Brean’s typology is quite relevant and thought-provoking, but a part of his terminology is, according to me, problematic: the word “rational”, in particular confronted to “speculative”, conveys the idea that the speculative is not rational. Yet, most of the SF scholarship argues that, precisely, rationality is central to science fiction since it guarantees the story’s plausibility. In his foundational 1972 *Encyclopédie de l’utopie, des voyages extraordinaires et de la science-fiction*, Pierre Versins indeed defines SF (along with utopia and imaginary voyage) as a set of “rational novelistic conjectures” (5, my translation). Similarly, the word “materialist” is rather misleading, not only because it strongly echoes a popular strand of theory and has, beyond the scope of philosophy, a very specific meaning – all of which Bréan himself acknowledges (27) – but also because delineating a group of “materialist” statuses within the more general “poetic status” implies the existence of non-materialist poetic statuses; yet, no example of such status is provided.

¹⁷ Also see Vas-Deyres 25.

scholarship Robert Heinlein already defines science fiction as “realistic speculation about future events” (qtd. in Seed 1).

It thus seems that the oldest certainty about science fiction concerns its hybridity between what *is* and what *is not* (but *could be*): reality and imagination. As these few references reveal, this ontological hybridity has been acknowledged and theorised in length, but has rarely been isolated from science fiction’s disciplinary hybridity. One might argue that such hybridity had been blatantly featured in the very name of the genre all along, indicating the centrality of science in those nonetheless imaginary narratives, not just in thematic terms but also in methodological terms. The importance of rationality in the science-fiction author’s methodology indeed explains the kinship between the genre and the non-fictional practices of philosophy and science. As a science-fiction motif¹⁸, the posthuman cannot help but carry on the hybridity entailed by the mixed approach of this genre: if science-fiction narratives scientifically justify – and sometimes, explain – their existence and nature, the posthuman might possess the

¹⁸ One can legitimately wonder how to designate the posthuman regarding its recurrence in science fiction: is it a *topos*, a theme, a motif? Although they might all seem suitable, I have opted for the last proposition following Jean Courtès’s reformulation of Erwin Panofsky’s notion of ‘motif’ as a “tripartite organisation of meaning” (Courtès, qtd. in Weil 134): “1—figurative detail corresponding to a concrete element, 2—thematic conceptual abstraction, 3—mythical reading” (Weil 134, my translation). Although Panofsky limits this designation to the first level, the ‘motif’ is nonetheless an essential part in an intricate web of meanings, from the more concrete to the more abstract. Courtès also underlines the importance of recurrence (which was absent from Panofsky’s conceptualisation), especially in twentieth-century literary studies (Courtès 26). The posthuman is therefore a motif in that it takes roots in a concrete, precise figuration (e.g. a cyborg, an android, an A.I., etc.), which evokes a series of themes and concepts (e.g. posthumanity, human nature, bioethics, etc.) as well as myths (e.g. the Golem or Prometheus). Panofsky/Courtès’s use of ‘motif’ corresponds to more casual definitions of the term, such as in the *Routledge Dictionary of Literary Terms*, which depicts the motif as “recurrent local features” that find meaning in their relationship with a more abstract theme. Meanwhile, I have chosen not to call the posthuman a *topos* because, according to Michele Weil, the *topos* is a “recurrent narrative configuration”; as a single word (so, not a phrase), the posthuman could at best be a ‘*toposème*’ (a *topos* being composed of several ‘*toposèmes*’) or an ‘*ensemble topique*’ (which is a configuration of several *topoi*) (128). However, such qualifications are needlessly elaborate for this chapter, whose focus lies elsewhere.

same ontological and disciplinary hybridity as every other element of that narrative. All of it is indeed the product of both rationality and imagination.

As its (science-)fictional nature confirms and reinforces, the posthuman is profoundly hybrid, and texts featuring it – whether theoretical or fictional – cannot escape the influence of such ontological and disciplinary hybridity. This influence manifests thematically, of course, as hybridity is widely discussed in theories of the posthuman and widely represented in fictions with posthuman characters. But hybridity also manifests structurally, especially as the hybrid entity that these texts (conceptually, speculatively or narratively) exploit blurs the line between theory and fiction. In the aforementioned *Science Fiction Studies* issue, Csicsery-Ronay Jr. indeed postulates the merging of science fiction with theory (which echoes the most popular claims of postmodernism) by describing Jean Baudrillard's *Simulacra* and Donna Haraway's *Cyborg* as "The SF of Theory." This description rests upon Baudrillard and Haraway's theories conveying the idea that, as technological progress has come to define our era, theoretical production is bound to amount to science fiction and, inversely, contemporary science fiction has become the best-suited genre to our era and, therefore, a legitimate place for theory – an idea upon which this chapter shall expand.

Originally a fictional character, the posthuman eventually transited from fiction to theory, turning into a (theoretical) concept. However, the fame of posthuman characters – from Mary Shelley's *Frankenstein's* monster to Philip K. Dick's androids, from Aldous Huxley's *Alphas* to James Cameron's *Terminator*, from Gibson's enhanced humans in *Neuromancer* to Charlie Brooker's *Cookies* in *Black Mirror* – definitely surpasses that of

any theory of the posthuman. One can therefore legitimately doubt whether the posthuman ever ceases to be connected to these fictional representations, even in the most abstract of theories; in other words, whether the posthuman can ever achieve the status of a pure concept, untainted by its figurations, which – one cannot stress this enough – precede it and are therefore bound to have participated in its construction. This study certainly shares this doubt, arguing that all theoretical posthumans are heirs to fictional posthumans, but also that the latter prove useful (if not, indispensable) to theories, because reality does not yet provide actual posthumans to theorise upon. Even in theoretical writings, the posthuman is therefore bound to be partly *fictional*, in all senses of the word: (ontologically) feigned and imaginary, (disciplinarily) arising from the cultural practices that constitute fiction. The concept and the character therefore always coexist within the posthuman, which, as a consequence, generates texts whose expected ontological and disciplinary statuses are disturbed, because hybridised. Part II as a whole seeks to reveal the traces of such a phenomenon, first focusing on theoretical texts, and then moving on to the case of fictional texts.

Chapter 5

Fiction in Theory

As mentioned above, postmodern thinkers have famously questioned the boundary between theory and practice. This line of thinking is expanded by Jean-Michel Rabaté in *The Future of Theory* (2002), in which, inspired by Judith Butler, he refuses the vision of theory as “disengaged contemplation” and rehabilitates its political and practical potential (Butler, qtd. in Rabaté 2):

Using different means than demonstrations, fundraising, or lobbying, means that remain closer to the status of a text, Theory functions as a witness in an ongoing trial, and its necessity arises from the moment one realizes that there is precisely such a trial, be it in the field of the humanities or of justice, politics, bioethics, the environment, and so on. Facing these issues, Theory is supposed to ask difficult, foundational questions that all somehow entail revisionary readings of culture and its foundational texts. (Rabaté 8-9)

Rabaté therefore grounds the practical aspect of theory in its attention to texts, which allows him to state:

Theory is not just philosophy and it should not stray too far from the humanities, by which I mean it has to keep a bond, however flexible and dialectical it may be, with literature. Or Theory *is* literature, if you want, but literature raised to the

power of speculation, literature when the term includes the “question of literature” or “the thinking of literature.” (Rabaté 8)

Thus, through the erasure of the theory/practice divide, Rabaté undermines the difference between theory and literature, prolonging the postmodern blending of disciplines: “theory defines a broad site upon which four main domains enmesh and interact: philosophy, history, sciences like linguistics and psychology, and literature (often with the help of the fine arts)” (Rabaté 17).

However, from the nineteenth century onwards, the “Theory” with a capital ‘T’ that Rabaté is alluding to, which is very much concerned with having an impact on the world (also see Erickson 144), in fact corresponds to a specific scholarly practice, critical theory, which is rooted in the works of Hegel, Marx, Nietzsche, Freud, structuralism and post-structuralism (Erickson 143). The latter, also popularly called “French Theory”, includes familiar names – Deleuze, Derrida, Guattari, Irigaray, Lacan, Latour, Lyotard, Serres, Virilio, Baudrillard, Kristeva, Foucault (Rabaté 12) –, many of which have indeed been identified in Part I as instrumental in the development of the posthumanist thought. The materialist critique undertaken by critical theorists, relying upon the questioning of assumptions (Erickson 146), as well as the nature of these assumptions (especially Reason and other Enlightenment ideals¹) indeed lay the methodological and thematic foundations of posthumanism. Besides this critical posture, posthumanism also inherited the interdisciplinarity described above (cf. Rabaté 17). As Part I has shown, posthumanist theories have emerged from scholars with backgrounds as diversified as philosophy, sociology, literature, communication, or even the hard sciences. Interdisciplinarity is not only a legacy of critical theory, but also a necessity, as the multi-

¹ See Erickson 143.

faceted hybrid nature of the posthuman requires the intervention of various disciplines: speculating about a technological being has to be grounded in technological, scientific or even socio-cultural considerations, but using such a figure to re-conceptualise the human can generate reflections across all fields of the Humanities. Among these influential fields, literature – and more widely, fiction – is the one that this study is particularly interested in, seeking to shed light upon its occurrences in theoretical texts, in order to evidence the posthuman-related hybridity of these texts.

As postulated by Lavocat, the ontological hybridity of a text goes through the heterogeneity of its references, which can concern the world of the text itself ("*intra-référentiel*"), the worlds of other texts ("*inter-référentiel*") and the actual world ("*extra-référentiel*"). This referential variety can be located in several textual processes, amongst which Lavocat mentions: naming characters after real people and historical figures to feign their presence in the narrative, quoting directly from other fictions, and having a narrative refer simultaneously to various worlds (amongst which, the actual one) by way of allegory (*Fait* 40). Even though Lavocat was writing about fiction, not theory, the same referential variety can affect, and therefore hybridise, theory.

Let us start with the last of these processes, double referentiality. As, in fiction, it manifests through allegory and entails multiple layers of signification, one might doubt of its presence in theory. This, however, is when the hybridity of the posthuman – as a fictional character, a speculative technological being and a theoretical concept – becomes significant. As mentioned in Chapter 3, a portion of theories indeed maintain the ambiguity of the posthuman, either embracing it and making it explicit, or ambiguously keeping it alive by not addressing it altogether. The most famous case is

that of Donna Haraway's cyborg, which is, as she claims, "an ironic political myth faithful to feminism, socialism and materialism" ('Manifesto' 7) and "a matter of fiction and lived experience that changes what counts as women's experience in the late twentieth century" ('Manifesto' 8). This, as mentioned in Chapter 2, has misled some of Haraway's readers to thinking that the cyborg was nothing more than an allegory of said experience. Yet, the hegemony of Haraway is visible not only in feminist but also in animal and technoscience studies, proving that her cyborg is more than a mere allegory; it is also discussed for what it *is* at that time in popular culture: a being resulting from technoscientific progress, a hybrid in many ways, a posthuman. Somehow, Haraway explicitly acknowledges the ambivalence of the cyborg: "The boundary is permeable between tool and myth, instrument and concept, historical systems of social relations and historical anatomies of possible bodies, including objects of knowledge. Indeed, myth and tool constitute each other" (23). The cyborg – not just the fictional character, but also the possibility of its existence in the actual world – participates in constructing her new myth, just as her new myth shapes a new *concept* of the cyborg.

Because the posthuman is essentially hybrid, double referentiality has pervaded theories of the posthuman since as early as Haraway. This referential hybridity can also manifest through another type of textual apparatus: references and citations.² Rarely, indeed, do theories of the posthuman fail to evoke fictional works, from the usual suspects – Mary Shelley, H.G. Wells, Aldous Huxley, Isaac Asimov, Phillip K. Dick or

² Lavocat postulates the possibility for a *fiction* to refer to 1) the world it itself builds, 2) the world built by other fictions, and 3) the actual world. Since this section considers the referential heterogeneity of *theory*, and that the world that it builds is supposed to be an explanation of the actual world, it can only refer to 1) the actual world and 2) fictional worlds.

Ursula LeGuin's now canonised novels – to less canonic, more recent or more mainstream³ narratives. However, these references to fictional posthumans are used with a variety of justifications, purposes and effects, following two main approaches, which generally correspond to two phases in the theoretical development of the posthuman: induction and deduction.

Phase 1: The Inductive Approach

In her contribution to *The Transhumanist Reader*, Natasha Vita-More writes: "how can we thoughtfully assess and critique the advantages and obstacles of a transhuman if we cannot now build such an existence – in other words, be *in* the experience?" ('Aesthetics' 19) Indeed, how can one theorise upon the transhuman or the posthuman⁴ if it does not (yet) exist? The answer lies, of course, in fiction. Myths, then literature, then cinema, then television, then video games (as well as other figurative media) have actively participated in the construction and conceptualisation of the posthuman, in all of its discourses.

With postmodern literary scholar Ihab Hassan as first theoretician (and coiner)⁵, the foundations of posthumanism are expectedly quite literary. "Prometheus as Performer: Toward a Posthumanist Culture" (1977) literally stages the importance of fiction: structurally, the article takes the form of a play whose characters are concepts derived from the text (Pretext, Mythotext, Text, Heterotext, Context, Metatext, Posttext

³ Here, 'mainstream' describes fictions featuring SF topoi that have not been written by authors normally associated with science fiction but instead by general, usually acclaimed authors. Bruce Sterling has called this phenomenon "Slipstream" (cf. Conclusion, "From Here to There").

⁴ To the transhumanists, the difference between the transhuman and the posthuman lies in the level of evolution of the enhanced being and, accordingly, its degree of remaining humanity.

⁵ See Chapter 2 .

et Paratext); thematically, the article discusses the Promethean myth as the basis of Hassan's seminal reflection about posthumanism.

A few years later, Haraway develops her conceptual posthuman, the cyborg, which, as mentioned in Chapter 2, was the basis of most posthumanist theories. In her "Manifesto for Cyborgs" (1984), Haraway abundantly refers to fiction and repeatedly emphasises how the cyborg, as hybrid being that questions the foundational dualist categories of Western civilisations, blurs the boundary between fiction and reality:

A cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction. [...] The cyborg is a matter of fiction and lived experience that changes what counts as women's experience in the late twentieth century. This is a struggle over life and death, but the boundary between science fiction and social reality is an optical illusion. [...] I am making an argument for the cyborg as a fiction mapping our social and bodily reality and as an imaginative resource suggesting some very fruitful couplings. [...] The cyborg is a condensed image of both imagination and material reality. ('Manifesto' 7-8)

This description of the cyborg seems to echo its double nature as a concept and a character, even more so a character of science fiction, a genre whose "double referentiality" (Lavocat, *Fait* 40) is amongst its defining traits. Whether by the anticipative nature of a story (which therefore has the present as a starting point) or by the presence of an allegorical level of meaning (which therefore refers to a real-world situation), SF builds an imaginary world while simultaneously commenting on the real one. The posthumans featured in science fiction are thus speculations as much as metaphors of an element of their inventors' reality. Fiction and reality nourish each other. Consequently, Haraway finds inspiration in both "social reality" (*Reader* 7) and literature:

I am indebted in this story to writers like Joanna Russ, Samuel R. Delany, John Varley, James Tiptree Jr., Octavia Butler, Monique Wittig, and Vonda McIntyre.

These are our storytellers exploring what it means to be embodied in high-tech worlds. They are theorists for cyborgs. (Reader 31)

By acknowledging the influence of writers on her reflection, Haraway brings into focus the role of fiction in the development of cyborg theory (which has led to posthumanism). Haraway further stresses the importance of fiction as she formulates her concept of cyborg: "I will look briefly at two overlapping groups of texts for their insight into the construction of a potentially helpful cyborg myth: constructions of women of color and monstrous selves in feminist science fiction" (Reader 37). A series of literary references thus populates the manifesto: on the one hand, *Sister Outsider* by Audre Lorde, *Loving in the War Years* by Cherrie Moraga et *The Ship Who Sang* by Anne McCaffrey; on the other hand, *The Adventures of Alyx* and *The Female Man* by Joanna Russ, *Tales of Nevérÿon* by Samuel Delany, the work of James Tiptree Jr. and John Varley, Octavia Butler's *Wild Seed*, *Kindred* and *Survivor*, and *Superluminal* by Vonda McIntyre. Fiction – and a *fortiori* science fiction – is therefore central to Haraway's manifesto, but has also been so to her other, more recent books. In *Staying with the Trouble: Making Kin in the Chthulucene* (2016), she even comments of the recurrence of the 'SF' motif in her work:

An ubiquitous figure in this book is SF: science fiction, speculative fabulation, string figures, speculative feminism, science fact, so far. [...] Science fact and speculative fabulation need each other, and both need speculative feminism. I think of SF and string figures in a triple sense of figuring. First, promiscuously plucking out fibers in clotted and dense events and practices, I try to follow the threads where they lead in order to track them and find their tangles and patterns crucial for staying with the trouble in real and particular places and times. In that sense, SF is a method of tracing, of following a thread in the dark, in a dangerous true tale of adventure, where who lives and who dies and how might become clearer for the cultivating of multispecies justice. Second, the string figure is not the tracking but rather the actual thing, the pattern and assembly that solicits response, the thing that is not oneself but with which one must go on. Third, string figuring is passing on and receiving, making and

unmaking, picking up threads and dropping them. SF is practice and process; it is becoming-with each other in surprising relays; it is a figure for ongoingness in the Chthulucene. (*Staying* 2–3)

Thus, twenty-five years after her *Manifesto*, Haraway continues to assert the co-dependent relationship of fiction and reality. Moreover, in her reflection, science fiction seems to be as influent as ever: not only does it help her develop her thought; it also serves as the common thread running through all of her writings.

Scott Bukatman's "Postcards from a Posthuman Solar System" is even more visibly rooted in literature, since – along with the entire *Science Fiction Studies* 1991 issue in which it appears – it focuses on (mainly literary) science fiction. Bukatman's article features literary references (*Crash* by J.G. Ballard, *Limbo* by Bernard Wolfe and, above all, *Schismatrix* by Bruce Sterling) as well as theoretical concepts (Haraway's *cyborg* and Deleuze and Guattari's *Body without Organs*), but the former takes significantly more space. Early in the article, Bukatman acknowledges the potential of fiction to contribute equally to reflections carried out in other fields:

At the intersection of cybernetics and phenomenology, the body already operates as an *interface* between mind and experience, but in contemporary SF and horror, the body is also narrated as a site of exploration and transfiguration, through which an interface with an electronically based postmodern experience is inscribed. [...] The SF text stages the superimposition of technology upon the human in all its effects. (Bukatman n.p.)

Fiction does not just echo theoretical reflections, but also allows an infinite number of possibilities – here, regarding the relationship between the body and technology – thus proving quite precious to further theoretical developments.

In *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (1999), N. Katherine Hayles traces the history of cybernetics, whose various steps she illustrates with complex literary analyses of *Limbo* by Bernard Wolfe, Philip K.

Dick android novels, William S. Burroughs's work, especially *The Ticket That Exploded*, Greg Bear's *Blood Music*, Neal Stephenson's *Snow Crash*, Cole Perriman's *Terminal Games* and *Galatea 2.2* by Richard Powers. Hayles defines literature as an integral part of her research methodology, alongside scientific practices:

Following this thread, I was led into a maze of developments that turned into a six-year odyssey of researching archives in the history of cybernetics, interviewing scientists in computational biology and artificial life, reading cultural and literary texts concerned with information technologies, visiting laboratories engaged in research on virtual reality, and grappling with technical articles in cybernetics, information theory, *autopoiesis*, computer simulation, and cognitive science. (*How We Became 2*)

When Hayles explains that her book discusses theories, practical applications as well as literary representations of each of the three phases of cybernetics (*How We Became* 20–21), she explicitly questions the idea that science influences literature exclusively and instead postulates the opposite, as evidenced by the influence of William Gibson's *Neuromancer* on tri-dimensional imagery (21). Just as Haraway considered science-fiction writers as the first theoreticians of the cyborg, Hayles redeems literature as a generator of theory rather than a mere illustrator: "Here the literary texts play a central role, for they display the passageways that enabled stories coming out of narrowly focused scientific theories to circulate more widely through the body politic." (21) The literary text is thus essential to Hayles's undertaking because it helps her understand and represent the stakes of cybernetics. Hayles also grants fiction other benefits: on the one hand it allows considering ethical and cultural implications of scientific theories and progress –

Shaped by different conventions, the literary texts range across a spectrum of issues that the scientific texts only fitfully illuminate, including the ethical and cultural implications of cybernetic technologies. [...] Literary texts are not, of course, merely passive conduits. They actively shape what the technologies

mean and what the scientific theories signify in cultural contexts. They also embody assumptions similar to those that permeated the scientific theories at critical points. (21)

– on the other hand, as conveyed by the last sentence, the literary text *embodies* scientific assumptions and proves Hayles's thesis according to which the virtual cannot be entirely disembodied:

Embedding ideas and artifacts in the situated specificities of narrative, the literary texts give these ideas and artifacts a local habitation and a name through discursive formulations whose effects are specific to that textual body. In exploring these effects, I want to demonstrate, on multiple levels and in many ways, that abstract pattern can never fully capture the embodied actuality, unless it is as prolix and noisy as the body itself. (22)

Lastly, in the manner of Haraway, Hayles seems to consider the relationship between literature and theory (especially scientific theory) as one of mutual dependency and reciprocity: "culture circulates through science no less than science circulates through culture" (21).

Published the same year as Hayles's *How We Became Posthuman*, Rutsky's *High Technè: Art and Technology from the Machine Aesthetic to the Posthuman* (1999) similarly emphasises the importance of fictional representations by focusing on art, thus prominently referring to fiction, especially science fiction. The first chapter, "The Spirit of Utopia and the Birth of the Cinematic Machine" extensively discusses Mary Shelley's *Frankenstein*. The second chapter, "The Mediation of Technology and Gender" focuses on Fritz Lang's *Metropolis*. The fourth chapter "Within the Space of High Tech" explains how cyberpunk fiction (William Gibson's novels or movies such as Ridley Scott's *Blade Runner*, Paul Verhoeven's *RoboCop* or the Wachowskis' *The Matrix*) conveys several aspects of post-modernity (complexity, urbanity, techno-culture). Lastly, the fifth chapter argues that science-fictional figurations – both theoretical (such as Haraway's cyborg or

Deleuze and Guattari's *Body Without Organs*) and fictional⁶– are more the products of the techno-cultural unconscious than of particular authors and mutate as the unconscious changes (21).

The content of this book thus conveys how fiction is central to its author's reflection, which is confirmed explicit comments on fiction's equivalence to theory –

when theorists such as Donna Haraway speak of “a kind of science fictional move, imagining possible worlds,” and science-fiction writers such as William Gibson and Bruce Sterling suggest that our world has already become science-fictional, the distinction between theoretical and science-fiction texts seems to have become less and less the point. (14)

– or its theoretical potential:

Yet, although [William Gibson's] representation of a generative, “artistic” technological agency may be figurative, this is not to say that it is simply a mystification, that it is atheoretical, or simply false [...]. Indeed, [...] in a techno-cultural space that is too complex and chaotic to be represented as a totality, such figures are perhaps the only way to theorize our relation to the techno-cultural world around us. (20-21)

Clearly, Rutsky does not consider fiction as a mere illustration of philosophical issues; instead, not only is fiction the result of the techno-cultural unconscious, but it also participates in shaping techno-culture.

Among these foundational texts for the posthuman, one notices that references to specific fictions are often accompanied by references to fiction in general: Haraway and Hayles mention the primacy of fiction over theory and sometimes even over science, as well as the reciprocal nurture between fiction, on the one hand, and reality, science or theory, on the other; Bukatman emphasises the way fiction may provide an

⁶ Rutsky discusses William Gibson's *Neuromancer*, Vernor Vinge's novella “True Names”, Marge Piercy's *He, She and It*, the different versions of *Godzilla* and *Mothra*, Fritz Lang's *Metropolis*, Fred Wilcox's *Forbidden Planet*, Eugene Lourié's *The Beast from 20,000 Fathoms*, James Cameron's *Terminator* and *Terminator 2*, David Cronenberg's *Videodrome* Steve Barron's *Electric Dreams*, John Badham's *Short Circuit*, TV series *Star Trek: The Next Generation*, *Super Dimension Fortress Macross* and *Max Headroom* or *Marvel* comics.

original perspective on the posthuman, hence completing (and sometimes challenging) philosophical and scientific ones; and Rutsky claims that, in our “techno-cultural world”, science fiction is tantamount to theory, as the fictional posthuman might be the only way to apprehend this era’s changes. These statements about fiction as a whole seem to contribute to the legitimation of fiction as a space of exploration and reflection about real-world issues.

One might also notice that these texts all belong to the same group of theories of the posthuman, which can be referred to as the developmental period of posthumanism. ‘Posthumanism’ because theories of the posthuman contribute to shaping the body of discourse that is now labelled as posthumanism (which differs from transhumanism by its critical perspective, its philosophical and theoretical background, and its strong integration in the Humanities⁷). ‘Developmental’ refers to the organisation of Part I: Chapters 1 and 2 are diachronic studies of the development of the posthuman through transhumanist and posthumanist discourses, from the 1957 to 1999, while Chapter 3 is a synchronic study of twenty-first-century theories of the posthuman. Noticing an increase in the popularity of the posthuman in scholarly works at the turn of the century, I have grounded this choice on its shifting status, from an idea under construction to a settled, functioning and transferable concept. This shift is embodied by the publication of Neil Badmington’s Reader *Posthumanism*, an anthology of theoretical texts (see Chapter 3). That the inductive uses (and hence valorisations) of

⁷ Note that a few transhumanist thinkers nonetheless acknowledge the importance of fiction in the development of the posthuman. I have already mentioned that Natasha Vita-More could not imagine envisioning what she calls ‘the transhuman’ without taking into account the aesthetics that participated in it conceptualisation (Vita-More, ‘Aesthetics’ 19). For example, similarly to Rutsky, transhumanist Ben Goertzel states: “it’s our collective visions of the future that will shape what occurs.”

fiction mainly⁸ occur during this twentieth-century developmental period not only validates my organisational choices, but it is also quite logical, since the theoretical framework that could have allowed a deductive approach was precisely under construction.

Phase 2: The Deductive Approach

From 2000 onwards,⁹ works focusing on conceptualising, theorising or historicising the posthuman started to appear (see Chapter 3), providing a more refined theoretical framework for further and more diversified studies of the posthuman. Consequently, twenty-first-century theories of the posthuman tend to have a deductive approach towards fiction: it no longer contributes to the conceptualisation of the posthuman but is instead confined to an illustrating or testing role. The starting point of reflection is therefore the theoretical framework, whose relevance is either questioned or confirmed by a series of fictional references. The posthuman as a concept no longer emerges from but precedes fictional references and analyses. In concrete terms, a significant part of the scholarship studies the presence of posthumanist discourses in fiction, thereby generating, in Herbrechter and Callus's words, "posthumanist readings"¹⁰ of a fictional work. Fiction can indeed "represent posthumanist issues" (Mahon 140) – and the word 'represent' is here quite telling: if it *re-presents* posthumanist issues, it means that these

⁸ There are some exceptions, such as Neil Badmington's "Theorizing Posthumanism" and Desprez and Lecuit's *L'homme, une chose comme les autres?* (2012), for example.

⁹ Again, here, there are a few exceptions, such as Halberstam and Livingston's *Posthuman Bodies* (1995), which does not explore the meaning or genealogy of the posthuman, as if the concept was either self-explanatory or already stabilised and widespread. Fiction is therefore illustrative rather than constitutive (since the posthuman is already constructed).

¹⁰ The same idea guides Herbrechter's 2013 book *Posthumanism: A Critical Analysis*: "The present chapter will therefore not only investigate the notions of 'technoculture' and 'technoscience' at work in science fiction, but it will also, in the form of critical posthumanist readings of some examples of science fiction, analyse the general relationship between humanism and technology" (108).

issues, and posthumanism altogether, pre-exist interpretation. Posthumanism as a theoretical discourse and the posthuman as a concept indeed need to exist before serving as a framework for the analysis of fiction.

The majority of nowadays' works on the posthuman features such a use of fiction. In *El hombre postorgánico: Cuerpo, subjetividad y tecnologías digitales* (2005), Sibilía uses fiction to illustrate the various aspects of our evolution towards the posthuman. Stefan Herbrechter's 2013 *Posthumanism: A Critical Analysis* not only claims to carry "critical posthumanist readings" (108), but also frequently features expressions such as "posthuman vision of technology" (108). The use of 'posthuman' or 'posthumanist' as an adjective conveys the idea that its meaning is a given, that it is not open to dispute, and thus precedes the reading. In his encyclopaedia of trans- and posthumanism, as in most of his other works, Gilbert Hottois emphasises the illustrative function of science-fiction literature by filling his philosophical developments with literary references and analyses.¹¹

Most predictably, studies that propose the analysis of a specific theme in light of the posthuman¹² tend to present this deductive approach, even when the theme is fiction itself. For instance, in *Representations of the Post/human* (2002), Graham starts

¹¹ "La SF est un terrain privilégié pour l'expression imaginaire de l'éventail complet des « préfixes de l'humain. [...] Renard invite implicitement à distinguer trois imaginaires respectivement inspirés par l'humain, le transhumain et le posthumain. [...] Nous présentons très brièvement ci-dessous un choix d'univers qui illustrent les thématiques postmodernes et à des degrés divers transhumanistes et/ou posthumanistes." (412-419) Note that Hottois also acknowledged the importance of SF in the development of theories of the posthuman. In one of his last, unpublished texts, he wrote: "Le trans/posthumanisme a le mérite de rassembler un grand nombre des interrogations philosophiques relatives à l'avenir de notre civilisation technoscientifique et multiculturelle. Sa matrice imaginaire et spéculative est, pour une part importante, la science-fiction."

¹² These themes includes medical imagery (Waldby), politics (Hables Gray), fetishism (Ferbach), international relations (Cudworth & Hobden), theology (Thweatt-Bates), animals (Wolfe), the environment (Westling), popular culture (Graham, Toffoletti, Essed & Schwab), literature (Yi, Taylor, Clarke, Rosendhal-Thomsen, Bieber-Lake, Després & Machinal, Tremblais-Cléroux, Clarke & Rossini), and the graphic novel (King & Page).

from theories (by Haraway and Hayles, amongst others), which she exemplifies with fictions such as *Blade Runner* (5). Dinello's repetitive, uncontextualised use of "posthuman" in the very first paragraph of *Technophobia!* (2005) similarly conveys a sense of obviousness regarding its meaning. In *Cyborgs and Barbie Dolls* (2007), Kim Toffoletti writes that most of her book "is devoted to analysing particular examples of the posthuman body in popular culture" (5). In *Posthuman Metamorphosis* (2008) Clarke states:

In the last two decades the theoretical trope of the posthuman has upped the ante on the notion of the postmodern. The common effect of its several definitions is to relativize the human by coupling it to some other order of being. This study examines a series of narratives of posthuman metamorphosis, culminating in Octavia Butler's Xenogenesis trilogy (2-3).

In Haney's *Globalization and the Posthuman* (2009), the analysis of science-fiction literature is not meant to characterise the concept of consciousness rather than that of the posthuman (the definition and tradition of which is already described in his introduction). In the "Literature" chapter of Ranisch and Sorgner's *Post- and Transhumanism: An Introduction* (2014), Marcus Rockoff establishes three "classes of references to transhumanism in literature" (254) – "references to specific technologies relevant for transhumanism (254), "thematological references to the transhumanist idea of overcoming human nature" (255), "references to transhumanism as an international movement" (259) – which all presupposes the existence of transhumanism as a discursive and thematic tradition, while the illustrative role of literature is expanded upon in the section "Everybody's Darling: Using Literature to Illustrate the Pros and Cons of Post- and Transhumanism" (262). In the chapter "Science Fiction Literature" of the same volume, Domna Pastourmatzi claims that in "Anglophone science fiction [...],

under the guise of entertainment, the transhumanist and posthumanist agendas are being explained, scrutinized, extolled, undermined, materialized or debunked" (274), implying that a lot of science fiction is nowadays read from the posthumanist or transhumanist perspective. The articles in Després and Machinal's collection *PostHumains: Frontières, évolutions, hybridités* (2014) contains analyses of fictional works through the lens of theories of the posthuman. Rosendhal Thomsen's *The New Human in Literature* (2013) starts with an extensive theoretical introduction and situates himself in line with Haraway, Hayles and Graham, before providing posthumanist readings of authors such as Virginia Woolf, William Carlos Williams, Louis-Ferdinand Céline, Chinua Achebe, Mo Yan, Orhan Pamuk, Don DeLillo or Michel Houellebecq. Wallace's *DH Lawrence, Science and the Posthuman* (2005), Herbrechter and Callus's *Cy-Borges: Memories of the Posthuman in the Work of Jorge Luis Borges (Cy-Borges 2009)*, Herbrechter's *Posthumanist Shakespeares (Shakespeares 2012)*, and several chapters of *The Cambridge Companion to Literature and the Posthuman* (2017), feature posthumanist interpretations of fiction, including medieval, pre-modern, romantic, modern and postmodern texts. These last examples convey an important notion: what matters, in identifying a deductive approach, is not the date of the fiction itself, but the date of its interpretation. In other words, even though the analysed fictions have been produced well *before* the birth of theories of the posthuman, they may be part of a deductive study of the posthuman, that is, if the study *postdates* these theories and is therefore likely to use them as an analytical framework.

Whether fiction is used to build or illustrate the posthuman, it remains a means of theoretical exploration. Under an inductive approach, fiction is a site whose

exploration leads to a series of observations regarding the fictional posthuman, these observations then becoming characteristics of the conceptual posthuman. Under a deductive approach, fiction allows testing the resulting concept, explore its (ir)relevance and, when needed, propose adjustments, thereby precipitating theory in a salutary feedback loop. If they work according to an ideal of objectivity, both approaches should therefore be open and critical. Even under the deductive approach, which may seem more driven as it is guided by an already-established theoretical model, the presence of fiction remains quite constructive, as it usually confirms the model just as much as it opens up new horizons. In short, in a critical and objective environment, fiction may be *used*, but it is never *utilised*.

In some occasions, however, fictions (especially the classics) are not referred to for their shaping or exemplifying potential, but for what they represent in the collective unconscious. For example, in *The Posthuman* (2013) Rosi Braidotti writes: "This is not Huxley's *Brave New World*, that is to say a dystopian rendition of the worst modernist nightmares" (Braidotti 197). She does not mention Huxley's novel in order to establish its contribution to the current concept of the posthuman, or to carry out an analysis that would reveal the posthumanity of its characters or its underlying posthumanist (or transhumanist) discourse; instead, she mentions this classic of science fiction because it is likely to prompt the same images and reactions amongst all of her readers. The classic acts as a shortcut towards a better and faster understanding of what she intends to describe. Similarly, in *Le Transhumanisme en 12 Questions*, Jean-Michel Besnier and Laurent Alexandre are asked whether we should fear a "brave new world" ("Doit-on craindre un "meilleur des mondes?"), as Huxley's novel, which is very briefly described

and whose popularity is emphasised, is presented as on the verge of becoming reality. Luc Ferry, for his part, argues that there is something quite Orwellian about transhumanism (n.p.): without citing or explaining *1984*, but with the mere mention of its author, Ferry manages to convey a rather negative image of transhumanism relying upon the reader's knowledge, if not of the novel itself, at least of what it evokes in Western culture.

These last two texts, however, differ from Braidotti's or any of the previously mentioned theories of the posthuman, in that they clearly present an ideological or political significance, which fundamentally changes their relationship to fiction.

Special Case: The Ideological Approach

In this context, fiction no longer serves to explore – or be explored through – the posthuman, but is likely to be utilised in order to legitimate one's opinion. This raises several issues: how can the inherent ambiguity and critical significance of fiction be handled by a text whose intention is to drive its readers to a specific conclusion? What if the underlying discourse of a work of fiction clashes with the one that the author intends to convey? To answer these questions, it is relevant to have a closer look at the treatment of fiction by two ideologically charged groups: the bio-conservatives and the transhumanists.

Fiction has been an important intertext to transhumanist theories from their earliest days. In *Man Into Superman* (see Chapter 1) and especially in the third chapter, "From Gilgamesh to Olaf Stapledon," Robert Ettinger establishes a survey of mythical and/or literary representations of "supermen": Sumer mythical semi-god Gilgamesh, Friedrich Nietzsche's *Übermensch*, George Orwell's *1984*'s oligarchs, Oriental saints,

G.B. Shaw's *Man and Superman*, Arthur Conan Doyle's and Rex Stout's super detectives as well as H.G. Wells, Olaf Stapledon, Stanley G. Weinbaurn, A.E. van Vogt, Arthur C. Clarke and Alfred Bester's supermen. Of the last six writers' works, Ettinger has a most negative opinion. Weinbaurn's *The New Adam* (1939) is "nearly a total catastrophe" (34) because it does not feature details about the creation of the superman; Van Vogt's *Slan* (1946) "was not the actual delineation of supermen" (34) but a mere "intricate and fast-paced adventure"; Clarke's *The City and the Stars* (1948) was "badly flawed" (35) and *Childhood's End* does not give "even semi-explicit reasons" (35) for the attributes of its supermen; Bester's *The Demolished Man* supermen are "emotionally and socially interesting" but "the developments are halting and unconvincing" (*Superman* 35). In short, Ettinger's laments are threefold: either the story is not explicit enough about the process leading to the existence of supermen, or it features but emotional and social implications of their existence, or else it simply does not correspond to Ettinger's views on the topic. In his conclusion, Ettinger indeed emphasises how frustrating literature may be, since it generally pictures supermen as ultimately proud, arrogant, cold and calculating (35-36).

Ettinger's apparent conflict with science fiction literature must be incident to the share of criticism regarding the technologies that these novels depict. This can only clash with Ettinger's optimistic and techno-progressive earlier form of transhumanism – a form of transhumanism that is not yet concerned with ethics. Ettinger's treatment of fiction indeed epitomises the usual gap between the transhumanists' expectations and the "reality" of science fiction literature: rarely is science fiction unambiguously and unreservedly optimistic about technological progress, contrary to most transhumanists.

In "5 Positive Science Fiction Novels To Enjoy While Waiting for the Singularity," Jacob Stoddart laments that "many of today's SF authors believe we'll wipe ourselves out with global warming, financial meltdowns, or another *catastrophe du jour*, before we have a chance to rise above our natures" (n.p.). For this reason precisely, science fiction can prove to be a powerful ideological weapon in the hands of techno-phobic, conservative thinkers, who use it as a warning or a cautionary tale against an invasive and uncontrolled incursion of technology in human societies and bodies.

This is exactly how Francis Fukuyama uses science fiction in *Our Posthuman Future: Consequence of the Biotechnology Revolution*. In the introduction, "A Tale of Two Dystopias," Fukuyama summons *Brave New World* by Aldous Huxley and *1984* by George Orwell, the visionary character of which he insists upon. He indeed refers to Peter Huber, who saw in computers the realisation of Orwell's telescreens and the sequencing of DNA by the *Human Genome Project* (between 1993 and 2003) as the start of a slope leading to Huxley's dystopia. Fukuyama thus advocates for a defence of human nature:

The aim of the book is to argue that Huxley was right, that the most significant threat posed by contemporary biotechnology is the possibility that it will alter human nature and thereby move us into a « posthuman » stage of history. This is important, I will argue, because human nature exists, is a meaningful concept, and has provided a stable continuity to our experience as a species. It is, conjointly with religion, what defines our most basic values. (*Our Posthuman* 7)

Of course, such a defence of human nature as a stable concept is entirely opposed to that conveyed by posthumanists, because it reaffirms the exceptionality of the human species over other animals and asserts humans' duty to cultivate their difference and superiority. Even though the latter idea is not so remote from some transhumanist vision of the human, it stems from a conservative standpoint and therefore leads to the

opposite conclusion that human nature should be safeguarded as it is, neither diminished or evacuated (as with posthumanists), nor enhanced (as with transhumanists).

The recurrent pessimism of science fiction – which does not necessarily convey the author’s own pessimism but can simply be the result of the narrative’s fundamental need for something to go wrong – enters in contradiction with the techno-progressivism and optimism of transhumanists. Yet, as one of the few ways for transhumanists to “be *in the experience*” (Vita-More), these fictions are as uncooperative as they are inescapable. The tension that arises from this troubled relationship is worth examining, especially in instances where the clash is the most apparent and inevitable: transhumanist reviews of science fiction works.

Max More’s magazine *Extropy*, the earliest self-proclaimed transhumanist publication, featured a section called “The Transhuman Taste¹³” from the sixth issue onwards. On its first occurrence, this section was introduced by MP Infinity, who precisely voices the difficulty of reading science fiction as a transhumanist:

extropians are in an awkward situation when we try to find aesthetic gratification. On the one hand, the traditional humanities glorify entropic forces – Ignorance, State, Religion, and Death. On the other hand, the art of the posthuman Singularity, where our extropic values come to fruition, is not yet available – and even if it were, we would not be able to understand it. Between the humanities and the posthumanities we are groping for the transhumanities, where extropic values are expressed in forms which extropic humans can appreciate. This new column, “The Transhuman Taste”, will review arts which explore extropic themes. (23)

This introduction is surprising in many ways, not only for its attack against “traditional” – *i.e.* non-extropic – “humanities,” which are groundlessly accused of exalting “Ignorance,

¹³ Note that Max More had already mentioned fiction in his *Extropian Principles*, though quite elusively since it was just in a reading list of theoretical or scientific works as well as fictional works, in which he actually warned: “appearance on this list should not be taken to imply full agreement of the author with the extropian principles” (More, ‘Extropian Principles’ 18).

State, Religion, and Death,” but also for its inaccuracy regarding the works that the section actually feature thereafter. As a matter of fact, while it claims to be seeking “aesthetic gratification” and reviewing “arts which explore extropic themes,” only four reviews out of 38 reviews (contained in the seventeen issues that were published from 1988 to 1996) are devoted to fiction; the rest of them are reviews of scientific or theoretical works. *Humanity+* and the *Institute for Ethics of Emerging Technologies* (see Chapter 1), other transhumanist associations founded by ex-members of the *Extropy Institute*, also feature reviews of fictions in their respective publications, *H+ Magazine* (since 2008) and the *Journal of Evolution and Technology*. Finally, several reviews of science fiction novels and films can also be found on *KurzweilAI.net* (since 2000), a news website maintained by transhumanist and Google consultant Ray Kurzweil, with contributions from various transhumanists. These reviews present recurring patterns of analysis and strategies to either deal with “uncooperative” science fiction or, whenever a novel or film would comply with the transhumanist agenda, valorise such work. The issue with which the transhumanist reviewers have most often been concerned is, indeed, whether a work corresponds to transhumanist values, which usually entails a positive representation of technology and, if applicable, transhumanism and transhumanists.

If it does, they flesh out the characteristics that make it so, which usually results in a praise of the plot’s scientific accuracy and/or plausibility, its technological optimism and its positive representations of (transhumanist) scientists. For example, Max More’s review of *Silicon Man* by Charles Platt praises “the realistic feel of the characterization” and “the convincing technology portrayed in the story” (“The Silicon Man by Charles

Platt' 47). Ben Goertzel congratulates Ramex Naam on the way "the computer software and hardware and neuroscience aspects of the novel [Nexus] are worked out in a speculative yet impressively plausible way" ('Nexus' n.p.). Goertzel's review of Zoltan Istvan's *The Transhumanist Wager* also massively features this emphasis on plausibility and accuracy:

[It is] a fascinating exploration of a *reasonably plausible* near-term future[...]. The author's understanding of the current challenges faced by the transhumanist movement, and the sort of events that could help overcome them, seems *spot-on* to me based on my own ample experience with such matter. And the author's understanding of near to mid term future transhumanist technologies seems *accurate*. This is not the sort of hard SF book that's full of new scientific ideas; its innovations are more in the political and social sphere, but the science and tech are *handled with accuracy and integrity*. [...] I think that part of the book is done with *impressive realism*. It seems like the kind of thing that could actually happen. And there are enough religious conservatives in the US, with enough political pull, that a War on Transhumanism, analogous to the hopeless War on Drugs that now seems to finally be beginning to end, is *not implausible* either. [...] I doubt that's how things are going to unfold, but it *doesn't strike me as beyond the pale*. (Goertzel n.p., my emphasis)

The reviews of such complying novels usually comes with aesthetic valorisation, which – for novels that do not always prioritise the aesthetic component – results in the heavy presence of euphemisms, as to warn the reader not to expect a literary *chef-d'oeuvre*. For example, despite his praise of plausibility and accuracy, Goertzel admits, (1) about Istvan's *The Transhumanist Wager*, that "this is not a Proust novel, it's a techno-thriller," and that "it's entertainingly written, more in the style of classic SF than literary SF" though he "wouldn't accuse the book of literary perfection" ('Transhumanist Wager' n.p.); and (2) about Naam's *Nexus*, that this is "possibly not the greatest literary work of all time" ('Nexus' n.p.). Regarding *The Transhumanist Wager*, Giulio Prisco also wrote that it was "painted in strong saturated colors with little room for intermediate shades

and character development“(‘Transhumanist Wager’ n.p.) which might sugar-codedly signify Manichaeism and shallowness.

If, on the contrary, the work does not convey transhumanist values or, at least, an optimistic representation of technical progress, the reviewers would rather resort to coping mechanisms, which, according to my survey, number two: discredit and denial. For the first strategy, reviewers undermine the scientific accuracy or plausibility of the novel and, incidentally, devalorise it aesthetically. Thus, about Hadelman’s *Buying Time*, MP Infinity writes:

Any one of these developments would revolutionize the world, but Haldeman’s indiscriminate mixing of these elements does not generate the right fictional reaction. [...] While *Buying Time* is mildly entertaining, and may infect its more naive readers with extropic memes, i (sic) am disappointed by Haldeman’s inconsistent exploration of extropic ideas.(23)

MP Infinity’s criticism is thus entirely directed towards the author’s alleged incompetence, in both writing (the narrative being “mildly entertaining”) and documentation (the science being “inconsistent”). Max More makes similar complains about Dan Brown’s inaccuracy in *Inferno*: “[Dan Brown]’s overpopulation fears make him sound like he’s writing half a century ago. ... In fact, fertility rates continue their decades-long (sic) precipitous decline [...], we should be worrying more about plunging global population after mid-century or 2080 at the latest.”¹⁴

The second strategy, which reviewers may not always use self-consciously, is one of denial and/or justification of the pessimistic representation of technology. Reviewers may therefore fail to mention (or even notice) the novel’s pessimism, or claim that it has been misunderstood, that it is not as techno-sceptic as it seems. For example, despite

¹⁴ Max More’s comment on Giulio Prisco’s review of Dan Brown’s *Inferno* (KurzweilAI.net, 31 May 2013).

his heavy criticism of *Buying Time*, MP Infinity disproportionately focuses on the fact that the novel is *not negative* towards cryonicists:

To his credit he avoids the “Volcek Syndrome” (refer to Mike Darwin’s review of *Wiseguy* in the May 1990 issue of *Cryonics*) by presenting life-extenders as likeable people. And by explicitly dedicating his novel to “the interesting people doing research in life extension, cryonics, and other such intimations of immortality,” he makes it clear that the coming era of man-made aeonic life is based on real projects underway now. (23)

The author therefore finds favour with the reviewer by depicting cryonicists – both fictional and factual – in a positive way. In the same vein, in order to make it corresponds to his personal values, Max More (mis)interprets *Silicon Man*’s depiction of characters as facades under which their true selves lie:

Yet Platt does not take the easy path of presenting Bayley as despicable, stupid, or destructive, neither does he portray the Promethean researchers as necessarily more benevolent or morally superior. On the contrary, Bayley is seen to be a decent person (and thus a misfit at the FBI), while Gottbaum’s brilliance is clouded by his insensitivity and arrogance. (‘The Silicon Man by Charles Platt’ 47)

In other words, More claims that the novel’s transhumanists (the “Prometheans”) seem evil but are actually not, and that this is a voluntary contradiction by the author, motivated by the wish to have a narrative of quality with ambivalent characters.

As it is now clear, a novel particularly difficult for transhumanists to deal with is *Inferno* by Dan Brown, since it actually dramatises transhumanism and transhumanists, not always in a favourable way. In what I believe to be a denial strategy, reviewer PL 2061 makes it clear that those who dared criticise the transhumanists of *Inferno* must not have read the book entirely or must have misunderstood it completely. Tired of all the reviews depicting them – as they develop and spread an airborne virus sterilising 30% of humankind – as the evil force of the story, PL 2061 wants to set the record straight:

Reality check, Dan Brown's "villain" solves the population bomb without killing anyone, without a war, and without releasing any sort of deadly plague whatsoever. [...] *Inferno* is a fun and entertaining summer read that is far from the worst book out there on transhumanism. (n.p.)

Prisco makes a similar argument against supposedly shallow interpretations of the novel: "Remember, in a Dan Brown thriller, things are never what they seem. Did Zobrist really create a plague to kill people or was he an eugenic idealist in the Julian Huxley model?" ('*Inferno*' n.p.) Both PL2061 and Prisco claim that Dan Brown is actually not critical of the virus solution, and more generally of transhumanists, especially since, as PL 2061 suspects, Brown might have been one of them in the past, though anonymously.

Related to these personal counter-interpretations, which I diagnose as part of a broader denial strategy, some transhumanist reviewers try to justify the negative image of human-enhancement that many science-fiction narratives convey. In his review of Greg Egan's *Zendegi*, Prisco accounts for the depiction of the negative consequences of a new technology by the early developmental stages in which this technology is: "In *Zendegi*, Egan describes the early development stage of very advanced mind uploading technologies which, of course, at the beginning do not work well enough for practical use" ('*Zendegi*' n.p.). Another way of justifying the novel's pessimism is displayed by Matthew Bailey's review of the movie *Elysium*, which he interprets exclusively as an allegory of a present issue, which softens the blow of criticism towards technology: "*Elysium* is where Blomkamp takes this trend to extremes that many might claim to be implausible, yet they mirror our current reality. Blomkamp has made no secret of the fact that his works are allegories" (n.p.); and as an allegory, the movie should not be taken seriously in its pessimistic predictions, allegedly.

Besides these recurring strategies enabling the contemplation of *all* science fiction, and not just the techno-enthusiast one, these reviews very often feature Manichean, “right vs. wrong,” rhetoric; see, for example, Prisco’s review of Egan’s *Zendegi*, in which he claims, “I am afraid Greg is *right*, and in the early development stages there will be unexpected problems and major setbacks, there will be unhappiness, and there will be tragedies” (n.p., my emphasis); or PL2061’s comment on Brown’s *Inferno*: “The weakest spot is where he suggests that fanatic transhumanists follow FM 2030’s naming convention. *Not true* of course. Brown mostly gets this *right* otherwise” (n.p., my emphasis). Consequently, reviewers often pass their opinions off as facts. About Platt’s *Silicon Man*, More indeed writes that “clearly the “heroes” are the anti-government, transhumanist scientists” (“The Silicon Man by Charles Platt’ 47) while Simon! D. Levy states that Marc Stiegler’s “*David’s Sling* is heavily libertarian, like much of the best science fiction” (44).

Such a blatant lack of neutrality might be due to the nature of the magazines where these reviews have been published. Indeed, *Extropy*, *H+ Magazine* and *KurzweilAI.net* have been – consonant with their respective publishers – labelled as rather activist, if not ideological (Damour 147). The *Journal of Evolution and Technology*, however, comes from the more critical tradition of Transhumanism (the *WTA* and later, the *IEET*) that considers not only the benefits but also the ethics and dangers of enhancing technologies, and, as such, has more academic pretensions. One thus wonders whether transhumanists developing a critical perspective, that is, with ethical concerns, could settle the conflict between science fiction and transhumanism. A

survey of the eleven reviews of fiction scattered across the twenty-eight issues of the *JET* seems to indicate so, for these reviews differ in terms of methodology and rhetoric.

First, the obsession with whether a science-fiction novel or film would correspond to transhumanist values, as well as the notion of 'transhumanist values' altogether, is absent from these *JET* reviews. Instead, when transhumanism is even mentioned, reviewers rather spot "topics that are relevant to transhumanism" (Marsen n.p.). According to Franck Damour, the creation of the *IEET* has been a step towards the academic legitimation of transhumanism, which necessarily entailed a riddance of any reminder of its original ideological nature for a more neutral, scholarly tone (147). Accordingly, opinions posing as facts are almost inexistent in these *JET* reviews. Indeed, when the reviewers wish to give their opinions – which is also less frequent – they explicitly present them as such; see, for example, Cirkovic's review of Justina Robson's *Natural History* – "whether this controversial theory will stand its ground by the time of Gaiasol and the events described in the novel is uncertain (and unlikely in my view), but that is a secondary issue" ('Natural History' 169) – or Blackford's review of Istvan's *The Transhumanist Wager* – "while I expected to enjoy *The Transhumanist Wager*, I found it unskilled as a novel and worse than that as a manifesto" (91). Recurring *JET* reviewer Seth D. Baum also uses such careful style abundantly. About the movie *Transcendence*, he writes:

In my opinion, this is the most interesting question raised by the film. [...] Here are the key factors I see in the decision: [...]. Given these factors, here is what I would say [...]. And so, based on what the film shows, I believe its characters make the wrong decision in terminating Upload Will. ('Transcendence' n.p., my emphasis)(my emphasis)

In his review of *Inception*, he uses a similar style: “In our opinion, the fight scenes are a poor excuse for injecting eye candy into the film and a distraction from its narrative development” (Baum and Thatcher n.p.). And in his review of *District 9*, he acknowledges his partiality even more explicitly, notifying that the rest of the audience did not share his opinions and reactions:

This scene is thus at heart a classic case of consequentialist versus deontological ethics. By highlighting the gruesomeness, it induced a deontological reaction in my companions: no ends could justify this terrible means. As someone who is consciously consequentialist, I had a very different reaction: I found myself agreeing with MNU’s tactics, contingent on the assumption that their ends were worthy. Likewise, a deontologist might argue that it is impermissible to give someone new capabilities against his/her will. By contrast, I would permit this given adequate ends, in particular to reduce existential risk (see Bostrom 2002; 2003). (“District 9’ n.p.)

Besides clearly informing the readers about the subjectivity of certain arguments, these *JET* reviews also avoid the Manichean discourse of the previous reviews: the science is not ‘accurate or inaccurate,’ nor ‘plausible or implausible,’ the author is not ‘right or wrong,’ and the posthumans are not ‘good or bad’. Instead, *JET* reviewers provide more nuanced points of view and, as a result, tolerate much better the inherent ambiguities of science-fiction narratives. Not only do the transhumanists who are concerned with the tricky ethical issues of various enhancements accept ambiguity and ambivalence better, but they also praise these qualities, which reflect more accurately the complexity of the real-life issues that they wish to ponder. Marcelo Rinesi thus claims: “ultimately, watching *Watchmen* reveals an ambiguity about the possibility of communication and interaction between different classes of posthuman” (n.p.). Seth D. Baum writes that “[*District 9*] offers ambiguity about which civilization we should be rooting for and even about where one civilization ends and the other begins” (“District

9' n.p.). Alongside James E. Thatcher, Baum underlines the same element in *Inception*: "the film remains ambiguous on this matter, and appropriately so, as this ambiguity highlights the ambiguity we must face within our own lives about what actually is real" (Baum and Thatcher n.p.). Likewise, Sky Marsen reviews *Advantageous* by Jennifer Phang as "intelligent enough to be neither a utopia nor a dystopia" but "a balanced reflection of possible experiences of existence in a scientifically sophisticated society where many infrastructural factors are the same as those in our own society: gender and income inequality, market competition, and a nuclear family structure" (n.p.).

As a consequence of such tolerance, *JET* reviewers allow science fiction to be both allegorical and speculative, which contrasts with the previous reviewers (such as Bailey with *Elysium*) who use the allegorical function of science fiction to dismiss dystopian futures. In his review of *The Golden Age* trilogy by John C. Wrigth, Michael LaTorra indeed acknowledges the novels' double potential to question current societal organisations as well as topics related to transhumanism such as virtuality and personhood in a technological era:

Are we our memories? Can we live satisfying lives if part of our past has been hidden from us?

Can we trust our perceptions? And when we enhance ourselves through transhumanist technologies, giving us virtually complete control over our sensory apparatus, how will we judge the veracity of what we see and hear?

Is society better off if civility is enforced by moral suasion rather than elective government? Should an individual be allowed to give up his memories as part of a contractual agreement?

What defines personhood? Is the synthetic copy of Daphne in some sense less than the original? But how can this copy, with its improved capacities for love, struggle and kindness, be less than the original?

Finally, when the immortality system makes a back-up copy of a mind and then reinstantiates it in another body, is this mind the same person or a different one? In other words, is the person a pattern or is there something essential about a particular body-mind that cannot be copied and reproduced? (107)

This quotation is also representative of how such critical attitude translates, form-wise, into the overwhelming presence of questions. All of the *JET* reviews feature some of them, which are precisely the ones that are supposed to be prompted by the reviewed science-fiction works. These questions emphasise the openness and ambiguity of most science fiction, two qualities that are so embarrassing to the ideologist and yet so essential to the scholar.

Regarding the aesthetic appreciation of the novels, a reversal of tendencies is to be noticed between the two types of transhumanists: while the first ones tend to over-criticise the narratives that do not correspond to their personal (transhumanist) values and over-praise the ones that do, these more critical transhumanists, ironically, tend to be harsher towards works that actually bear such transhumanist values. See, for instance, Blackford's review of Istvan's *The Transhumanist Wager*:

The Transhumanist Wager does not succeed as a novel, and its flaws could not be repaired easily. [...] Knight has a philosophy and a plan that are presented uncritically. [...] I dread to think that general readers might envisage transhumanism as the callous and potentially totalitarian enterprise that *The Transhumanist Wager* makes it appear. [...] While I expected to enjoy *The Transhumanist Wager*, I found it unskilled as a novel and worse than that as a manifesto; (91)

and Cirkovic's review of Ian McDonald's *Brasyl*:

McDonald's excellent writing is occasionally irritating because of the positive and life-enjoying spin he puts on everything he touches: from the ubiquitous poverty (likely to persist in 2032 as well), to media predators, to drugdealing. For the future-oriented thinker, amongst of the most valuable parts of the narrative are those describing unpleasant (at the very best) aspects of the near-future "age of perpetual surveillance" and almost complete loss of privacy, as well as the chilling implementation of "security markets" [...]. Whether a significantly different wave function branch could produce a "copy" of the person similar enough for a deep emotion like love to be smoothly transferred from the "original" is a question worthy of an entire novel; but that novel is yet to be

written, since *Brasyl* simply sails over it towards the Next Colorful Scene, with just occasional sitcom-like remarks. ('Brasyl' n.p.)

Both reviews target the authors' lack of objectivity regarding the issues they are dealing with, as well as their quality as *literary* narratives, due to their inconsistency, underdevelopment, predictability and shallowness.

While the more ideological transhumanists find it hard to handle works that do not cast an entirely positive light on transhumanism or, more widely, on technological progress, the *JET* allows – and even imposes – a more critical stance. For these reasons, not only is critical/pessimistic science fiction welcome, but the whole take on the relationship between science fiction and transhumanism changes: the reviews in *Extropy*, *H+* or *KurzweilAI* consider how a science fiction work corresponds to transhumanist values, whereas the *JET* reviewers envision what this work could bring to transhumanism, as stated by Seth D. Baum in his review of *District 9*:

This ambiguity – and the audience reaction it generates – is of much interest to transhumanism. [...] This result is an important one for transhumanism. A major impediment to transhumanism is a strong backlash that includes an argument that transhuman or posthuman beings should be rejected because of their differences from humans (for discussion see Bostrom and Ord 2006). But if transhumans (and perhaps also transhumanists) exhibit desirable character traits, then perhaps they can gain acceptance, just as the transhuman Wilkus gains acceptance from the audience in *District 9*. [...] *District 9* thus offers opportunities for reflecting upon humanity's place in the grander scheme of things. These reflections are of immediate relevance to decisions we face about transhumanism, space colonization, and the search for extraterrestrial intelligence. ('District 9' n.p.)

Therefore, rather than evaluating science fiction through the lens of transhumanism, these more critical reviewers evaluate transhumanism through the lens of science fiction.

The survey of these transhumanist reviews of science fiction confirms the assumptions made in the first chapter: the transhumanist movement suffers internal

divisions, not only in terms of political orientation – some of its members privilege freedom, other equality – but also in terms of goal, and hence methods: while the more critical transhumanists, who, incidentally, have more academic pretensions, endeavour to produce more neutral, or at least, intellectually honest accounts about science-fiction narratives, an ideological stance generally prevents one from enjoying science fiction in all its ambiguous yet thought-provoking splendour. However, besides the discreditation and denial strategies to which they might succumb, one last solution remains for ideological transhumanists to cope with science fiction: writing it themselves. In this case, fictions are no longer the intertext of theory; they become the “codes through which” theory comes into being, as Rutsky would say (139), thus merging theory with/in fiction even more effectively. The following chapter is an attempt at identifying and analysing the fiction¹⁵ resulting from such a fusion by searching for textual indicators of a potential underlying theoretical discourse.

¹⁵ Whereas ‘fiction’ has so far been understood in several ways – “an invented story” and “fictitious literature” (Merriam-Webster) – the following section shall focus on the second of these meanings. This choice is simply motivated by my background as a literary researcher and does not mean that marks of theory cannot be found in other types of fiction (movies, plays, games, etc.). Actually, most of the remarks that will be made about literature could apply to fiction at large, providing that one adapts literature-specific terms (‘reader’, ‘book’, etc.) to the medium in question (‘spectator’ or ‘player’, ‘film’ or ‘play’ or ‘game’, etc.).

Chapter 6

Theory in Fiction

Posthuman x Fiction: Terms and Conditions

Before getting to the presence of theory in the “fiction of the posthuman”, I would like to explain my preference for the use of this rather clumsy expression instead of “posthuman fiction” in a digression that the reader, I hope, will forgive.¹

At the end of a 2015 keynote address entitled “Posthumanist Literature?” Stefan Herbrechter was asked to name a novel that was, according to him, *posthuman*. He answered that he had not found any *posthumanist* literature yet, that “it would be literature written by stones [...] or based on animal traces”.² This answer epitomises some of the issues explained earlier regarding the scholarship related to posthumanism and the posthuman: on the one hand, “posthumanism” and the “posthuman” are

¹ An earlier version of this section was published as a chapter in *Reconfiguring Human, Nonhuman and Posthuman in Literature and Culture* (2019), edited by Sanna Karkulehto, Aino-Kaisa Koistinen, Essi Varis.

² Personal recordings.

sometimes confused and used interchangeably³; on the other hand, Herbrechter’s notion of the posthuman as a biological other (stones, animals) is incomplete, as explained in Part I. Yet, Herbrechter could hardly be blamed, as the overly simple question that he was asked on the spot actually would have needed an answer that may have been too complex and nuanced for a conference context.

This anecdotal exchange nonetheless sheds light upon the need to put more thought into describing the meaning, the possibility and the relevance of formulations such as ‘posthuman literature’ and ‘posthumanist literature’ (or even ‘transhumanist literature’). A more rational method to unravel the ambiguities of these expressions would be to dissect their composing elements; while the meanings of the adjectives have been explored in Part I, the nature of that which they qualify has occupied literary studies since Antiquity, resulting in an unfathomable theoretical mass. To avoid getting lost in it, I deliberately narrowed the focus onto a structuralist⁴ description of literature inspired by Jakobson’s scheme of the “constitutive factors in any speech event, in any act of verbal communication” (353):



³ Contrary to what his answer implies, Herbrechter does differentiate posthumanism, which is a discourse, from the posthuman, which is the object of this discourse (2015, 3).

⁴ In his seminal text, *“Introduction à l’analyse structurale des récits,”* Roland Barthes indeed acknowledges both the centrality of linguistics to structuralist literary critique and, more precisely, the influence of Jakobson’s communication theory.

⁵ For a more extensive approach to semantics in a posthuman era, see *The Future of Post-Human Semantics: A Preface to a New Theory of Internality and Externality* (Baofu, 2012).

Paul Ricœur has noted that this model could not fully apply to literature since the latter is an *indirect* mode of communication (Vultur 247). The “addresser” and the “addressee” are not in physical contact and thus do not share the same socio-historical context. This results in the duplication of contexts, the author’s and the reader’s, which creates a discrepancy in the understanding of the “message”. Moreover, literature features “various possible enunciative agents”: the “addresser” is not only the *empirical author* but also the *narrator*, who can be the *implied author*⁶, an *omniscient narrator* or a *character*. Similarly, the “addressee” is not only the *empirical reader* but also the *narratee*, who can be an *implied reader* or a *character* (Hébert n.p.).⁷ The “message” is, in the context of a fiction, the *narrative* but also the *story* that this narrative features⁸, while the “code” is *written language*, even though many works feature other “codes”: for example, images or, in the case of digital literature, audio or video. Similarly, the “contact” is likely to be a *book*, but not in all cases, as demonstrated below. While Jakobson used his model to explore the relationship between the “message” and each of the six categories⁹, this section uses its literary version to explore the ramifications of applying the adjectives ‘posthuman’, ‘posthumanist’ or ‘transhumanist’ to each category.

⁶ Wayne C. Booth explains that the one “who stands behind the scenes, whether as stage manager, as puppeteer, or as an indifferent God silently paring his fingernails” is not the actual man who wrote the book but a “superior version”, a “second self” created by the writer (151).

⁷ This chapter does not discuss the distinction between empirical and implied authors and readers because such distinction does not provide significant nuances as far as posthuman and posthumanist literatures are concerned.

⁸ “Story” and “narrative” refer to Gérard Genette’s typology that distinguishes between *story*, *narrative*, and *narration*: “Je propose [...] de nommer *histoire* le signifié ou contenu narratif [...], *récit* proprement dit le signifiant, énoncé, discours ou texte narratif lui-même, et *narration* l’acte narratif producteur” (1972, 72).

⁹ Jakobson describes these relationships between the message and the six elements of communication as the “functions of language”: thus, the function that operates from message to context, addresser, addressee, contact, code or message can be qualified as, respectively, “referential”, “emotive”, “conative”, “phatic”, “metalingual” or “poetic”.

In "Posthumanist Literature?" Herbrechter considers modalities to the realisation of posthumanist literature: on the one hand, it should go beyond the limits of language, "a primary constituent of human nature" (Garber qtd. in *Posthumanist Literature?* 2), which makes literature deprived of human language and human agency quite unlikely. On the other hand, literature is declining in favour of a "new media and virtual reality technology and might therefore be no longer at the forefront of cultural change and innovation," (5–6) which renders "the phrase 'posthumanist literature'" contradictory (6). While Herbrechter considers *posthuman* literature from a purely thematic perspective (8) – the posthuman only being able to influence, according to the framework developed earlier, the *story* factor – he apprehends *posthumanist* literature according to several factors – *code*, *context*, and *contact* – but eventually acknowledges the impossibility for the concept to exist. His understanding of posthumanism implies that humans cannot play any part in the process of creating posthumanist literature, which turns this concept into a theoretical dead-end based on an apparently unsolvable contradiction. The purpose of this section is to overcome this stalemate by reconsidering the possibility of posthuman and posthumanist (as well as transhumanist) literature based upon a more explicit theoretical and literary background.

ContextS

As mentioned earlier, literature is an indirect mode of communication. This indirectness implies that the context of writing and the context of reading differ in terms of both time and place. Defining posthuman or trans- / posthumanist literature according to the nature of its context entails postulating, respectively, the posthumanity or the trans- / posthumanism of either production or reception contexts. Arguing the latter is relatively

easier because, as mentioned in Part I, 'posthumanist' and 'transhumanist' do not say anything about the state of our world or of our species, but rather denote the nature (and ideological orientation) of a message. As Herbrechter has established (see Chapter 3), they are only types of *discourses*, while 'posthuman' would be a *figure*. A *trans-* or *posthumanist* context would be a context where these *discourses* abound, while a *posthuman* context would be one where these *figures* abound. However, Part I has shown that 'posthuman' is a more encompassing term that not only describes the state of our species but also covers the physical, societal and psychological and philosophical impact of technology on humans. Therefore, reflecting upon whether the author or the reader of a novel is situated in a posthuman context may depend not only on how liberal one is with the word 'posthuman', but also on how enthusiastic and optimistic one is about current technologies: beyond philosophers postulating that humans are already posthuman (Stiegler, Haraway, Hayles), one may indeed consider that the current ubiquity of technology is a sign that we nowadays live in a posthuman context.

With its several diegetic levels, Houellebecq's *Possibility of an Island* creates a *mise en abyme* that not only echoes the indirectness of literature, but also hints at the possibility of a posthuman context of both production and reception. In this novel, Daniel is a stand-up comedian at the turn of the twenty-first century who writes his autobiography, each chapter of which is followed by a comment from Daniel's clone (first Daniel²⁴, then, when the latter dies, Daniel²⁵), who is reading this autobiography centuries later. There is a major discrepancy between Daniel's context and that of his clones, which is a post-cataclysmic future where humankind is on the verge of extinction, except for a few remaining individuals who have returned to a primitive state

of life. Unable to communicate with these inarticulate humans, clones regard them as worse than animals (Houellebecq, *The Possibility of an Island* 17). The difference between the original Daniel and his clones' contexts is, of course, central to the plot: Daniel was asked to write his autobiography in order to pass his memories on to his successive clones, but the 24th and 25th clones' context of reading is so different from his that they hardly understand him and are unable to sympathise with their ancestor. Ironically, the clones' secluded lifestyle, with the Internet as their only means of communication, recalls Houellebecq's own context of writing. On the one hand, the 1990s in a Western country such as France was already quite a technologically advanced decade and the role of technology, and especially of the Internet, in life and society was only likely to increase. On the other hand, and paradoxically to how technology enables unprecedented connections between humans, the clones' physical isolation and failure to understand humans certainly echo a feeling of being unable to connect despite the facilitation provided by new communication technologies; a feeling that is common in (and has only been heightened by) what Šmihula calls the "information and telecommunications revolution" (51); a feeling that also seems recurrent amongst Houellebecq's protagonists as well as for himself (or at least, his public persona); and a feeling that is foundational to the *déprimiste* French literary vogue, and more generally, the French *déclinist* thought, both of which Houellebecq is described as a central representative (Moor; Sweeney, 'Déclin'). This unexpected parallel between Houellebecq's clones and his contemporaries has the effect of highlighting the latter's changing nature and lifestyle, possibly towards a postmodernity

that often goes hand in hand with a declinist approach to the entire sweep of human history.

Addressees: Readers and their Readings

Speculating about posthuman and post- or transhumanist contexts of production and reception is hardly possible without alluding to the people living in this context: a posthuman or post-/transhumanist context of production would be a context in which authors are respectively posthuman or post-/transhumanist. Similarly, the possibility of such a context of reception entails discussing the possibility of a posthuman or post-/transhumanist recipient altogether. In “What is a Posthumanist Reading?” (2008), which has been alluded to in the first part of this chapter, Herbrechter and Callus put forward the following characteristics:

[A] posthumanist reading [...] focuses on the ambiguities around the human [...] can strategically exploit the ambiguity of the term *posthumanism* [...] can evaluate examples of posthuman representation in terms of their potential for a critical *post-humanism* [...] may be critical of both representations of the posthuman and of humanism, and instead envisages the human as something or someone that remains to arrive, as a potential that remains to be defined or realised [...] can nevertheless resist technological determinism and posthuman teleology, and contemplate a “posthumanism without technology” (Callus and Herbrechter 2008 *passim*.) [...] may identify oppositions between the human and the nonhuman at work in a text or practice and demonstrate how the vital difference between the two has to be strategically breached in order to trouble protection of the “essential” purity of the category. (Callus and Herbrechter 2008, 96–97)

Such characteristics allow the production of a posthumanist reading of almost any fiction, and not just those written in the speculative mode (cf. “The Deductive Approach” in Chapter 5). Even if a posthumanist reading does not necessarily require a posthuman character, the presence of a posthuman character in a novel is very likely to

engender a posthumanist reading.¹⁰ However, in their article, the authors ask the following questions:

how is it possible to read as if one were not human, or at least from a position of analytical detachment in relation to the humanity – whether “essential” or “constructed” – that informs and determines the very position from which it is read? What would be the nature of such an “unnatural” reading? (Callus and Herbrechter 95)

While in the rest of their article, they use “reading” as “a particular interpretation of something”, this question rather insists on “reading” as “the act of reading” (*Merriam-Webster*), which emphasises the presence of an agent, the reader. Through this question, the concept that they are actually investigating is not a “posthumanist reading” but a *posthuman reader*, a reader who is not, or (at least pretends not to be) human, which foreshadows the dead-end that Herbrechter faces in his 2015 presentation.

The 2008 article, which thus uses the phrase “posthumanist reading” to refer to both a posthumanist interpretation and a posthuman reader, exemplifies, again, the importance of differentiating between posthumanism (or transhumanism) as a discourse and posthuman as a figure. A posthumanist or transhumanist reader is a reader who is familiar with the issues of posthumanism or transhumanism, which allows them to produce posthumanist or transhumanist interpretations of literary works. A so-called “posthuman reader” would rather correspond to a reader who is actually a posthuman. Again, within the realm of fiction, finding examples of posthuman readers is as easy as

¹⁰ As mentioned in the Introduction, these past few years saw the recurrence, amongst the literary wing of the scholarship of the posthuman, of references to the same few novels. This resulted in an unofficial corpus whose common denominator seems that to be the presence of a posthuman character and, consequently, posthumanist interpretations. Let us nonetheless note that the presence of a posthuman character does not guarantee a posthumanist underlying discourse. Some novels can indeed convey a perspective that is rather humanist, which is the mark of mainstream fiction, according to Callus and Herbrechter (page). The present chapter shall come back to this issue.

pointing out posthuman characters altogether (e.g. clones in *The Possibility of an Island* or in Ishiguro's *Never Let Me Go* read, and Crackers in Atwood's *Oryx and Crake* yearn for Snowman's stories). Yet, beyond these fictional posthumans, one could also postulate the existence of posthuman readers in the real world, as does Jessica Pressman, who explains that digital literature is forcing us to be posthuman readers because "reading [the digital work *Between Page and Screen*] requires a sophisticated digital apparatus: an Internet connection, a webcam, the right flash-based software upgrades, and, of course, the book containing the Qr codes" (55). Digital literature does not transform readers into posthumans but instead makes them realise that they had been posthuman all along, even before the reading, then again echoing the recurring claims of posthumanist landmarks.

Addressers: Authors

Just as readers can be post- or transhumanist as long as they are familiar with post- or transhumanist theories, authors can self-consciously create post- or transhumanist works. One could argue that some contemporary writers have been influenced by the popularity of post- or transhumanism in recent theory. Most of the novels cited in this study were produced in the 2000s, an era of increasing awareness of the possibilities for (bio)technology to modify humankind, which has been reflected in the increasing number of publications on posthumanism and the posthuman.¹¹ For example, Carole Sweeney notes that Houellebecq's 1998 novel *Atomised* was already written at a time when "there was much intellectual interest in posthumanism" (*Despair* 157), implying

¹¹ See Appendix 2.

that Houellebecq must have been influenced by both the exponential technological progress and the philosophical discourse inspired by this progress. Yet, as one shall see further in the present chapter, such a claim is hard to make with certainty if a work does not contain direct citations of, or obvious references to any theory, or if the author has not explicitly stated being influenced by the latter.

Post- or transhumanist authors are very much human, but the perspective of a posthuman author still belongs, according to many, to fiction. Yet, our current reality might in fact feature instances of posthuman authors strictly speaking (*i.e.* setting aside the more philosophical, encompassing definition of 'posthuman'). Some AI technologies can indeed imitate human communication (as long as it has been programmed to do so – which still involves a form a human agency): many researchers in computer science and narratology have been combining their knowledge to create “story generators”, which are programs that can create a story, sometimes according to the rules of a certain genre (epic, romance, thriller, to name only a few), simply by following a previously established pattern. Gervás and his co-authors note that finding this pattern has precisely been the core issue for these researchers. Some of them have used Vladimir Propp’s 1968 narrative morphological models, established through the study of Russian folktales. Others have used Joseph Campbell’s 1968 structure of myths or Chatman’s 1978 adaptation of Campbell to literature and films. Some scientists also used Robert McKee’s 1997 narrative model. All of these models inspired the creation of AIs capable of writing stories (Gervás *et al.*). One could consider these AIs to be posthuman writers, even though Gervás *et al.* establish that none of the existing programs have managed to cope with the necessary ambiguities that add aesthetic

value to a random narrative. Nevertheless, this does not totally deprive these non-human writers from their authorial status: many novels might just as well not display any aesthetic value and, according to some, do not qualify as "Literature" (with emphasis on the capital "L"), while others (publishers and booksellers, for example) may easily label these allegedly low-brow novels as "literature". The possibility of a posthuman author therefore depends on one's own understanding of the nature of literature. Moreover, since this 2006 article, computer engineers have made substantial progress on AIs: in Japan, in 2016, a novel written by an AI passed the first round of a literary contest (Lewis) and one of Google's AIs has been writing poetry of relative quality (Gibbs).

Code and Contact

Since structuralism, literature and language have been inseparable concepts, especially from the perspective of Jakobson's theory of communication: a common "code" between the "addresser" and the "addressee" guarantees the circulation of the "message". If language is often seen as "a primary constituent of human nature" (Garber 264, qtd. in Herbrechter 2), a posthumanist gesture would consist in bypassing such a statement and consider the possibility of non-human language. For example, computer code might be regarded as the language of the technological posthuman. However, computers are man-made machines, and so is the language they use to communicate, not only with each other but also with humans. Katherine Hayles indeed confirms that the "addressees of code [...] include intelligent machines as well as humans" (*How We Became* 15). This does not mean that posthumanists – and transhumanists, for that matter – abandon the idea of posthuman language altogether: some of them indeed consider the possibility of machines eventually breaking free from

their human creators and starting to use a language of their own, impenetrable by humans.¹²

A post-anthropocentric perspective (which may be confused with posthumanism, but is, in fact, only *one* of its aspects) on language can also provide interesting conclusions about the possibility of, if not posthuman, at least non-human literature. It might seem grotesque to state that animals, plants, minerals or the environment can actually produce literature. A humanist or anthropocentric approach would provide the aforementioned explanation that language, and thus literature, are primarily human: a “message” communicated by a non-human “addresser” in a non-human “code” will not be understood by a human “addressee” and cannot qualify as literature. A post-anthropocentric approach would, on the contrary, acknowledge humankind’s inability to ever know whether animals, plants, microorganisms or minerals send “messages” that lay emphasis on themselves – such as suggested by Jakobson with the “poetic function of language”, the predominance of which guarantees the work’s aestheticism (thus, for some, its legitimacy as Literature). These messages would simply not be formulated in a language that humans can understand – let alone print in a book.

Many posthumanists indeed regard printing as the emblematic institution of humanism that is bound to disappear in the digital era. The digitalisation of publishing, and more precisely, the rise of the e-book, might indeed threaten the materiality of the paper book but, despite its digitality and disembodiment, the e-book provokes the same reading habits as the printed book: one still reads linearly (from the first to the last

¹² This would be a symptom of the long predicted – and feared – Singularity: that moment when “the ordinary human is [...] overtaken by artificially intelligent machines or by cognitively enhanced biological intelligence and unable to keep pace” (Shanahan xvi).

page), in a range of places and situations. From this perspective, the e-book is but a mere modernisation, a simple remediation¹³ of the printed book, not a true questioning. In fact, it seems that the medium altogether has come to no longer matter, that “the ubiquitous repurposing of text into different editions, formats and genres implies that text can be and often is format blind” (Shep 40).

Some artistic undertakings nonetheless question the materiality of the book and its consequences on the reading experience and interpretation in a more profound way. The hypertext, for instance, is not a simple digitalisation of a pre-existing paper novel, but has been exclusively created for computers. In Shelley Jackson’s notable *Patchwork Girl* (1995), the reader is presented with windows displaying texts full of hyperlinks that lead to other texts with other links or to visual media.¹⁴ Hypertexts allow various reading paths, making each reading practically unique and enhancing the role of the reader in the production of meaning. In some cases, the computer can also generate random reading patterns, which implies that meaning production can be co-dependent on the reader and the machine, a non-human entity. If digital literature is, as non-print, an instance of posthumanist literature, this last situation of human-machine cooperation could even be a step further towards posthuman literature *per se*.

¹³ In their seminal book “Remediation: Understanding New Media”, Bolter and Grusin “identify a spectrum of different ways in which digital media remediate their predecessors, a spectrum depending upon the degree of perceived competition or rivalry between the new media and the old” (339). A “an older medium [...] re-presented in digital form without apparent irony or critique,” most ebooks represent the lowest degree of competition toward the printed book.

¹⁴ A linear transcript of *Patchwork Girl* is available at this address: <http://web.mit.edu/m-i-t/articles/jackson.html>. Studies of *Patchwork Girl* include “Sutured Fragments: Shelley Jackson’s *Patchwork Girl* in Piecework” (Joyce, 2003), “Flickering Connectivities in Shelley Jackson’s *Patchwork Girl*” (Hayles, *My Mother*, 2010); “‘I Am a Double Agent’: Shelley Jackson’s *Patchwork Girl* and the Persistence of Print in the Age of Hypertext” (Hackman, 2011), “Reproductive Technologies, Fetal Icons, and Genetic Freaks: Shelley Jackson’s *Patchwork Girl* and the Limits and Possibilities of Donna Haraway’s Cyborg” (Latimer, 2011), and “*Patchwork Girl* de Shelley Jackson, ou le spectre d’une mémoire dés/incarnée” (Regnauld, 2014). Extensive studies of hypertext and ergodic literature include *Cybertext* (Aarseth, 1997), *Digital Poetics: The Making of E-Poetries* (Glazier, 2002) and *Cybertext poetics* (Eskelinen, 2012). A thorough update on literary theory in the digital era can be found in *Literature Now* (Bru et al., 2016).

Message: Speculative Fiction

If reader, author, language, book, and context designate entities that exist in our empirical world, narratee, narrator and character belong to fictional worlds,¹⁰ that is, worlds in which the story takes place. When adapting Jakobson's communication scheme to literature, changing "addressee" and "addresser" into "reader" and "author" does not suffice. The former terms indeed also have fictional equivalents, the narratee and the narrator, who, unlike their factual counterparts, can be (not just theoretically but actually) posthuman: cyborgs, clones, robots, AIs, mutants, etc. Such posthuman narrators and narratees even help readers understand and accept the unnatural aspects of their fictional worlds by inviting them to see through their posthuman perspectives. With its first-person clone narrator addressing, in the second person, a fellow clone narratee, Kazuo Ishiguro's 2005 novel *Never Let Me Go* exemplifies the effects of adopting a posthuman perspective. In an alternative 1990s England where scientists have managed to clone humans in order to harvest their organs for transplants, Kathy remembers her childhood at Hailsham, a boarding school for clones managed by a group of activists campaigning against the clone breeding system. The point of Hailsham is to prove that, when raised like humans, clones develop characteristics and abilities that fall nothing short of human. As Kathy tells her personal, miserable story to a narratee that remains silent throughout the narrative, readers are spared no intimate or heart-breaking detail and have no choice but take on her point of view. Furthermore, by first misleading the reader into believing that the story happens in "England, late 1990s" (Ishiguro 1), and by postponing the revelation of Kathy's true identity (and thus of its own uchronic nature), the novel induces an identification process

between readers and the protagonist strong enough to withstand the realisation of Kathy's non-humanity. Lastly, Kathy addresses the narratee in the second person – "I don't know how it was where you were, but at Hailsham we had to have some form of medical almost every week" (Ishiguro 13) – making him or her quite transparent, therefore easing readers into assuming that role. But Kathy turning out to be a clone makes them realise that this role has been that of a clone as well. In a way, these clone narrators and narratees trick readers into identifying with their posthuman yet exploited species. On that matter, note that the posthuman character's role in the enunciation of a narrative is a catalyst for conveying a posthuman perspective, but that such a perspective can also be conveyed by omniscient narrators letting readers in on posthuman characters' states of mind.

Amongst all the constituent elements of literature to which I have attempted to apply the adjectives 'posthuman' and 'posthumanist' (or 'transhumanist', to a lesser extent), those that refer to beings – such as authors, readers and characters – have been unsurprisingly easier to work with, highlighting the fact that these adjectives can hardly apply to anything else than *beings*. Consequentially, the posthumanity or posthumanism of the other constituents that I have dealt with – interpretation, language or media – is discussed through that of the *people* who produce them. Yet, the last and no less significant aspect of literature, the story, stands out compared to the others, as it is at the intersection of two types of beings: the factual being who is responsible for its existence, and the fictional beings that it contains; in short, the author and the characters. Therefore, if, like the other constituents of literature, the posthuman or posthumanist nature of a story can only be contemplated through that of the beings

that are related to it, this nature – unlike the others – comes from both within and without.

As already suggested, many stories can be read from a posthumanist perspective, whether this story challenges the categories and borders of the human in an obvious way (as in speculative fiction) or more discreetly. This implies that non-speculative stories – especially the oldest ones – are probably not intrinsically posthumanist. They only become posthumanist thanks to a contemporary posthumanist interpretation. In other words, their posthumanist nature comes from without. On the contrary, speculative stories can be intrinsically posthumanist since they are more likely to feature tropes and characters – actual posthumans – that question or dilute the borders between the human and the non-human. In such speculative works, a posthumanist interpretation might seem – almost – inescapable. Many speculative stories, especially the most popular ones,¹⁵ indeed do not actually invoke a posthumanist discourse but, on the contrary, reinforce a dominant, humanist and anthropocentric argument. Herbrechter and Callus write:

There are what might be called “posthuman moments” in science fiction. They more or less deliberately threaten the integrity of a given “human essence” and are fetishistically indulged in, but all too often they are in the end closed off by the reaffirmation and reconfirmation of the human on a different plane. (98)

In other words, the presence of a posthuman initially questions the essentiality of humanity, which it nonetheless might end up reaffirming. A story featuring posthuman characters or at least the possibility of posthuman life can be posthumanist or humanist, or even both at the same time.

¹⁵ Herbrechter and Callus allude to Hollywood science-fiction blockbusters (2008, 99).

If the posthumanist potential of a story is connected to the presence of posthuman characters, one wonders about the influence of such characters on the story and the narrative. The most obvious impact is thematic; featuring with posthumans implies the recurrence of certain topics such as the essence of humanity, human dignity, otherness, ethics and technology, amongst others. A posthuman character might also have a formal impact on the narrative when, for example, the narrator of a novel is a posthuman, as in *The Possibility of an Island*:

The first time I met Marie22 was on a cheap Spanish server; the connection times were appallingly long.

*The weariness brought on
By the old dead Dutchman
Is not something attested
Well before the master's return.*

2711, 325104, 13375317, 452626. At the address indicated I was shown an image of her pussy—jerky, pixelated, but strangely *real*. Was she alive, dead or an intermediary? Most likely an intermediary, I think; but it was something you did not talk about. (Houellebecq, *The Possibility of an Island* 4)¹⁶

In this extract, narrated by a clone, lines of numbers seem to transcript computer language, and more precisely the server connection process. It has been suggested earlier that such an attempt at imitating computer code is not entirely a posthumanist gesture, since computer code is a language invented by humans to guarantee successful communication with the machine and amongst the machine themselves. The lines in this passage, which is around the beginning of the novel, seem to emulate more

¹⁶ "La première fois que j'ai rencontré Marie22, c'était sur un serveur espagnol bas de gamme; les temps de connexion étaient effroyablement longs.

*La fatigue occasionnée
Par la vieux Hollandais mort
N'est pas quelque chose qui s'atteste
Bien avant le retour du maître.*

2711, 325104, 13375317, 452626. À l'adresse indiquée j'eus la vision de sa chatte – saccadée, pixélisée, mais étrangement *réelle*" (Houellebecq, *La Possibilité d'une Île* 12).

than a connection between the clone narrator and other clones on the Internet; it may also express the attempted connection between the narrator and his readers, who seem to be explicitly addressed a few pages later: "I do not want to keep you outside this book; living or dead, you are *readers*. Reading is done outside of me; and I want it to be done—in this way, in silence" (7).¹⁷ Since, in that post-apocalyptic future, the human species has returned to a primitive way of life, clones are the only species that is still able to process writing, able to be readers. Yet, real-life readers do not know that the characters are posthuman at that point of the novel, which is why the use of the word "readers" creates an ambiguity that invites actual readers to take on the role of the narratees and therefore tricks them into identifying with the actual posthuman narratees.

This extract also epitomises several of the oppositions that posthumanism interrogates. Computer code contrasts with the poem, which corresponds to a more traditional and ancient form of writing. The presence of the machine contrasts with the depiction of organic, even carnal elements ("pussy", "jerky"), which is accompanied by an opposition between the disembodied digital ("pixelated") and the embodied "*real*". The question "Was she alive, dead or an intermediary?" (4) adds the dead/alive dualist category as another layer of opposition. The narrative thus associates, on the one hand, organic, embodied and alive, and, on the other hand, mechanic, disembodied and dead but seems to imply that clones are in-between ("an intermediary"). This could echo a posthumanist discourse were it not for the presence of "alive" and "dead", whose respective positive and negative connotations affect the other terms. The lack of

¹⁷ "Je ne souhaite pas vous tenir en dehors de ce livre ; vous êtes, vivants ou morts, des *lecteurs*. Cela se fait en dehors de moi ; et je souhaite que cela se fasse – ainsi, dans le silence" (15).

neutrality and the praise, although discreet, of the organic and embodied maintain a reactionary and anthropocentric discourse. This uncertainty about whether this novel fosters a posthumanist discourse continues until its very ending, where Daniel²⁵ follows Maries²³'s footsteps and leaves his home with his dog in order to search for a neohuman community where he could reconnect with a more human lifestyle. Throughout his journey, Daniel²⁵ encounters primitive human beings and does not hide his contempt for them. These humans kill his dog, which leads him to experience sorrow for the first time, making him realise the nature of love. Following this traumatising event, Daniel²⁵ decides to lie down on the sand:

I had perhaps sixty years left to live; more than twenty thousand days that would be identical. I would avoid thought in the same way I would avoid suffering. The pitfalls of life were far behind me; I had now entered a peaceful space from which only the lethal process would separate me.

I bathed for a long time under the sun and the starlight, and I felt nothing other than a slightly obscure and nutritive sensation. Happiness was not a possible horizon. The world had betrayed. My body belonged to me for only a brief lapse of time; I would never reach the goal I had been set. The future was empty; it was the mountain. My dreams were populated with emotional presences. I was, I was no longer. Life was real. (423)¹⁸

According to Posthumus and Sinclair, Daniel²⁵ left looking for a more emotional existence and eventually finds it through experiencing sadness for the first time (352). In the end, he reaches a state of continual ecstasy; he is himself and everything revolves around him (353). His search for a more human lifestyle and an emotional existence conveys the idea that emotions are the essence of humanity, which reinforces the

¹⁸ "Il me restait peut-être soixante ans à vivre ; plus de vingt mille journées qui seraient identiques. J'évitais la pensée comme j'évitais la souffrance. Les écueils de la vie étaient loin derrière moi ; j'étais maintenant entré dans un espace paisible dont seul m'écarterait le processus léthal.

Je me baignais longtemps, sous le soleil comme sous la lumière des étoiles, et je ne ressentais rien d'autre qu'une légère sensation obscure et nutritive. Le bonheur n'était pas un horizon possible. Le monde avait trahi. Mon corps m'appartenait pour un bref laps de temps ; je n'atteindrais jamais l'objectif assigné. Le futur était vide ; il était la montagne. Mes rêves étaient peuplés de présences émotives. J'étais, je n'étais plus. La vie était réelle" (474)

anthropocentric idea of human exceptionality. He eventually never finds a community but seems to accept the isolation of what remains of his existence. He seems paradoxically relieved by, on the one hand, leaving his ascetic home to experience love and pain ("My dreams were populated with emotional presences"), and, on the other, knowing that he will not have to experience them ever again, that "the future [is] empty". His journey stops there; he settles for an existence of pure sensation instead of seeking further for companionship. In parallel, the novel conveys a constant critique of humanity and the praise for dogs – "Goodness, compassion, fidelity and altruism therefore remain for us impenetrable mysteries, contained, however, within the limited space of the corporeal exterior of a dog" (63),¹⁹ which seems quite posthumanist (although a bit misanthropic).

The novel therefore appears to be generally torn between posthumanism and anthropocentrism, as the following extract attests: "Marie22, if she exists, is a woman to the same extent that I am a man; to a limited, refutable extent. I too am approaching the end of my journey" (7).²⁰ This primarily implies that the biotechnologically modified clones that are Marie22 and the narrator are not part of the human race (again, a human essentialist discourse) but, as suggested earlier, the reader does not know about the nature of these two characters at this point of the novel. Again, it tricks readers into identifying with the narrator and, thus, question their own identity as humans as well as the permanence of their race.

¹⁹ "La bonté, la compassion, la fidélité, l'altruisme demeurent donc près de nous comme des mystères impénétrables, cependant contenus dans l'espace limité de l'enveloppe corporelle d'un chien" (77).

²⁰ "Marie22, si elle existe, est une femme dans la même mesure où je suis un homme ; dans une mesure limitée, réfutable. J'approche moi aussi la fin de mon parcours" (15).

Finding the Right Words

Differentiating the posthuman as a figure from post- and transhumanism as discourses allows several observations. On the one hand, the meaning of the expressions 'posthumanist fiction' and 'transhumanist fiction' becomes quite straightforward: they denote fictions that convey underlying posthumanist or transhumanist discourses, which is usually related to the nature of the story, combined with the position of either the author or the reader, and may affect the material as well as formal aspects (structure and language) of the work. On the other hand, the meaning of the expression 'posthuman fiction' changes depending on whether 'posthuman' is an attributive adjective or an attributive noun (a noun used as an adjective). It also depends on whether 'posthuman', as a figure, evokes a being (an enhanced human, a cyborg, a clone, etc., either in a story or in a speculative future) or the theoretical concept that this being has inspired (which is the basis of posthumanism).

The grammatical nature of 'posthuman' matters because it may echo a specific part of the theoretical tradition of the posthuman, and consequently, indicate when one refers to the concept more than the being. Haraway, with "the cyborg," and Hayles, with "the posthuman," indeed popularised the use of 'posthuman' as a noun²¹; therefore when a text uses 'posthuman' as a noun, especially in the expression 'the posthuman', it is likely to refer to this particular strand of theories and, consequently, to the posthuman as a concept. By contrast, when it uses 'posthuman' as an adjective, it

²¹ Their works do feature a few occurrences of 'cyborg' or 'posthuman' used as adjectives, but the use of 'the posthuman' is overwhelmingly predominant.

might primarily refer to the futuristic being²² (which, in turn, may prompt a reconceptualisation of the human). For example, in *Posthuman Metamorphosis*, Bruce Clarke uses 'posthuman' generally as an adjective ("posthuman metamorphosis", "posthuman transformation", "posthuman metamorphs", "posthuman figures", "posthuman couplings", "posthuman being", "posthuman subjectivities", etc.), but sometimes also as a noun, usually within the nominal construction 'the posthuman'. Interestingly, Clarke uses this form whenever he alludes to posthumanist theories of the posthuman: "In the last two decades the theoretical trope of the posthuman has upped the ante on the notion of the postmodern" (2). Similarly, Pepperell's *The Posthuman Condition* overflows with adjectival uses of 'posthuman', in formulation such as "posthuman condition", "posthuman era", "posthuman studies", "posthuman implications", "posthuman conception", "posthuman terms", "posthuman schema", "posthuman ideas", "posthuman thought", etc. There is, however, a few uses of 'posthuman' as a noun: "it is one thing to say the mind, the body and the world are continuous (and posthumans are not the first to say it) but another matter altogether to appreciate what practical implications this might have" and "where humanists saw themselves as distinct beings in an antagonistic relationship with their surroundings, posthumans regard their own being as embodied in an extended technological world" (n.p.). Surprisingly, in these sentences – which are absent from the first edition (see why

²² Interestingly enough, the early transhumanists' 'posthuman' – which exclusively referred to this futuristic being – was used as a noun rather than an adjective: FM-2030 used 'posthuman' in its plural form and defined it as "an entirely new concept of the human," "entirely new kinds and forms and shapes of life" and "the evolution from the human" (n.p.); Vita-More wrote: "We are active participants in our own evolution from human to posthuman" (n.p.) while her husband wrote: "In this essay I will show how religion acts as an entropic force, standing against our advancement into transhumanity and our future as posthumans" (26); Bostrom used it as a noun – "Transhumanism advocates the well-being of all sentience (whether in artificial intellects, humans, posthumans, or non-human animals)" (n.p.) – as well as a predicative adjective – "Opponents of posthumanity argue that we should not seek enhancements of a type that could make us, or our descendants, posthuman" (29).

it matters in Chapter 1) – ‘posthumans’ does not seem to refer to futuristic beings, nor to the concept, but to posthumanist theorists themselves.²³ This is the mark of the terminological confusion that I repeatedly mentioned in previous chapters, but at least this one leaves my grammatical conjectures intact: ‘posthuman’ as a noun is still closer to the reconceptualisation of the human through its theorists. Other texts might actually undermine my suppositions by using ‘posthuman’ as an adjective in order to refer to the posthumanist traditions. For example, Ferrando writes: “The historical and ontological dimension of technology is a crucial issue, when it comes to a proper understanding of the posthuman agenda; yet, posthumanism does not turn technology into its main focus” (“Posthumanism...” 28). Therefore, a system based on the grammatical use of ‘posthuman’ can hardly be universal, but only shows general tendencies in the scholarship of the posthuman. Yet, it still is a valuable tool for my own theorisation of the posthuman and its relationship to fiction.

If the use of ‘posthuman’ as an adjective is likely to refer to the futuristic being, and its use as a noun rather evokes the reconceptualisation of the human, then the expression ‘posthuman fiction’ – in which ‘posthuman’ is either an attributive adjective or an attributive noun – is highly ambiguous. If it is an attributive adjective, ‘posthuman fiction’ rather entails the presence of a posthuman being in the production process (an AI writing machine as author, for example or, as one might imagine, a future context where posthumans exist and might be authors or readers) or in the fictional world (posthumans being to posthuman fiction what science is to science fiction, or detectives

²³ The section “Other eminent posthumans” features a list of authors from cybernetics, posthumanism and extropianism (early transhumanism): Wiener, Capek, Hayles (who mentions Stone Allucquere, Halberstam and Livingston, Bukatman, Balsamo and Foucault), Deitch and More. Note that in the first edition, “Other Eminent Post-Humans” only refers to extropians.

to detective fiction, for example). If it is an attributive noun, the 'posthuman' of 'posthuman fiction' could refer to, if not to the whole theoretical tradition of posthumanism, at least to the possibility of a reconceptualisation of the human.

Despite the appeal of its conciseness, the fact that 'posthuman fiction' is not a transparent expression, but instead requires (sometimes lengthy) clarifications, should dissuade scholars from using it. As a less ambiguous, or at least a less deliberately ambiguous option, I suggest 'fiction of the posthuman' which has the merit not only of mirroring 'theory of the posthuman' (used recurrently in previous chapters) but also of conveying both the being and the concept. Moreover, compared to expressions such as 'posthumanist fiction', 'fiction of the posthuman' does not presuppose the presence (and nature) of the underlying discourse potentially conveyed by a narrative. For example, *The Possibility of an Island* can be called 'fiction of the posthuman' because it features posthuman characters (narrators and narratees) and tropes (a post-cataclysmic world, genetic engineering, etc.) and even attempts at imitating a posthuman language. However, it can hardly be called a *posthumanist* novel, because even though posthuman elements could prompt posthumanist interpretations – as they stimulate reflections about the essence of humanity and blur the lines between various ontological (human/non-human, organic/mechanic, embodied/virtual, alive/dead, amongst others) as well as narratological dualist categories (reader/author, reader/character, etc.) – other aspects of the novel rather convey an anthropocentric discourse (see further, in "Persuasion"). Alongside the reasons exposed earlier, the potential presence of contradictory underlying discourses within the same novel is

another argument in favour of a more neutral expression ('fiction of the posthuman')²⁴ over one that would presuppose a specific type of discourse ('posthumanist fiction'), especially when the presence, nature and purpose of such discourse are the focus of discussion, just like in the following pages.

Now that the choice of using the expression 'fiction of the posthuman' over any other has been explained, let us dive in the into the topic of this sixth and last chapter, "Theory in Fiction", which mirrors its predecessor well beyond its title. In "Fiction in Theory", observing the presence of fiction in theories of the posthuman has amounted, concretely, to locating, within theoretical texts, references to fictional works, worlds and figures. Furthermore, the purpose of locating this presence has been related to whether these references play a role in the construction, explanation, verification or dissemination of a theory of the posthuman. In the present section, the latter question persists, except that its answer is being sought in fictional rather than theoretical texts. In other words, if the presence that is being examined has shifted from that of fiction in theories of the posthuman to that of theory in fictions of the posthuman, fiction nonetheless remains, in both cases, used by theory; and, just like in theoretical texts, this occurs in more than one way, to more than one end.

²⁴ I am aware that there is a contradiction in claiming that 'fiction of the posthuman' is neutral right after highlighting that 'the posthuman,' as a noun tends to refer to the posthumanist tradition specifically. Despite this paradox, I maintain that 'fiction of the posthuman' is a more accurate formulation because it does not encompass narratives whose posthumanity or posthumanism come from without (from the author or reader's nature, or the latter's opinion or interpretation, for example). As such, it thus only denotes narratives that feature posthuman characters or tropes.

Persuasion, or Ideological Fiction

Since the middle of the 1990s, a growing awareness of the power of narrative has kindled an interest in storytelling as a method deployed in domains as various as leadership, management, journalism, politics, medicine or psychology (Salmon 7–8). Narrative can indeed boast the ability to not only inform, but also influence: Thierry Boudès acknowledges that, even if “narrative” and “knowledge” share the same etymology – the Latin word “gnarus” – meaning that the narrative allows to *know* (67), the narrative is also meant to “seduce, persuade, justify, excuse, etc.” (71), which makes storytelling “a technique of communication, control and power” (Salmon 12). Given such potential, it is therefore unsurprising that ideologists turn to narrative in order to make people understand their cause and even rally behind it. In the case of the posthuman, the ideological group that springs to mind is, obviously, transhumanists. However, the latter go one step further than using compelling narrative techniques in their theoretical writings: probably in reaction to the already available but ‘uncooperative’ science fiction (see Chapter 5), some transhumanists have produced their own fiction, which not only allows circumventing science fiction’s usual pessimism and downright criticism towards transhumanist solutions to, for example, aging and death, but it might also facilitate the reader’s adherence to transhumanist principles. Yet, labelling this type of fiction as ideological merely because ideologists wrote it may be a bit hasty and, in any case, does not really fit the textual approach of this chapter. For this reason, I suggest a closer look at these fictions through the lens of Suleiman’s poetics of the ideological novel.

Suleiman defines the ideological novel as:

*a novel written in the realistic mode (that is, based on an aesthetic of verisimilitude and representation), which signals itself to the reader as primarily didactic in intent, seeking to demonstrate the validity of a political, philosophical, or religious doctrine. (7)*²⁵

The ideological novel thus seeks to persuade its reader to agree to a particular worldview and subsequently, has been considered mere propaganda by many, resulting in its poor reputation (Suleiman 3). Unlike most novels, which tolerate and even cultivate ambiguity, the ideological novel cannot afford to leave unanswered questions, for there must be room for only one interpretation: that intended by the author. Through a comparison with the genre of the *Exemplum*, Suleiman finally isolates three characteristics for the ideological novel, besides its unambiguous interpretation (55): “the presence of an unambiguous dualistic system of values, [...] the presence (even if it is only implied, not stated) of a rule of action addressed to the reader [...] [and] the presence of a doctrinal intertext” (56).²⁶

With the intention of fulfilling the transhumanists’ urgent need for fictions that do not only correspond to transhumanist values but also help spread them, 2016 American presidential election candidate for the transhumanist party, Zoltan Istvan released *The Transhumanist Wager* (2013), a self-published novel about a transhumanist philosopher

²⁵ One could undermine my classification of transhumanist science fiction as ideological novels since Suleiman’s mention of realism as one of its constituent. However, her notion of realism does not rely on *mimesis*. Suleiman indeed notices a paradox in the ideological novel: while ‘regular’ novels depict the complexity of life, the ideological novel softens it, thus being, somehow, *unrealistic* (23). Instead, it is ‘based on an aesthetic of verisimilitude and representation’, and so is, precisely, the realistic aspect of science fiction (see Chapter 4).

²⁶ Note that the “rule of action” and the “doctrinal intertext” are co-dependent. The “rule of action” is dictated according to the “doctrinal intertext”, so much so that the “rule of action” could define the “doctrinal intertext” if the latter went missing.

/ life-extension proselytiser named Jethro Knights who is chased by Christian extremists and terrorists. Victim of violent censorship, Knights ends up building his own ideal transhumanist community on an island, *Transhumania*. He then enters a war against the rest of the world, which he wins and becomes the “undisputed leader of the planet” (Istvan n.p.).

The novel seems to meet all of Suleiman’s ideological novel criteria quite explicitly. The “doctrinal intertext” is indeed announced as early as the title of the novel: the *transhumanist* wager. However, even though Istvan stages transhumanism as an established movement, with its emphasis on longevity and enhancements, its mediatised representatives (character Preston Langmore) and its institutions (the “World Transhumanist Institute”), he actually conveys an extreme form of transhumanism; a transhumanism from another time, in all its individualistic and libertarian splendour. Precisely, his protagonist accuses institutional, mainstream transhumanism to be “lethargic”, “watered-down” and “passive” and instead proposes another version of transhumanism named “Teleological Egocentric Functionalism,” which is exposed through speeches, dialogue and manifesto excerpts scattered across the novel. In a conference given at the “transhumanist conference”, Knights breaks down the meaning of this expression:

Teleological—because it is every advanced individual’s inherent design and desired destiny to evolve. Egocentric—because it is based on each of our selfish individual desires, which are of the foremost importance. Functional—because it will only be rational and consequential. And not fair, nor humanitarian, nor altruistic, nor muddled with unreachable mammalian niceties. (n.p.)²⁷

²⁷ As noted by most of Istvan’s reviewers (Prisco, Stolyarov), there is an obvious parallel between such reflections and another fiction-conveyed philosophy, namely Ayn Rand’s Objectivism, which was at its zenith in *Atlas Shrugged* (1957). Rand’s philosophy, which she defined as “the concept of man as a heroic

Istvan's system of value thus seems pretty straightforward – and pretty dualistic as well: it starts with 'transhumanists vs. religious terrorists' but results in a very post-9/11 Bushian 'radical transhumanists vs. those who disagree'. The didactic intent of the novel manifests through the abundance of *mise en abyme* moments, where Jethro Knights is depicted as introducing and describing his philosophy, in writing or speech, and seems to act as a mouthpiece and fictional *alter ego* for the author – a politician and an ideologist. The speech that Knights gives the losing nations after he wins the war against them (chapter 33), in which he gives but the illusion of a choice between joining *Transhumania* or death, seems to address readers directly. It conveys the urgency and relevance of transhumanism as the only viable option for mankind, which, again, unambiguously exposes how the novel seeks to convince the reader of the validity of (his) transhumanism. Incidentally, just as the aforementioned monologue seems to implicitly dictate certain behaviour to readers, a more explicit rule of conduct is conveyed by the laws that open the novel:

The Three Laws:

- 1) A transhumanist must safeguard one's own existence above all else.
- 2) A transhumanist must strive to achieve omnipotence as expediently as possible—so long as one's actions do not conflict with the First Law.
- 3) A transhumanist must safeguard value in the universe—so long as one's actions do not conflict with the First and Second Laws. (n.p.)

These laws not only contain the overall philosophy of the novel but also signal its didactic intents.

Even though Suleiman's uniqueness lies in her focus on the ideological novel as a literary genre, it could also be argued that her characteristics for the genre could also

being, with his own happiness as the moral purpose of his life, with productive achievement as his noblest activity, and reason as his only absolute," (Rand n.p.) is thus a kind of rational egoism, very much akin Istvan's protagonist's ideas.

apply to other, shorter forms of fiction. For example, in 2005, Nick Bostrom, co-founder of important transhumanist associations and very active transhumanist (see Chapter 1), published, in *Journal of Medical Ethics*, “The Fable of the Dragon-Tyrant”:

Once upon a time, the planet was tyrannized by a giant dragon. The dragon stood taller than the largest cathedral, and it was covered with thick black scales. Its red eyes glowed with hate, and from its terrible jaws flowed an incessant stream of evil-smelling yellowish-green slime. It demanded from humankind a blood-curdling tribute: to satisfy its enormous appetite, ten thousand men and women had to be delivered every evening at the onset of dark to the foot of the mountain where the dragon-tyrant lived. Sometimes the dragon would devour these unfortunate souls upon arrival; sometimes again it would lock them up in the mountain where they would wither away for months or years before eventually being consumed. (1)

The dragon, of course, is a metaphor for aging that criticises humans’ inaction against this top murderer: rather than working to defeat it, humans adapted to this permanent threat by building infrastructure meant to facilitate “paying the tribute” and developing coping mechanisms:

Spiritual men sought to comfort those who were afraid of being eaten by the dragon (which included almost everyone, although many denied it in public) by promising another life after death, a life that would be free from the dragon-scourge. Other orators argued that the dragon has its place in the natural order and a moral right to be fed. They said that it was part of the very meaning of being human to end up in the dragon’s stomach. Others still maintained that the dragon was good for the human species because it kept the population size down. To what extent these arguments convinced the worried souls is not known. Most people tried to cope by not thinking about the grim end that awaited them. (1–2)

But then, the transhumanist dream unfolds: a few scientists refusing such a fate manage to convince more and more people to join in and invest in finding new ways to kill the dragon, until they catch the attention of the government, stir up a public debate that leads to awareness and action, and finally build a missile big enough to defeat the dragon.

In the unlikely case that, by the end of the tale, readers still had not gotten what the dragon stood for, Bostrom made sure they eventually would, by adding an extensive “Moral” section explaining each and every plot twist. This section, in which the “‘deathist’ stories and ideologies, which counsel passive acceptance” (10) are lamented, and which argues that we now have enough technology and “compelling moral reasons” to fight against aging and postpone death, is an explicit code of conduct addressed to the reader. Destined to a scientific readership, specifically doctors – who have their fictional counterparts in the “dragonologists” – this text was indeed meant to convince, as many transhumanist texts do, that effort and money should be put in “extending [...] the human *health-span*”²⁸, i.e. “slowing or halting the aging process” (11). In this, it clearly manifests its ideological nature. The fable indeed describes the opposition between two ways of dealing with the dragon – accepting vs. fighting – but unambiguously asserts the righteousness of the second one, as it values human health and life above all.

As an extremely popular genre to which the majority of people were confronted as a child, the fable is quite well suited for Bostrom’s purpose. Its codes – realism, irony, satire (Childs and Fowler 82) – and its aim – “reflecting on the commonsense ethics of ordinary life” (idem), which often leads to, precisely, a moral – are known to all, which means that everybody has the tools to understand and interpret a fable, to decode its underlying message and welcome it as a life lesson. To enhance the readers’ adherence to the message, Bostrom uses these same codes; the accommodation and

²⁸ Bostrom differs health-span extension from life-span extension in that the latter would amount to “Adding extra years of sickness and debility at the end of life” (11).

naturalisation of the threat, the bureaucracy whose only purpose is to keep itself floating, the tendency to handle the collateral rather than the problem itself, etc., are painfully and ironically realistic. Moreover, the choice of a dragon to impersonate a real-life threat is no stranger to many traditional, popular tales, but this tale contains a twist to the usual 'princess and dragon' trope, in which the dragon is usually slayed by a knight or a prince. In this case, the princess is humankind, and no exterior force can save her; salvation can only come from humankind itself, which reinforces Bostrom's critique of our passivity faced with the serial killer that aging is. Playing with these codes, while keeping it simple and obvious, secures the overall understanding of Bostrom's fable.

A few years later, Bostrom published a fictional letter in *Studies in Ethics, Law, and Technology*, "Letter from Utopia", which is even more explicit about its intention to convince. The author of the letter is a posthuman; s/he is writing to us, twenty-first-century human readers, to convince us to technologically enhance ourselves – body and mind-wise –, erase suffering and postpone aging and death. To do so, Bostrom uses three common strategies. Firstly, it describes the pleasures of their heavenly life in lively terms: such state of "bliss" could be our future if only we started heading in the right direction. Secondly, as many transhumanists before him, Bostrom legitimates the transhumanist agenda by naturalising it: "[m]y existence breaks no law of nature. The materials are all there. Your people must become master builders, and then you must use these skills to build yourselves up, without crushing your cores". In other words, since humans have always used technology; and that such technology has always grown in complexity, they were always supposed to handle their own evolution at some point: "Ever since one hairy creature picked up two flints and began knocking them together

to make a tool, this has been the direction of your unknown aspiration (n.p.). Unusually for a transhumanist, though, Bostrom hints that some of our current aspects, our “cores,” need to be safeguarded, but does not venture to clarify their nature. Thirdly, Bostrom unambiguously emphasises how ethically *right* human enhancement (thus transhumanism) is: “Human life, at its best, is fantastic. I’m asking you to create something even greater. Life that is truly humane”. As the last sentence of the letter, it seems to indicate that the ethical argument is even the main argument in favour of transhumanism. This persuasion process uncovers the ideological nature of the text: the rules of action induced by the narrator are quite explicit, including through the presence of imperatives –

Please, help us come into existence! Please, join us! Whether this tremendous possibility becomes a reality depends on your actions. If your empathy can perceive at least the outlines of the vision I am describing, then your ingenuity will find a way to make it real.

– and derive from a doctrinal intertext that is similar to the one conveyed by the “Fable of the Dragon Tyrant”: technology must be used to improve human existence.

Identifying Istvan’s and Bostrom’s fiction as ideological is quite easy because, besides their status as notable transhumanists, their narratives abound with *textual* markers of such ideological nature. Of course, this unconcealed abundance might be the result of their very status: there is no point in being subtle about one’s intentions when these can be deduced from one’s public ideological stance. Additionally, this ideological instrumentalisation of fiction is likely to result in texts whose status as “‘real’ literature” can be doubted in virtue of “[m]odern criticism [, which] has been tremendously wary of any literary work that ‘means to say something’ (that has a ‘message’)” (Suleiman 18).

This is a reference to Jakobson's and Mukařovský's theories of the poetic and communicative functions of language, their relationship with each other within a text, and their importance regarding a text's "literariness" (20-21): to the Modernists, the more prominent the poetic function, the less referential the text, and thus the more "literary" the work. Modernists sought either the plurality or the non-existence of meaning while the ideological novel, as already mentioned, seeks to convey a specific meaning (22). Despite these arguments, Suleiman argues that the ideological novel is literature, by relating it to the didacticism and referentiality of the beginning of the novel as a genre, and by recalling that Jakobson did not think that Literature must be all about the poetic function of language, but that thought that "the hallmark of a 'poetic' text (in the broad sense of a text characterised by "literariness") is that in it the communicative functions of language are subordinated to the poetic function" (Suleiman 19). Therefore, a 'legitimate', 'literary' work can be ideological, as long as the aesthetic aspect not only remains, but also dominates. This implies that 'convincing' will only be one (minor) purpose of such novel. In practice, I suggest returning to this almost canonical fiction of the posthuman: Michel Houellebecq's *The Possibility of an Island*.

Some might consider that there is, in *La Possibilité d'une île*, as in the majority Houellebecq's work, an "unambiguous dualistic system of values" which opposes a post-May-68 libertarian spirit based on individualism and those who condemn it. Kim Doré notices that the theme of the double was recurrent in Houellebecq's first attempt at science fiction, *Les Particules élémentaires* (Doré 74), but there might also be doubles in *La Possibilité d'une île*, and these doubles might well, at various levels, embody this "dualistic system of values". For example, Isabelle and Esther, respectively Daniel's

first wife and last girlfriend, represent two contrary views on human romantic relationships: "Isabelle did not like sexual pleasure, but Esther did not like love, she *did not want* to be in love, she refused this feeling of exclusivity, of dependence, and her whole generation refused it with her" (294).²⁹ The narrator describes Esther as a representative of her lubricious, loveless generation. The contradiction between Isabelle and Esther's values corresponds to a conflict of generations:

I was wandering among them like some kind of prehistoric monster with my romantic silliness, my attachments, my chains. For Esther, as for all the young girls of her generation, sexuality was just a pleasant pastime, driven by seduction and eroticism, which implied no particular sentimental commitment; undoubtedly love, like pity, according to Nietzsche, had never been anything but a fiction invented by the weak to make the strong feel guilty, to introduce limits to their natural freedom and ferocity. Women had been weak, in particular at the moment of giving birth, early on they had needed to live under the guardianship of a powerful protector, and to this end they had invented love, but now they had become strong, they were independent and free, and they had given up inspiring or indeed feeling a sentiment that no longer had any concrete justification. The centuries-old male project, perfectly expressed nowadays by pornographic films, that consisted of ridding sexuality of any emotional connotation in order to bring it back into the realm of pure entertainment, had finally, in this generation, been accomplished. What I was feeling, these young people could not feel, nor even exactly understand, and if they had been able to feel something like it, it would have made them uncomfortable, as if it were something ridiculous and a little shameful, like stigmata in ancient times. They had succeeded, after decades of conditioning and effort, they had finally succeeded in tearing from their hearts one of the oldest human feelings, and now it was done, what had been destroyed could no longer be put back together, no more than the pieces of a broken cup can be reassembled, they had reached their goal: at no moment in their lives would they ever know love. They were free. (294-5)³⁰

²⁹ "Isabelle n'aimait pas la jouissance, mais Esther n'aimait pas l'amour, elle ne voulait pas être amoureuse, elle refusait ce sentiment d'exclusivité, de dépendance, et c'est toute sa génération qui le refusait avec elle" (334).

³⁰ "J'étais parmi eux comme une sorte de monstre préhistorique avec mes niaiseries romantiques, mes attachements, mes chaînes. Pour Esther, comme pour toutes les jeunes filles de sa génération, la sexualité n'était plus qu'un divertissement plaisant, guidé par la séduction et l'érotisme, qui n'impliquait aucun engagement sentimental particulier; sans doute l'amour n'avait-il jamais été, comme la pitié selon Nietzsche, qu'une fiction inventée par les faibles pour culpabiliser les forts, pour introduire des limites à leur liberté et à leur férocité naturelles. Les femmes avaient été faibles, en particulier au moment de leurs

While the previous generation still clings to the concept of love, the young live happily without it. Beyond a discussion about the (non)existence of love, this is actually a reflection on human relationships as a whole, an interrogation not only of relationship but on whether humans should have relationships at all; the human need for co-dependency is in question. The answer to this question might determine the “doctrinal intertext” of the novel, which is, nonetheless, *not unambiguous*.

Regarding the narrator’s speech, as exemplified in the previous extract, there is no proof of direct criticism of the ‘new’ system of values. His description is rather neutral and some passages would even tend to convey a kind of approbation of this new world order, and a criticism of the old one. Whenever Daniel¹ mentions his own worldview and feelings, phrases related to them connote negativity: “prehistoric monster”, “silliness”, “chains”, “a fiction invented by the weak”, “guilty”, “limits”, “invented love”, “any concrete justification”, “uncomfortable”, “ridiculous”, “shameful” and “stigmata”. Moreover, whenever Daniel¹ describes this new, loveless generation, he sometimes uses terms or concepts that inspire positive feelings: “pleasant pastime”, “seduction”, “eroticism”, “freedom”, “strong”, “independent and free”, “perfectly expressed”, “pure entertainment”, “accomplished”, “free”. Should the conclusion therefore be that the narrator is in favour of this new world order? If so, should the

couches, elles avaient eu besoin à leurs débuts de vivre sous la tutelle d’un protecteur puissant, et à cet effet elles avaient inventé l’amour, mais à présent elles étaient indépendantes et libres, et elles avaient renoncé à inspirer comme à éprouver un sentiment qui n’avait plus aucune justification concrète. Le projet millénaire masculin, parfaitement exprimé de nos jours par les films pornographiques, consistait à ôter à la sexualité toute connotation affective pour la ramener dans le champ du divertissement pur, avait enfin, dans cette génération, trouvé à s’accomplir. Ce que je ressentais, ces jeunes gens ne pouvaient ni le ressentir, ni même exactement le comprendre, et s’ils avaient pu ils en auraient éprouvé une espèce de gêne, comme devant un stigmate de temps plus anciens. Ils avaient réussi, après des décennies de conditionnement et d’efforts ils avaient finalement réussi à extirper de leur coeur un des plus vieux sentiments humains, et maintenant c’était fait, ce qui avait été détruit ne pourrait se reformer, pas davantage que les morceaux d’une tasse brisée ne pourraient se réassembler d’eux-mêmes. Ils avaient atteint leur objectif: à aucun moment de leur vie, ils ne connaîtraient l’amour. Ils étaient libres” (334-5).

narrator's view automatically be associated with the authors', as is normally the case in ideological novels and often the case in Michel Houellebecq's writings? The answer to these questions is to be found beyond the narrator's speech, first in his psychology and then in the plot itself.

Daniel1 is a successful stand-up comedian and the uniqueness of his sketches, and the origin of his success, lies in his cynicism. He acknowledges and advertises this characteristic as he decides to call one of his projects "Diogène le cynique", and repeatedly and shamelessly says that he is cynical or praises cynicism:

I am cynical, bitter, I can only interest people who are a bit inclined towards doubt, people who already feel that they've reached the end of the line. (26)

Any form of cruelty, cynical selfishness or violence was therefore welcome (38)

I was enough of a cynical bastard to understand the situation, I had succeeded in avoiding most of the traps; but as for friends, no, I no longer had any. (51)

I had built the whole of my career and fortune on the commercial exploitation of bad instincts, of the West's absurd attraction to cynicism and evil... (183) ³¹

Daniel1 seems rather proud of publicly being a nonconformist and despising social convention. This extract might lead the reader to think that, when talking about love – another social convention – Daniel1 praises its disappearance amongst the new generation. However, Daniel1 also knows that he is not really as cynical as he tries to appear: "Something was emerging between us, like a state of innocence, and I had obviously overestimated the extent of my cynicism" (36-37, my translation³²). Most

³¹ "En fait, je suis cynique, amer, je ne peux intéresser que des gens un peu enclins au doute, des gens qui commencent à être dans une ambiance de fin de partie." (36); "Toute forme de cruauté, d'égoïsme cynique ou de violence était donc la bienvenue." (50); "enfin, j'étais moi-même suffisamment salaud et cynique pour me rendre compte, j'avais réussi à déjouer la plupart des pièges; mais des amis, non, je n'en avais plus." (64); "[L]'ensemble de ma carrière et de ma fortune je l'avais bâti sur l'exploitation commerciale des mauvais instincts, sur cette attirance absurde pour le cynisme et pour le mal..." (210).

³² "Quelque chose naissait entre nous, comme un état d'innocence, et j'avais manifestement surestimé l'ampleur de mon cynisme." This sentence does not appear in the English translation.

interestingly, those who come to know him intimately through friendship, like Vincent, or through reading his autobiography, like his clones, could see beyond the public figure and discover the sentimental side of him that he does not advertise in his shows:

The life story of Daniel 1, turbulent, painful, as often unreservedly sentimental as frankly cynical, and contradictory from all points of view, is in this regard characteristic. (162)

[According to Vincent,] on the intellectual level I was in reality slightly above average, and on the moral level I was the same as everyone else: a bit sentimental, a bit cynical, like most men. (348)³³

These two extracts reveal the contradictions created by the juxtaposition of cynicism and sentimentalism, and the difference between what Daniel1 thinks of himself and how others perceive him. It is interesting to note that Vincent and Daniel's clones conclude that humanity as a whole is as contradictory as Daniel himself, and therefore do not make a distinction between old and new generations.

Given his internal contradictions and the contrast between his public and private behaviours, Daniel1's reliability as a narrator should be questioned. The neutrality verging on jubilation that he expresses towards social change when he describes Esther's generation might as well be remote from his actual feelings. While Daniel's clone can have a general overview of humanity through reading not only Daniel's but also others' autobiographies, the veracity of Daniel's statements about humanity is undermined by his not having such an overview and by his personal feelings and experiences. Indeed, his speech about youth's 'lovelessness' could derive from mere frustration at having lost his own youth, at being incapable of connecting with the

³³ "Le récit de vie de Daniel1, heurté, douloureux, aussi souvent sentimental sans retenue que franchement cynique, à tous points de vue contradictoire, est à cet égard caractéristique." (187) ; "[Selon Vincent] sur le plan moral j'étais semblable à tous: un peu sentimental, un peu cynique, comme la plupart des hommes" (391).

current youth, at seeing that his feelings for Esther are unreciprocated, at Esther leaving for New York, and at knowing that he does not satisfy her sexually, etc. For all of these reasons it is safe to state that Daniel's attitude towards the decline of morality might be guided by the wish to save his cynical face, probably prompted by the shame of being unable to adapt to a cynical age. Examining the narrator's discourse in order to find an *unambiguous* doctrinal intertext is therefore inconclusive, for this character is, precisely, full of ambiguities.

As narrator speech and behaviour fail to reveal any unambiguous doctrinal intertext, one last option might be located at the level the plot, more precisely, the characters' outcomes. As Suleiman explains, in many ideological novels the fortune of a character, and more precisely whether it is good or ill, is a way of dictating to the reader how to behave according to the following reasoning: depending on whether the character achieves a happy ending or not, their lifestyle is either an example to follow or an account of what must *not* be done. In so addressing an implicit rule of action to the reader, the characters' fortune after they make certain choices may indeed provide information on the doctrinal intertext of the novel.

In the case of *La Possibilité d'une île* it might not be this simple since the novel, which depicts a depraved society and a post-apocalyptic world where one is either a human savage or a lonely clone, is quite pessimistic. An 'happy ending' awaits very few characters, regardless of their lifestyle or the era they live in: Daniel dies miserable, Daniel's ex-wife commits suicide, the former guru of the *Élohim* is murdered, Esther dies young from a renal malformation, Marie²³ disappears, Daniel²⁵'s dog is murdered by wild humans, Daniel²⁵ puts an end to the Daniel lineage by leaving his home and

humanity (as referring to both the ensemble of humans and the quality of being humane) is almost extinct. The only character whose lot is not so miserable is also the only person who finds favour with Daniel:

Before putting the final stop to my story I thought back for the last time to Vincent, the true inspiration of this book, and the only human being who had ever inspired in me the feeling that was so foreign to my nature: admiration. (365)³⁴

The reader will never know how Vincent's story ends but the narrator's tribute to him in such a defining moment of the tale (the narrator's death) is an unambiguous marker of his importance. Vincent's lifestyle and values might therefore correspond to what the narrator (and probably, by implication the author) wishes to promote. According to Neli Koleva, Vincent's 'peculiarities' are that he refuses to "adjust to the demands of mainstream society" and is "thoroughly comfortable with himself and ready to live life on his own terms" (3). In a novel where the narrator constantly criticises contemporary society, this praise of non-conformism is rather predictable. If Vincent rejects the values of our present society, the values he promotes are those from bygone days: through his art, which is pervaded with nostalgia, he tries to "[recreate] a universe in which words such as love, goodness, tenderness, loyalty and happiness still have a meaning" (Koleva 3). The fact that the decoration of his house has been unmodified since the 1930s (Koleva 3) is also quite telling of Vincent's values: even though those years saw the end of the "années folles" and the beginning of a worldwide economic crisis, they were somehow the last 'moment of peace' before the moral decline initiated by horrors of

³⁴ "Avant de mettre un point final à mon récit je repensai pour la dernière fois à Vincent, le véritable inspirateur de ce livre, et le seul être humain qui m'ait jamais inspiré ce sentiment si étrange à ma nature: l'admiration" (409-10).

the Second World War, the advent of consumerism, the events of May 1968 and the rise of capitalism and globalisation.

The idea that May 1968 was the turning point where French society lost all of its morals is recurrent in Houellebecq's work (Rowlins 66). Koleva, for her part, states that the most important aspect of *Possibility* was the role of the artist as a moralist, and she establishes that Vincent was one of these moralising artists (2). The positivity of Vincent's values is conveyed so unambiguously that one can safely assume that his lifestyle corresponds to the doctrinal intertext of the novel; in the "unambiguous dualistic system of values" which can be now formulated as a sexually liberated, loveless society *versus* a society "in which words such as love, goodness, tenderness, loyalty and happiness still have a meaning" (Koleva 3), the narrator and the implied author clearly choose the latter, therefore leading the "doctrinal intertext" in the same direction.

I wrote earlier that, in this novel, the dualistic system of values was personified by pairs of antagonistic characters, such as Isabelle and Esther, who embody, respectively, love and sexuality. Vincent can also be considered part of a pair, his negative counterpart being the former guru of the *Élohim*, a man driven by power, money and sexual desire. Unlike the latter, who corresponds to the typically dishonest chief of a cult, Vincent believes in the whole mythology developed by the cult and is one of the few who do not take advantage of the sexually liberated atmosphere permitted and encouraged during the cult meetings. He only desires one woman and refuses to participate in frequently organised orgies. His monogamous ideal, which becomes his lifestyle when he eventually wins this woman's heart, contradicts the behaviours of the guru, of the cult and most of its adherents.

One can also draw an interesting comparison between Vincent and Daniel, two very similar and simultaneously very different characters. Indeed, Koleva established that what Daniel liked about Vincent was his non-conformism (2); and Daniel, by being so cynical, is also a nonconformist. Despite sharing, as Maingueneau would call it, a similar *paratopical* status, Daniel and Vincent do not maintain the same bond with the society they despise. While Vincent takes refuge in his art, which is like a dream world he creates for himself to escape reality, Daniel confronts the vices of contemporary society by representing them in his sketches. However, his attitude towards these vices is rather ambiguous; on the one hand, as one would expect, focusing on something considered negative by the majority (such as, in Daniel's sketches, violence, poverty and discrimination) is often a way of criticising it (even more so in a sketch, which often aims at ridicule); on the other hand, Daniel explains that alluding to these themes is also a way to stimulate the audience's basic instincts, encouraging them to come and see his show and make him more successful. This is the core distinction between Daniel and Vincent and, incidentally, the reason why the former admires the latter: contrary to Vincent, and despite his cynicism, Daniel eventually adapts himself and his art to society. If humanity is torn between cynicism and sentimentalism, and if the majority of characters in the novel, including Daniel, are rather attracted to the former, Vincent might be the only character who openly accepts and embraces his sentimentalism. He is not torn, he is whole and holds the 'right' values, which is why he first unsettles Daniel before prompting the latter's boundless admiration.

The issues of "dualistic system of values" and "doctrinal intertext" in *Possibility* formulated as above might sound a little reductive: it would seem that this novel depicts

a battle between love and sex in which love should be winning but is actually losing in a debauched society. Yet, although Daniel devotes a lot of his autobiography to this, describing his romantic relationships and sexual experiences in detail, the focus is much wider. Koleva wrote that Vincent promoted not only love, but also “goodness, tenderness, loyalty and happiness” (3). ‘Love vs. sex’ is the symptom of a greater moral battle that opposes two attitudes: altruism vs. egotism. These terms correspond to the accurate abstractions of many, more specific antagonisms that might arise in the novel – ‘love vs. sex’ (Isabelle and Esther), ‘honesty vs. dishonesty’ (Vincent and his former guru), ‘resistance vs. resignation’ (Vincent vs. Daniel) or ‘community vs. solitude’.

The latter, which is embodied in the way Marie²³ distinguishes herself from other clones, is particularly interesting in its final and conclusive position in the narrative. Indeed, towards the end of the novel, Daniel²⁵ reports that Marie²³ has left her home permanently, perhaps in search of a neohuman community. Daniel²⁵ quickly becomes intrigued by Marie²³’s motives for giving up such a comfortable lifestyle. Witnessing in her ancestor’s autobiography everything that collective life had to offer, Marie²³ could no longer stand her loneliness. It is through the same wish to reconnect with a more human(e) lifestyle that Daniel²⁵ decides to follow Marie²³’s example and leaves home with his dog. The reader will never know the outcome of Marie²³’s flight, but Daniel²⁵ describes his ‘adventure’ in the novel’s “Final Commentary, Epilogue” (379): he observes and encounters humans who have returned to a primitive state (they lead cruel rituals, they do not talk, they live in rudimentary camps, they barely dress, etc.), then these humans kill his dog, which leads him to experience sorrow for the first time and makes him realise the nature of love. Following this traumatising event, Daniel²⁵

decides to lie down on the sand, estimates that he has sixty more years to live if he stays right there, and concludes that he is finally at peace. According to Posthumus and Sinclair, Daniel²⁵ left looking for “a more affective existence” (my translation) and eventually found it through feeling sadness for the first time (352). He finally reaches a state of continual ecstasy; he is himself and everything revolves around him (353). Posthumus and Sinclair conclude that only the reader can decide if this fate is desirable or not (353):

I had perhaps sixty years left to live ; more than twenty thousand days that would be identical. I would avoid thought in the same way I would avoid suffering. The pitfalls of life were far behind me ; I had now entered a peaceful space from which only the lethal process would separate me.

I bathed for a long time under the sun and the starlight, and I felt nothing other than a slighty obscure and nutritive sensation. Happiness was not a possible horizon. The world had betrayed. My body belonged to me for only a brief lapse of time ; I would never reach the goal I had been set. The future was empty ; it was the mountain. My dreams were populated with emotional presences. I was, I was no longer. Life was real. (422-423)³⁵

By mixing positive and negative ideas, the ending does not allow for any definitive judgment about the narrator’s fate. Daniel²⁵ seems to accept his future but it is not clear whether he is really satisfied with this. Regarding the doctrinal intertext, the novel’s ending might therefore not be conclusive enough. Like Marie²³, Daniel²⁵ left to find a neohuman community (Posthumus and Sinclair 352) but ends up being entirely alone and satisfied with this. Should one therefore conclude that the novel is in favour of

³⁵ “Il me restait peut-être soixante ans à vivre ; plus de vingt mille journées qui seraient identiques. J’évitais la pensée comme j’évitais la souffrance. Les écueils de la vie étaient loin derrière moi ; j’étais maintenant entré dans un espace paisible dont seul m’écarterait le processus léthal.

Je me baignais longtemps, sous le soleil comme sous la lumière des étoiles, et je ne ressentais rien d’autre qu’une légère sensation obscure et nutritive. Le bonheur n’était pas un horizon possible. Le monde avait trahi. Mon corps m’appartenait pour un bref laps de temps ; je n’atteindrais jamais l’objectif assigné. Le futur était vide ; il était la montagne. Mes rêves étaient peuplés de présences émotives. J’étais, je n’étais plus. La vie était réelle” (474).

isolation, which would rather be placed on the 'wrong' side of the "dualistic system of values"? Like Daniel, Daniel's experience of love (which is on the 'right' side) also gives him the strongest of sorrows. If love hurts, should one conclude from the novel that, between altruism and egotism, the second prevails because it at least prevents suffering? This might not be the exact conclusion of the novel, but it proves that the doctrinal intertext that appeared so clearly earlier can be questioned, just like, the branding of *Possibility* as an ideological novel.

According to Koleva, many of those who described Michel Houellebecq as a writer of ideological novel (or *roman à these*) meant it as criticism (2). Laurence Dahan-Gaida may be one of the few who used the term free from negative connotations; alluding to *Atomised*, which is thematically close to *Possibility*, she describes his work as a "compendium of customs and mentalities history", a "quasi-report", a "utopian and speculative novel", "scientific theories" (99), "naturalism", an "experimental novel" and a "philosophical manifesto" (101).³⁶ It would therefore be reductive to call his novel *merely* ideological; it only partly is so, amongst other things, and behind this plurality of labels lies a heterogeneity of purpose: to convince, yes, but also to reflect, to entertain, to please mind and senses, to denounce, to voice other perspectives, to warn, to anticipate, and many others. Among this variety of purposes, several hints at the presence of an underlying theoretical discourse. Persuasion has just been covered: it is achieved textually through markers of didacticism, resulting in texts that are (partly) ideological. Theory is therefore located in the doctrinal intertext of these narratives.

³⁶ "abrégé d'histoire des moeurs et mentalités", "quasi-reportages", "utopie et roman d'anticipation", "théories scientifiques", "naturalisme", "roman expérimental" and "manifeste philosophique".

However, the presence of theory in fiction can also be noticed in narratives whose purpose is not always to convince, but to convey and even develop a theory.

Knowledge, or Philosophical Fiction

The ideological novel as a genre is often jointly studied with – and differentiated from – another type of fiction that gives prominence to ideas: the novel of ideas.³⁷ French writer Paul Bourget contrasts the ideological novel with the novel of ideas, which he identifies as “*romans d'idées, romans d'analyse, or romans sociaux*” (Suleiman 3). Similarly, in “The Spanish Novel of ‘Ideas’: Critical Opinion (1836-1880)”, Sherman H. Eoff searches for the equivalent of ‘novel of ideas’ in the Spanish language and compares it with, again, the ideological novel:

Thus the novel which dealt with ideas of social, moral, religious, or political significance was commonly called *filosófica* and *transcendental*, especially in the 1870's: the novel of thesis, sometimes called *novela tendenciosa*, was a notable manifestation of this type of ‘philosophical’ novel. (531)

Eoff therefore identifies two types of novel: on the one hand, the all-encompassing category of the “novel of ideas”, also called in Spanish “*novela filosófica*” or “*novela transcendental*”, and, on the other hand, one of its “manifestation[s]”, the “novel of thesis” (recalling the French *roman à thèse*) or “*novela tendenciosa*” (meaning ‘partial’ or ‘biased’ novel), which clearly corresponds to the ideological novel.³⁸ Even though Eoff presents the “*novela tendenciosa*” as a type of “*novela filosófica* and *transcendental*”, he implicitly signals that the rest of novels of ideas / philosophical novels / transcendental novels are *impartial, unbiased*.

³⁷ More rarely, the novel of ideas is conflated with the

³⁸ Notably, Eoff considers the ideological novel to be a “notable manifestation” of the novel of ideas (531) whereas Bourget categorically opposes the novel of ideas to the ideological novel. The reason behind this might be that the ideological novel had a poor reputation and Bourget, who was simultaneously writing ideological novels and criticising them, preferred to define his own work otherwise (Suleiman 3).

Eoff's article, which is about the nineteenth-century Spanish novel of ideas, might appear too minor, or its topic too precise, to be an authority on the novel of ideas or any of the other genres mentioned. However, publications such as this constitute a large portion of the sources on the novel of ideas. As such, they cannot be ignored because, despite their brevity, their sometimes non-academic publisher, or their limited scope, each of them sheds light on one or several essential aspects of these types of novels. For example, in a *LA Times* article about the 2012 novels of ideas, David Ulin writes that novels of ideas "both portray and reflect upon the spirit of their moment, telling not just a story but using it to illustrate something about the world in which we live" (n.p.). Similarly, in his review of Teju Cole's *Every Day Is for the Thief*, Adam Plunkett characterises the novel of ideas as mainly aimed at depicting the dysfunctions of (in this case, Nigerian) society (n.p.).

Besides these articles, information might be found in specialised reference works. Dictionaries, encyclopaedias or glossaries devoted to literature may indeed prove useful when faced with the scarcity of extensive and focused theorisation attempts. However, in this particular case, they suffer similar scarcity: amongst the consulted literary reference works,³⁹ 'novel of ideas' only appears in Cuddon's *Penguin*

Dictionary of Literary Terms and Literary Theory:

A vague category of fiction in which conversation, intellectual discussion and debate predominate, and in which plot, narrative, emotional conflict and psychological depth in characterization are deliberately limited. Such a form of

³⁹ Abrams, M. H. *A Glossary of Literary Terms*. Fort Worth: Harcourt Brace Jovanovich College, 1993; Baldick, Chris. *The Concise Oxford Dictionary of Literary Terms*. Oxford: Oxford UP, 1990; Baldick, Chris. *The Oxford Dictionary of Literary Terms*. Oxford: Oxford UP, 2008; Barnet, Sylvan, Morton Berman, and William Burto. *A Dictionary of Literary Terms*. London: Constable, 1964; Childs, Peter, and Roger Fowler. *The Routledge Dictionary of Literary Terms*. London: Routledge, 2006; Gray, Martin. *A Dictionary of Literary Terms*. Harlow, Essex, England: Longman, 1992; Shipley, Joseph T. *Dictionary of World Literary Terms: Forms, Technique, Criticism*. Boston: Writer, 1970.

novel is perhaps best exemplified by Aldous Huxley's *Crome Yellow* (1921), *Point Counter Point* (1928) and *After Many a Summer* (1939). See NOVEL. (Cuddon 602)

As often,⁴⁰ this definition is heavily influenced by Aldous Huxley's personal appropriation of the concept in the 1920s. In *Point Counter Point*, Huxley indeed has character Philip Quarles take notes on the "Novel of ideas":

The character of each personage must be implied, as far as possible, in the ideas of which he is the mouthpiece. In so far as theories are rationalizations of sentiments, instincts, dispositions of soul, this is feasible. The chief defect of the novel of ideas is that you must write about people who have ideas to express—which excludes all but about .01 per cent of the human race. Hence the real, the congenital novelists don't write such books. (Huxley, qtd. in Hoffman 129-130; Bowering 6)

Bowering notices that Huxley designates something quite different from the usual understanding of 'novel of ideas' (5). Quarles's – and therefore Huxley's⁴¹ – definition of this concept, along with the *Penguin* definition (which is obviously based on Huxley's), gives a prominent role to the ideas shared during conversation, often at the expense of other dimensions of the novel such as "plot, narrative, emotional conflict and psychological depth in characterization" (Cuddon 602). Yet, none of the previously mentioned articles (Eoff, Ulin, Plunkett) indicates underdevelopment or conversationality. This shows the gap between Huxley's and these more recent notions of the novel of ideas, which highlight its philosophical (and, to a lesser extent, sociological) dimensions. Such discrepancy hints at the failure of the novel of ideas to be considered an actual genre. Yet, whether with Huxley's emphasis on conversation or in new, more encompassing notions of the novel of ideas, the plurality of viewpoints is

⁴⁰ See the section "The Novel of Ideas" in Peter Bowering's *Aldous Huxley: A Study of the Major Novels* and Frederick Hoffman's article "Aldous Huxley and the Novel of Ideas."

⁴¹ Quarles' ideas are very likely to have been primarily Huxley's. Indeed, this character, who is a writer, is often said to be Huxley's self-portrait, and as Hoffman writes: "[Quarles'] theory of fiction corresponds with, or draws upon, Huxley's own philosophy" (130). The synchronisation of Quarles' opinions with Huxley's is confirmed when the author writes about similar themes in essays of the 1929 collection *Do What You Will* (Hoffman 131).

always conveyed. The essence of this type of novel is, indeed, the confrontation of different ideas, worldviews or, as Hoffman puts it, “generalization[s] about human behaviour” (131). As such, it fundamentally differs from the ideological novel – which ultimately seeks to promote *one* idea – and hints at uses of fiction other than persuasion. In order to cover these other uses, I would like to consider the broader ensemble of which the novel of ideas is part: philosophical fiction.

Like the novel of ideas, philosophical fiction cannot boast many extensive or thorough definition attempts: a few defining elements are occasionally dropped in the course of analyses of specific (bodies of) narratives,⁴² and as for specialised reference works, only Logan’s *Encyclopedia of the Novel* feature an entry the “Philosophical Novel” (written by David Cunningham). These scattered sources nonetheless led me to identify several ways philosophical discourse manifest in fiction and sort these ways into two categories.

The first category gathers narratives featuring ideas that seem to have been formed beforehand. The incursion of these ideas into fiction has at least three purposes. Firstly, as Cunningham notes, philosophical fiction, in a pure French Enlightenment fashion (Voltaire, Montesquieu, Sade, Rousseau), may be called so because it *illustrates* philosophical ideas, either by featuring large digressions and “discursive reflections”, or by functioning as a parable (608). Giving “‘concrete’ imaginative form to a set of more or less ‘abstract’ theoretical propositions” may indeed contribute to a better understanding of these ideas (608). In this case, the fictional narrative is but a vessel for ideas, “a literary means to implicitly philosophical ends” (608). Secondly, as with

⁴² For example, “Le roman philosophique balsacien et la passion de l’absolu” (Méra 2006), “The philosophical novel” (Ryerson 2011) and *Henry James and the Philosophical Novel* (Williams 2009).

nineteenth-century Russian realists (Tolstoy, Dostoyevsky), philosophical fiction can designate narratives “putting to “the test of life” particular contemporary ideas” (Cunningham 609). Fiction therefore becomes the place where the accuracy, the practicability and the impact of ideas can be *evaluated*. One of the ways of doing this is, thirdly, to *confront* ideas with one another. Fiction may indeed be philosophical by being “the means by which divergent ideas may be brought into (a frequently unresolved) conflict” (609) as Cunningham puts it, as he evokes Bakhtin’s dialogism. Interestingly, the confrontation of ideas has been identified by Huxley as the main defining characteristic of novel of ideas, but the entire category of philosophical fiction could fit the broader understanding of the novel of ideas as fiction aimed at featuring ideas.

However, the uses of fiction can go far beyond the propagation, the illustration, the confrontation or the evaluation of ideas. It indeed plays a role at the developmental stage, which constitutes the second category. Indeed, whereas Cunningham mainly presents ways of writing philosophical fiction that consist in featuring ideas, he nonetheless defines the philosophical novel as a “genre in which characteristic elements of the novel are used as a vehicle for the exploration of philosophical questions and concepts” (606). Unlike “concepts”, which are the *result* of philosophical activity, the formulation “philosophical questions” does not imply the pre-existence of ideas. Instead, it emphasises philosophical activity – the construction of ideas – as a *process*; a process that can take place in fiction, amongst others. This might be enabled by the shared purpose of fiction and philosophy: the pursuit of knowledge. In his *New York Times* article about “The Philosophical Novel”, James Ryerson indeed notes that “both

disciplines seek to ask big questions, to locate and describe deeper truths, to shape some kind of order from the muddle of the world" (n.p.). Similarly, in "Theory Not of Literature But as Literature", Jean-Michel Rabaté recalls Roland Barthes stating: "literature is a *mathesis*, an order, a system, a structured field of knowledge" (117–18). And as for the somewhat vague "big questions" and the "deeper truths", they seem to correspond to what characterises philosophy and therefore the philosophical novel, according to Brigitte Méra in "Le Roman philosophique Balzacien et la passion de l'absolu": the search for absolute knowledge.⁴³

If reporting the totality of the world (Méra 164) or of life (Rabaté 135) is the goal of all philosophical writings, whether fiction or non-fiction, commentators nonetheless recognise that they do not all prompt the same type of knowledge. For example, Ryerson recalls Iris Murdoch saying that philosophy is "austere, unselfish, candid" whereas literature is "mysterious, ambiguous, particular" (n.p.). Similarly, Landy differentiates literature from philosophy by observing that they convey, respectively, subjective and objective forms of knowledge, even arguing that the former is the "only type of knowledge we care about, the only kind that can transform our life" (Landy n.p.). Lastly, Rabaté notes that the knowledge conveyed by a literary work is likely to concern the latter's own construction process (134), implying that the philosophical discourse featured in literature is mainly aimed at producing a theory of literature itself, especially from Modernism onwards (Cunningham 610).

Characterising philosophical fiction – or all fiction, according to certain critics – as a way to produce, organise and evaluate ideas or, more generally, knowledge,

⁴³ Landy emphasises the moral dimension of it all when he recalls that fiction, like philosophy, "has a role to play in the formation of a successful human life" (n.p.)

therefore emphasises the cognitive function of fiction. In *Pourquoi la fiction?* (1999), Jean-Marie Schaeffer, who defines fiction as a social practice resting upon “playful pretending” (“*feintise ludique*”), discusses the cognitive function of imitation (or ‘*mimesis*’). Imitation is indeed one of “the four canonical types of learning processes, alongside cultural transmission of explicit knowledge, individual learning by trial and error, and rational calculation” (my translation).⁴⁴ The mimetic component of fiction therefore enables its cognitive function. In other words, as a specific relationship to (or, a way of modelling) reality, fiction can be a legitimate path to knowledge and truth. However, this cognitive function of imitation, legitimated by theories of cognition and learning, mainly concerns agents of imitation, not its observers. In other words, when transferred to the particular case of fiction, Schaeffer’s observations apply more directly to writers rather than readers (132).⁴⁵ To accompany Schaeffer’s rather authorial perspective (which echoes Ryerson’s and Cunningham’s), one could turn to Lamarque and Olsen’s *Truth, Fiction and Literature* (1994) for a focus on the cognitive impact of reading fiction. As they explore the relationship between literature and philosophy, they describe two attitudes towards the cognitive value of literature: some might argue that it has nothing to do with the pursuit of knowledge, while others would instead propose “to redefine the concepts of knowledge and truth-seeking, at least loosening the connection with supportive evidence and argument” (368–69). This redefinition is what they call “the Subjective Knowledge Theory of Cognitive Value” (371) and is rooted in

⁴⁴“L’apprentissage mimétique, loin d’être une phénomène secondaire ou marginal, constitue en fait un des quatre types canoniques d’apprentissage, à côté de la transmission culturelle de savoir explicites, de l’apprentissage individuel par essai et erreur et du calcul rationnel” (Schaeffer 120).

⁴⁵ This is when he develops of the concept of fiction as “shared playful pretending” (“*feintise ludique partagée*”), which postulates the participation of both writers and readers in creating and maintaining fiction, but not longer

the idea that literature allows one to “come to share [an internal, subjective] knowledge through an act of ‘subjective imagination’ in which one occupies in imagination the point of view of another self [, thus] training and extending our sympathetic understanding of other people” (370). The knowledge conveyed by literature is therefore not the same as that conveyed by science: the latter allows “knowing how” and “knowing that” while literature is more about “knowing what it is like” (Ryle, qtd. in Lamarque & Olsen 371).

Although Lamarque and Olsen study how “literature [...] becomes a companion to philosophy, or even a branch of philosophy” as both “seek a better understanding of moral matters” (370), neither do they nor Schaeffer presume to comment on the philosophical novel as a genre, but on the philosophical aspects of fiction altogether. Even those who claim that philosophical fiction is a genre sometimes base such claims on the observation of the philosophical potential of fiction. For example, Cunningham explicitly label the philosophical novel as a “genre”, but nonetheless partially relates its existence to “the novel’s concrete sensuousness and attentiveness to everyday experience that has been said, by some, to lend it a special intellectual significance with regard to characteristically philosophical concerns” (610). Similarly, Ryerson comments on the philosophical novel by acknowledging literature’s relevance in the pursuit of knowledge (n.p.). If the novel, literature, or fiction altogether, has the capacity to engage the author and the reader philosophically (Bewes 428) and to constitute a path to (new forms of) knowledge, considering philosophical fiction a genre becomes questionable, as this so-called genre would encompass an extremely large portion of fictional works. This might explain why most of the works adopt an inductive approach

to philosophical fiction, starting from the fictional works – usually novels (Honoré de Balzac’s for Méra, Marcel Proust’s and James Joyce’s for Rabaté, Proust’s again for Landy or Henri James’s for Williams) – and emphasising their philosophical aspects, but never quite going as far as using them to establish a poetics of the philosophical novel as a genre.

One can nonetheless notice recurring features signalling the philosophical or theoretical potential of fiction. Here, the status of ideas – ‘fully fledged’ or ‘under construction’ – and the earlier categorisation that it has inspired are still relevant.

Intertextuality

If ‘philosophy’ or ‘theory’ designate a set of writings and, therefore, of already established ideas, their presence in fiction can be as explicit as straightforward references to or citations of thinkers or concepts.⁴⁶ For example, in *The Possibility of an Island*, narrators refer to philosophers, writers or scientists such as Pierce (27), Proust (91), Smith and Nagel (138), Everett and De Witt (220), or Gödel (240). Most often, though, some references are less obvious than this, and can instead be (playfully) hidden. For example, they could manifest through lexical and thematic nods to philosophical writings, such as the protagonist of Philip K. Dick’s *Do Androids dream of Electric Sheep?* (1968) being named Rick Deckard, which famously recalls philosopher René Descartes. In this case, it is more than a nod to philosophy in general: Descartes is indeed an important advocate of the mind-body dualism, whose questioning is at the

⁴⁶ Beyond theory or philosophy, references contributing to the ontological heterogeneity of fictions of the posthuman can also concern, non-fiction in general, including naming real-world people, works, places and events. These references to real-world elements are not uncommon in fictions of the posthuman, and in science fiction at large, because they enhance the plausibility of the story, which is a constitutive part of the genre. For example, in the tenth chapter of Houellebecq’s *Atomised* (*Les particules élémentaires*, 1998) feature references to Huxley’s *Brave New World* (Clément 95; Van Wesemael 87).

centre of the novel's plot, but also of most fictional representations of the posthuman. Part I has shown that this questioning is at the heart of posthumanism, but, of course Dick's novel precedes this set of theories by decades. More recent works, however, contain explicit or implicit references to theoretical discourses related to the posthuman,⁴⁷ the likelihood of which increases in accordance with the popularity of these discourses.

As an increasingly popular discourse with solid, consistent and identifiable foundations, transhumanism is therefore the perfect candidate for fictionalisation. For example, references to transhumanists in Dan Brown's *Inferno* (2013) or Zoltan Istvan's *The Transhumanist Wager* (2013) have been mentioned, but Marcus Rockoff also signals references to transhumanism in Richard Powers's 2009 *Generosity: An Enhancement* (Rockoff 261). Sometimes transhumanist ideas are only hinted at, such as in Don De Lillo's *Zero K*, in a dialogue about cryonics: "'This is not a new idea. Am I right?'" 'This is not a new idea. It is an idea,' he said, 'that is now approaching full realization' (8). This is not a reference to transhumanism *per se*, but cryonics has been the breeding-ground of transhumanist writings (see Chapter 1).

Something quite similar has happened to posthumanism, which has rarely been the object of explicit references. Instead of referring to posthumanism as an established discourse, fictional narratives would rather refer to individual theoreticians who could be said to belong to the posthumanist tradition. I stumbled across two non-literary examples of this.

⁴⁷ See the next section.

In the same vein as *Do Androids Dream of Electric Sheep?*, Mamoru Oshii's *Innocence: Ghost in the Shell 2* (2004) alludes to this tradition through a character name. The police forensic specialist tasked with conducting the investigation on robot-related crimes is indeed called "Haraway". Yet, this is not just a subtle nod to the author or the *Manifesto for Cyborgs*: not only does character-Haraway resemble real-life Donna Haraway – "marked features, short hair, slender figure" (Milani n.p.)⁴⁸ – but the anime version's monologue also echoes Donna Haraway's actual theories faithfully.



Fig. 2. Haraway from Mamoru Oshii, *Ghost in the Shell 2: Innocence*.



Fig. 3. Donna Haraway from Silvia Milani, "Siamo tutti cyborg."

Haraway indeed implies that the "clear distinction between humans and machines" is irrelevant, as she and investigator Batou discuss whether the robot she is autopsying had committed *suicide* or *self-destruction*. 'Suicide' (etymologically, *sui caedere*, "killing oneself") presupposes the presence of a self, that is to say, of self-consciousness. Yet, robots – especially "pet robots", Miss Haraway adds, in a reference to the *Companion Species* theory – are treated less as self-conscious beings than as replaceable and disposable things (the neglect and abandonment of which is precisely the cause of their malfunctions). She further undermines the humans/machine distinction by assimilating

⁴⁸ "tratti marcati, capigliatura corta, figura esile."

“raising children” and “creating artificial life”. Yet, she finally declares that she has never had any children, thus rejecting the role of creator, which echoes Haraway’s famous conclusive remark of the *Manifesto*: “I would rather be a cyborg than a goddess” (‘Manifesto’ 39).

Haraway is also mentioned extensively in the Belgian dramatic creation *Cocon!* (2018), along with other theories and theoreticians, many of whom inspired the more philosophical brand of posthumanism. *Cocon!* is the results of a collective reflection – between director Dominique Roodthooft, actors, stage workers and philosophy scholars⁴⁹ – upon the relationship between humans and “inappropriated” and non-human beings. This creation process is characteristic of the contemporary brand of theatre that is stage composition. Descending from postdramatic theatre,⁵⁰ stage composition (“*écriture de plateau*”, as theorised in French by Bruno Tackels) not only emerges from collective writing, but also produces meaning through its overall staging, i.e. set, lights, choreography, music, multimedia, etc. (Monfort 1), and forces fiction and non-fiction into coexistence by acknowledging its own theatrical nature to the audience (Monfort 3). *Cocon!* epitomises this type of contemporary theatre.

The synopsis traces its creation process, starting from an interest in Judith Scott, a fibre sculptor with Down syndrome, and exploring ways of making sense of her existence through theoretical writings by philosophers, anthropologists and biologists. Presentations of Anna Tsing’s *The Mushroom at the End of the World* (2015), David Abram’s *Becoming Animal* (2010), and, especially, several of Donna Haraway’s concepts

⁴⁹ Complete cast and collaborators available at this address: <https://theatredeliege.be/evenement/cocon/>

⁵⁰ Postdramatic theatre, as theorised by Hans-Thies Lehmann in 1999, is a form of theatre that no longer relies primarily on text and action (or ‘drama’) (Monfort 1).

(Inappropriate/d Others, String Figures, Chthulucene, Medusa, Companion Species and Cyborg) allow carrying on reflections upon handicap, human-non-human relationships and communication, subjectivity and identity, boundaries... in short, upon existence and coexistence (or "being" and "becoming with"). The play thus consists of a series of scenes, most of which focus on an author or one of their theories (others being illustrations or applications of these theories), making it so that theory is what truly structures the play.⁵¹

These verbal references to theories and theoreticians are echoed in all aspects of staging, so that the verbal and the non-verbal collaborate equally in producing signification. For instance, the play starts with actors stretching a wire back and forth across the stage. Right afterwards, one of them (coincidentally, the director) takes the floor to tell the life of Joyce Scott and her fraternal twin, Judith Scott, a renowned artist with Down syndrome who consistently made cocoon out of string. Then, all actors take on playing a string game, as one of them delivers a Haraway-inspired speech about string figures and how they function as a metaphor for telling stories and relating to one another. Throughout the play, the onstage string is used for hanging pictures, drawings, portraits or keywords that are related to what one of the actors is discussing. At the end of the play, all of them remain hanging (fig. 4), connected by the string. This connection is thematic, of course, but also, on a metaphorical level, ontological: humans, concepts, animals, plants, machines and even art are all connected.

⁵¹ Note that the



Fig. 4. Video recording of *Cocon!*, courtesy of Le CORRIDOR.

The string – its onstage disposition, its artistic uses, its philosophical discussion, and its metaphorical implications – actually embodies the common thesis between the play and all of the theories it features: humans must acknowledge that they are not impermeable, autonomous, homogeneous subjects, but are incorporated in a network of beings and narratives which are an integral part of themselves. Cocoons may be reassuring and comfortable, but they are meant to be broken out of.

With the true story of Judith Scott as inspiration and the overwhelming presence of theories and theoreticians, one could legitimately question to what extent *Cocon!* can be considered fiction. With respect to this issue, contemporary theatre displays two tendencies: it is drawn to documentary topics and emphasises (or denounces) its own fictionality (Monfort 2). This tension is usually most palpable at the level of the actors, the identity of which is being purposely unstable and unclear, as they can speak and act in the name of their characters or their own (5). *Cocon!* provides an utterly relevant example of these contemporary tendencies. As mentioned, the play undoubtedly relies on facts and factual writings, but it also does very little to hide its dramatic artifices.

Many of the aspects of a play that traditionally take place backstage, here, do so onstage. For example, actors change clothes (fig. 4), stage workers come up the stage in the midst of action, and music comes from instruments that are played onstage by the actors. The latter also repeatedly break the fourth wall and nothing in the play seems to indicate that they are addressing anything else than the audience (*i.e.* there are no hints at the presence of an imaginary narratee). Moreover, as usual in contemporary theatre, the confusion between fact and fiction seems to gravitate towards the actors/characters. Throughout the play, most of the actors assume one or several identities other than themselves: Mieke Verdin plays Anna Tsing's mushroom, Eric Domeneghetty plays David Abram, Dominique Roodthoof plays the extinct bird Dodo, Isabelle Dumont plays Donna Haraway and her Medusa while Clément Papachristou plays her Cyborg. The fictionality of these identities does not lie in the fictionality of the characters (on the contrary, they refer to actual theoreticians and their theoretical figures, the fictionality of which can legitimately be questioned) – but merely in the discrepancy between the actor's actual identity and that of the character he or she plays. However, the identity that the actors in *Cocon!* assume is sometimes much less explicit, possibly leading the audience to believe that they are speaking in their own name, if it were not for certain details. For example, Dumont delivers a speech about string figures that does not contain any information about her identity at that moment. One could assume that she is speaking as herself, but those well-acquainted with Haraway recognise her String Figures theory, thus allowing to infer that Dumont might to be impersonating Haraway. Another example lies in how Roodthoof tells Scott's story in the third person, but wears Scott's portrait as a hat. Her third-person

narrative dissociates her from Scott, but her hat paradoxically implies that she is symbolically assuming Scott's identity as a character. Speech emphasises separateness while costume indicated oneness, which, of course, supports the general message of the play. But perhaps the most ambivalent posture can be awarded to twin brothers Clément and Guillaume Papachristou, the latter of which suffers motor handicap. Clément first appears as an actor, comically stretching the string across the stage in a blue sweatshirt. In the second scene, Guillaume appears on a video in a red polo having his face wash by a cloth. The man taking care of Guillaume, it turns out, is Clément, this time in a red polo as well. Meanwhile, on stage, Clément now wears the same red polo and performs a choreography with Domeneghetty that emphasises connection and co-dependency. Guillaume and Clément's identical polos accentuate their physical resemblance and establish their brotherhood. The veracity of their relationship and its analogy with Joyce and Judith Scott's enhances the factuality of the play. From this early scene onwards, Clément Papachristou is more likely to be perceived as acting as himself and conveying a greater degree of factuality (compared to the fictionality conveyed by the discrepancy between the other actors and their characters). In the scene about David Abram, Clément Papachristou acts as Abram's translator, and this role resurges in other scenes as he sometimes provides translations or corrects pronunciation in the midst of someone else's speech. However, this role that he assumes is superimposed on his actual identity but does not eclipse it. For example, his further linguistic remarks concern Greek words (Chthulucene and Anthropocene), which echoes part of his actual identity, namely his Greek ancestry. More significantly, the David Abram scene is followed by a video of Clément Papachristou in a domestic

setting, transcribing, almost *translating* his brother's speech – an act that only a brother's trained hear can carry out. Clément is a translator; the translator is Clément. He only stops seeming to act as himself as he starts impersonating Haraway's Cyborg, which is signalled, again, by a change of clothes. Of all the theatrical identities present on the stage of *Cocon!*, his is the most open about how much he puts of his actual, offstage identity in his performance. His part is thus marked by a deep factuality that seems to confirm the relevance of the theoretical figures that the other actors play.

In the most explicit of ways, *Cocon!* features the presence of theory in fiction that I have been studying. The original interest of director Dominique Roodthooft for these theoretical issues, her previous collaborations with scholar and philosopher Vinciane Despret, and the latter's participation (alongside Jessica Borotto and Julien Pieron, two philosophy scholars whose expertise precisely covers these issues), might explain this emphasis on theory. However, can it be argued, as I have been postulating, that this presence of theory in fiction can also be tied to that of the posthuman? In fact, is there even a posthuman in *Cocon!* ?

The play itself rejects this figure, but it is obviously due to the French-speaking tendency to use '*posthumain*' and '*posthumanisme*' in a sense that is closer to what is described in transhumanist writings (see Chapter 3): "I am a cyborg, but I'm not posthumanist. I do not want to cancel death or become some superman."⁵² This rejection also adds a nice ring to Cyborg's last sentence: "Here it is: compost, cocoonpost, not posthuman" (my translation).⁵³ However, according to the meaning of

⁵² "je suis un cyborg, mais je suis pas posthumaniste. Je ne veux pas annuler la mort ou devenir des surhommes."

⁵³ "Voilà: compost, cocoonpost, pas posthumain."

posthuman developed across Part I, two posthumans (or posthuman moments) can indeed be identified: the Cyborg, of course, but also Guillaume Papachristou. In the video that follows the Cyborg scene, he is shown urging the audience – or perhaps “standing people” (“*les gens debout*”, i.e. valid people) altogether – to stir themselves and get out of their cocoons, as his assistive chair shifts from the seated to the standing position. His condition alone would legitimate calling him and his appearances in the play ‘posthuman’ because, “disability is the quintessential posthuman condition: because it calls for new ontologies, ways of relating, living and dying” (Goodley et al. 348), expanding upon Braidotti’s statement.⁵⁴ However, Guillaume’s position in the video, which is only allowed through the help of his electric standing chair, makes this point more concrete. Indeed, “one common theme of critical disability studies is that disability necessarily demands and affirms *interdependent* connections with other humans, technologies, non-human entities, communication streams and people and non-peopled networks” (Goodley et al. 348). This interdependence is established early on, in the very first video, where Guillaume’s face is being washed by Clément, and then later when Clément serves as Guillaume’s “translator”, as Guillaume describes his point of view on “standing people” and the treatment of the disabled, and finally in the last video, illustrating the interconnectedness with technology that Haraway’s Cyborg emphasises, which is made clear to the audience by its broadcasting right after the Cyborg scene. Even more so than his brother, Guillaume’s identity in the play seems to coincide with his actual identity: as a disabled man wanting a more inclusive attitude

⁵⁴ “The fast-changing field of disability studies is almost emblematic of the posthuman predicament. Ever mindful that we do not yet know what a body can do, disability studies combine the critique of normative bodily models with the advocacy of new, creative models of embodiment” (Braidotti 146).

towards his community, but also as a twin brother, sharing with his other half a deep connection and understanding. Is the posthuman therefore responsible for the play's fact/fiction hybridity? I confidently argue so, as the Papachristou brothers' as well as the Scott sisters' relationships and personal histories, and particularly the way they provide perspectives that only a posthumanist intellectual landscape can apprehend, lay the thematic and philosophical foundations of the play.

While I had been searching – fruitlessly – for examples of references to the posthumanist tradition in fiction for years, I stumbled upon *Ghost in the Shell 2* and *Cocon!* mostly by chance, which says a lot about the rarity of this kind of references. I believed this could be explained by the fact that posthumanism has not been institutionalised or gone mainstream as much as transhumanism. Interestingly, this general absence of explicit references to posthumanism in fiction strikingly contrasts with the recurrence, in fictions featuring posthumans, of an underlying discourse that could be described as posthumanist (as evidenced by the amount of studies providing “posthumanist readings” of novels⁵⁵).

Discursive Reflection

Direct references to theories or their authors are nonetheless determined by the pre-existence of philosophical or theoretical discourses. Yet, these types of discourses can also emerge from fiction, as the results of reflections carried out through fictional narratives. These narratives can thus be characterised as ‘philosophical’ because of the way they *feature* philosophical thought and idea formation, which materialise as the

⁵⁵ See Chapter 5.

presence of “philosophical and essayistic forms of discourse into the prose itself” (Cunningham 609).⁵⁶

As Cunningham recalls, these “discursive reflections” were originally enabled by the typical epistolary form of French Enlightenment (Montesquieu’s *Lettres Persanes*, Rousseau’s *La Nouvelle Héloïse* and Sade’s *Aline et Valcour*) (607–08): characters fictionally sending each other letters left a lot of space for “directly philosophical ‘digressions’” (607), to which readers eventually became accustomed, even in non-epistolary forms. In fact, this type of “digressions” only needs for its enunciator to be identifiable and for its psyche to be accessible: in first-person fictional narrations, where the narrator is also a character, the latter’s reflections (both verbal and mental) can be conveyed by dialogue, reported speech or the narration itself; in third-person narrations, however, dialogue and reported speech can just convey characters’ verbal reflections, while mental reflections can only be conveyed by a non- or internally focalised narrator.⁵⁷

In the former case, the presence of reflexive discourse may be more easily recognisable because the narrator is unambiguously identified with a character and each reflection that is expressed in the first person can be easily attributed to this character. Amongst the novels that came under the scrutiny of the current study, Ishiguro’s *Never Let Me Go* and Houellebecq’s *The Possibility of an Island* are first-

⁵⁶ Rabaté also mentions the recurrence, in philosophical fiction, of digressions, whose length may vary from short parenthetical side notes to sixty-page essays (121).

⁵⁷ Non-focalised narrators are third-person (also called “heterodiegetic”), omniscient narrators. Note that the word ‘omniscient’ is used by convention, but has nonetheless met its share of resistance. Many scholars indeed uncover the inadequacy of this concept. For example, Jonathan Culler (“Omniscience”) questions whether narrators can really be classified according to their level of knowledge, and John Morreall (“The Myth of Omniscience”) dismantles the entire concept along the entire “Communicative Theory of fiction which gives rise to it” (429).

person narratives, and both indeed abound with reflexive moments. In *Never Let Me Go*, narrator Kathy H. tells anecdotes of her early life to one of her patients, leading to moments of introspection, new perspectives and a deeper understanding of her life and her nature. The enunciative situation of this narrative – between small talk and confession – is particularly inviting of reflexive discourse; just like that of *The Possibility of an Island*, which is made up of a fictional autobiography – Daniel’s – intertwined with the reflexive comments that it generates many centuries later amongst Daniel’s clones. Both autobiography and commentary are genres that are quite accommodating of reflexive discourse, in that they invariably demand from their authors (fictitious or not) a reflexive perspective, in the first case, on their own lives and, in the second, on other writings (yet again, fictitious or not).

Identifying reflexive discourse in a third-person narrative – especially when reflections are not conveyed by dialogue or reported speech because they mainly occur in a character’s *psyche* – can be a bit more intricate than with first-person narratives, but may lead to particularly interesting cases of reflexive discourse being featured in fiction. *LoveStar* (2002), by Icelandic writer Andri Snær Magnason, postulates the discovery and exploitation of the waves that migratory animals use to get their bearings and communicate with each other. The resulting new wireless communication technologies lead to substantive changes in (mainly Western) human societies. Both the discovery and the ensuing technology can be attributed to LoveStar, the bold, intelligent, eccentric and charismatic founder of the eponym company that soon becomes a sprawling megacorporation à la GAFAs. After taking hegemonic control over wireless communication amongst humans and between humans and machines, LoveStar takes

over various sectors, such as insurance (LoveLife), banks (LoveBank), oil (LoveOil) and funerals (LoveDeath). Readers are especially given insight into the latter branch, which sends corpses into space, thereby making traditional funeral rites obsolete. Also central to the plot, inLove is a matchmaking service so precise that the couples that have been formed under other circumstances no longer bear any legitimacy in the eyes of relatives, institutions and society at large. This latter fact is what triggers the other story arc of the novel: the floundering of Indridi and Sigrid's couple when Sigrid is matched with someone else.

LoveStar is a third-person narrative that features many reflexive moments, occurring on various diegetic levels and originating in various minds. On the one hand, characters' reflections are conveyed by three main devices. The first one consists in the direct citation of fictitious external sources, such as interviews (100, 101, 107-109, 112-113), speeches (69), newspaper articles (240), memoirs (85-87), ancient works (102), poems (56, 258), song lyrics (116), advertisements (32, 59, 60, 67, 68, 70, 198, 246, 289), road signs (62, 269), orders (71), corporate reports (129, 131, 199, 287), web pages (180-181, 200), REGRET⁵⁸ reports (190, 200), computer commands (284, 285), or personal notes (44) and correspondence (142, 143, 147, 148, 149, 199, 202, 203, 204, 258). Among these citations, which are visually separate from the main *diegesis* thanks to indentation and a smaller size font (and, occasionally, a frame), those with an

⁵⁸ REGRET is a hotline that people can consult whenever they want to know what would have happened if they had acted differently. Depending of how much people pay, the answers can be more or less developed. Nonetheless, REGRET almost always concludes by announcing that the path not taken would have lead to death or the end of the world. REGRET is first introduced when eighteen-year-old Indridi wonders what his life would have looked like had he been less well-behaved (38-41), while the drift into paralysing indecisiveness that is may sometimes induce is alluded to later (139-141, 295-296). The only time REGRET does not announce death or the end of the world, is when Grim, an engineer whose creation is about to have terrible repercussions worldwide, consults it: REGRET lengthily describes how another of his inventions would have profoundly affected life on earth anyway.

identified origin are the most likely to convey an explicit reflexive discourse, especially when this origin is Lovestar himself. Amongst the citations attributed to LoveStar, two of them particularly shed light upon his reflexive abilities.⁵⁹ The first one is a personal note in which LoveStar reflects upon God's perception of time and speed, "For a thousand years in Your sight are like a day" (44). The second one is an extract of his fictitious book-long reflection *The Ideas*, which verbalises a notion that, previously, has only been hinted at, namely that ideas possess humans – with all the violence and obsessiveness that this word entails – in order to be realised. In that particular extract, LoveStar emphasises the total control ideas have on their host, putting their health, their sanity, their relationships and their reputation at risk. He therefore presents ideas as subjects having agency and substance:

An idea hijacks the brain functions, pushes away feelings and memories, makes you neglect friends and relations, and drives you towards a single goal, that of launching the idea into the world. An idea takes over the speech centers, allowing access only to itself, it steals your appetite, reduces your need for sleep, and induces the brain to produce a chemical that is stronger than amphetamines and can keep you going for months at a time. (85-86)

While LoveStar's other apparently philosophising discourses may have just been opportunities to convince people of his and his company's validity, the materialist theory of ideas that he develops is more than an attempt at convincing his family to forgive and accept his neglectful behaviour. It perfectly falls in line with the LoveStar research department's motto – and the novel's unifying principle: "Everything has substance" (12). The discovery of the bird waves sets humanity on a path towards the

⁵⁹ The other ones may contain generalising comments but the discourses they contain do not seem reflexive as much as they are persuasive: in a speech following the Pope's LoveDeath launch, LoveStar hints at the purity and liberation of this funeral method, thus praising its merits; in an interview about InLove, he reflects upon earlier ways of getting a partner (from arranged marriages to chance encounters) to emphasise how InLove is the best system of all.

understanding of the material, physical processes behind what was once inexplicable: “The complex exists, the strange exists, the incomprehensible exists, the unexplained and imaginary exist, but the supernatural does not exist, though nothing is ruled out” (12). Animal communication, then love, then God end up being a *matter* of waves. Meanwhile, technological progress allows scientists to *give body* to entities and concepts that were once disembodied, fictional, spiritual or metaphorical: LoveDeath and InLove actualise the ancient myths of the religious ascension to heaven and the Platonic missing half,⁶⁰ while iSTAR (LoveStar’s marketing department) has researchers engineering real-life versions of fictional and mythical creatures such as the VikingCenturyFox, the Big Bad Wolf and Mickey Mouse. The end of the novel, where one of LoveStar’s promotional events leads to the end of the world – which Indridi and Sigrid survive because they are sheltered in the Bid Bad Wolf’s womb – epitomises the novel’s tendency of *making myths come true* to extreme ends: being swallowed by a giant wolf obviously recalls the tale of Red Ridding Hood, but coming out of and cared for by a she-wolf, Indridi and Sigrid are also highly reminiscent of Romulus and Remus; and finally, as they follow a ray of light in the midst of a lava desert to “a grassy valley surrounded by white glaciers on every side” (308), where they settle and plant the godly seed, the couple evoke Adam and Eve in the Garden of Eden.

The other ways in which characters’ reflections are shared is through direct, reported or free indirect speech, including thoughts, thanks to the omniscient narrator.

⁶⁰ The source for the myth of the missing half, namely Aristophanes’s speech in Plato’s *symposium*, is even quoted in the chapter that introduces InLove: “When a lover...meets the real thing (i.e., his other half), he is completely overwhelmed by friendship and affection and desire, more or less refusing to be separated for any time at all. These are the people who spend their whole lives together, and yet they cannot find words for what they want from one another. No one imagines that it’s simply sexual intercourse, or that sex is the reason why one gets such enormous pleasure out of the other’s company. No, it’s obvious that the soul of each has some other desire, which it cannot express” (102).

Amongst these devices, dialogue – especially dialogue revolving around the impact of LoveStar’s discoveries and inventions – perhaps provide the best opportunities for the characters to articulate their reflections upon life and the world. Most memorably, discussions between LoveStar and his chief of marketing Ragnar present opposite views on the uses and purposes of science. LoveStar, who carries out his research away from the practicalities and leaves to others the commercialisation of his discoveries (which is, to him, just another way of financing research), indeed thinks that his discoveries can only contribute to the progress of mankind. He therefore seems in denial about the misuse of his technology strictly for profit, which is Ragnar’s exclusive task in the company. When the LoveStar research team discovers that the waves produced by prayers are all going to the same place, Ragnar – “assailed” by an idea (223) – immediately envisions the marketing potential of this discovery, such as an unprecedented connection with and control of the human mind and the possibility of commodifying prayers and faith overall. A conversation starts with Ragnar submitting his projects for LoveGod, by which LoveStar is appalled:

“But everyone can pray.”

“Nothing’s free, who do you think paid for those medieval churches? St. Peter’s is still standing, raised on the profits of absolutions! God could have destroyed it but he didn’t. A giant colossus raised in times of poverty and famine. We’d be doing what the Church did. We’d be creating mood around him and encouraging people to pray.” [...] “But...God,” whispered LoveStar. “What about him?”

“He’ll benefit most. We can pep him up. He’ll get a crazy surge through his system. We’re talking about a billion hits a day. It’ll be like in the old days when the Church took him under their wing. It worked for him for two thousand years. But then science came and took charge and the Church couldn’t make him popular any more. But LoveGod will combine science with God. Except that rather than only appealing to a small target group that believes in things—whether it’s God, Elvis, ghosts, or aliens—we’ll also reach all the rest whom science drove out of the Church. We’ll find the place, bring him here, and make

him famous. We can do it! And everyone'll benefit! He'll benefit and we'll benefit and the subscribers will benefit and everyone'll be happy!"

"[...] why should we do this? What for?" asked LoveStar. "What's the point?"

Ragnar looked at him baffled. The answer couldn't be clearer. "JUST BECAUSE!" (226-229)

Confronted with LoveStar's reluctance, Ragnar is forced, through conversation, to find arguments other than profit to legitimate his plans. Having radically opposed views on what can and should be done with knowledge as sensitive as God's nature and location, and with scientific discoveries overall, LoveStar and Ragnar's conversations allow Ragnar to develop his legitimating discourse, for which he needs to reflect upon the nature, purpose and ethics of science and religion. One nonetheless wonders whether Ragnar actually reflects upon these issues for the sake of knowledge or only orients these reflections in a way that benefits his profit-driven perspective. If questions are marks of reflection, then LoveStar indeed seems to be the one whom this discovery mostly makes reflect:

"But what do you think he's like? Who receives all this? What does he do with the prayers?"

"You pray for something: a harvest, long life, love, happiness, luck, success, good fortune. There's a demand for what money can't buy. If he listens to the prayers he can improve what's on offer: more sunshine, rain, better harvests, or fertility, making the customer happier and reaping more believers and more prayers."

"Then why are there famines and failed harvests?"

"The prayers end up in one place. So God is probably only one entity. There's clearly a need for more gods. If there were two of them they would compete for prayers. If people could send them somewhere else, then the original would have to improve his service, enhance the quality of life on offer. Wouldn't he? He must have some goal, mustn't he?"

"I see," said LoveStar, staring rigidly out of the window. Ragnar was much sicker than he had realized.

"So another God is needed?" asked LoveStar.

Ragnar the moodman gazed at him with glowing eyes.

"I believe YOU ARE God." (229)

Ragnar may be obsessed with the financial impact of possibly finding God, but LoveStar is the one that considers the metaphysical impact of such a discovery. His questions may not lead to explicit theories about God, yet they hint at the reflexive process that occurs within LoveStar's mind and, at the same time, prompt a similar process amongst readers.

It has been mentioned earlier that the third-person narrative of *LoveStar* appears to be told by an omniscient narrator, that is to say, a narrator that

has no limitations of age, education, experience, or access to informants and "knows about events occurring at any time or place, in complete detail, [and] not just about public events but also about the private thoughts and feelings of the characters. (Morreall 430)

In *LoveStar*, the narrator indeed shares with readers details of the characters' inner lives – for example, how Indridi and Sigrid feel when they are together or what goes through LoveStar's mind when he is hooked on an idea – as well as events from their pasts, such as Indridi's childhood or LoveStar's family life.

By convention, readers know that such "superhuman attributes" (Sternberg 282, qtd. in Culler 24) – "omnipotence, omnitemporality, omnipresence, and telepathy," as identified by Nelles (119) – do not entail an actual superhuman narrator. Instead, they accept it as a disembodied voice⁶¹ whose origin and trustworthiness need not be questioned. However, this convention only holds as long as the narrator's input is "narrative or descriptive" (Culler 27). If, on the contrary, the narrator conveys "generalizations, aphorisms, opinions, moral views" (27), thus signalling a *point of view* that, by definition, cannot be universal and necessarily true, readers can no longer

⁶¹ John Morreall indeed questions whether one could at all postulate the presence of a narrator in such cases of third-person narratives, (429) which is, according to him, a mistake induced by the way the Communication Theory of fiction establishes the absolute necessity of a narrator and a listener/reader for something to be a narrative (Barthes, qtd. in Morreall 429).

assume that the narrator is just a disembodied voice; this point of view has to be *someone's*. If I am mentioning this, it is, of course, because the narrator of *LoveStar* is an instance of this ambiguous enunciative situation: amongst their descriptive and narrative affirmations, this narrator also conveys opinions that do not seem to belong to anyone but themselves, *i.e.* partial comments that are not announced as reported speech or thoughts. Culler notes that this type of comment – and the omniscient narrator overall, Dawson might add⁶² – is especially common in nineteenth-century novels and tends to reflect a “social consensus” (31). Even though the narrator expresses an opinion, this opinion does not come from a person but a “collective voice” (31). This is certainly the case in *LoveStar*, where the narrator often seems to convey judgements that are consistent with the dominant ideology of the depicted society. For example, in the chapter about how Indridi’s parents got persuaded to “rewind” him, *i.e.* to exchange the previous Indridi, a difficult five-year-old boy, for a brand new Indridi (probably by cloning, even though this is not explicated), the narrator adds:

“because the research results did not lie. They were based on the most stringent assessments, psychiatric personality tests, and astrological charts. But Indridi had had the great luck to be born at a time of uncertainty when no one knew any longer exactly how to define an individual. (30-31)

This comment on the reliability of the system clearly echoes the social consensus on this system, and on the working of science overall. However, the confidence in the accuracy of the results clashes with the relative scientificity of the methods to get to them, such

⁶² In *The Return of the Omniscient Narrator*, Paul Dawson argues that the omniscient narrator, which used to be the norm in nineteenth-century prose, was deemed “technically obsolete and morally suspect” (3) in the twentieth century as the intellectual climate tended toward perspectivism, but has recently made a comeback with “relatively new writers such as Zadie Smith, Adam Thirlwell and Nicola Barker, [...] established literary figures such as Jonathan Franzen, David Foster Wallace and Rick Moody, [and] literary icons such as Tom Wolfe, Salman Rushdie, Martin Amis, and Don DeLillo” (2).

as astrology. This contrast creates a strong sense of irony, which makes readers realise that there might sometimes be a discrepancy between what the narrator says and what she or he thinks, and between the social consensus and the narrator's personal opinions. This suspicion is somehow confirmed a few pages later, as Indridi's parents eventually accept what is presented as a rewind but is actually a disposal of their current child:

The ideology suited cordless modern people and they had been brought up with the concept since childhood. It was like wiping a hard disk, or starting a computer game with three lives so that when things went wrong you could always start over. (32)

Even if the narrator previously conveyed the dominant ideology, they now denounce it as such, thereby also distancing themselves from it. By doing so, the narrator might just finally show their true colours. From that moment onwards, readers are less inclined to take the comments that seem to convey consensus as the narrator's own opinion. See, for example, when the narrator describes REGRET's most common answers: "Death was the best of a bad bunch. Other possibilities included disablement and, in some cases, the end of the world, and it was all scientifically proven" (*Lovestar* 39). Nothing within this sentence indicates irony, and neither does the context, which never explains how REGRET exactly works. Yet, a sense of irony persists, and I believe it is due to the way this kind of affirmation has been undermined a few pages earlier, where what had been deemed "scientifically proven" relied on astrology, and where readers have been taught that the narrator might convey the dominant ideology without actually subscribing to it. But if the narrator is not consistently this collective voice, a "specifier of consensus" (Ermath, qtd. in Culler 31), who or what is it?

As mentioned above, citations of fictitious works are signalled by indentation, size font reduction and mention of the origin of this fictitious quotation. Yet, two passages of the novel present the same citational form but make no mention of an author. The first one appears as LoveStar is flying back from the place where his company's research on prayer waves have led him, holding in his hand the destination of these waves: a seed.

What should he do with the seed himself? He had been responsible for the search and expected to find a cave, ancient artifact, mountain, mound, pool. But a seed? What does one do with a seed? What would germinate from this seed?

A seed becomes a tree?
A seed becomes a flower?
All as the one flower. (78)

Here, the main narrative level seems to transcribe LoveStar's reflection about the seed that his team just found. Because this type of content would not be accessible to a (human) character, one naturally surmises that this third-person narrative is told by an omniscient narrator. Yet, the fact that the questions that precede the citation-like passage are followed, in the latter, by further questions – about the same topic, moreover – conveys a sense of continuity that could indicate that the origin of these questions is the same: LoveStar. This supposition might find confirmation in further descriptions of LoveStar's contemplation of and about the seed:

In LoveStar's hand was a seed and in the seed was a kernel and in the kernel was so much content that he was afraid that if the seed was damaged the world itself would crack like an eggshell. (94)

"The seed is withering," thought LoveStar. He looked round. His heart pounded in his chest. "The seed mustn't wither," he thought but didn't dare move. He didn't dare breathe on the seed. He didn't dare stand up to fetch a drop of water. He looked at his hands, which were closed around the seed. They were old hands. (145)

Besides sharing a thematic similarity (both depict LoveStar's concern over the fragility of the seed), both passages present mirroring words and structures, overall carrying on the noteworthy repetitive style of the authorless-quotation moment, but not only. Indeed, this mysterious quotation also echoes both the ending of the novel – "A seed becomes a forest"⁶³ – and its beginning:

*A seed becomes a tree becomes a forest green as a carpet.
An egg becomes a bird becomes birds fill the sky like clouds.
An egg becomes a bump becomes a man becomes mankind,
manufactures cars, writes books, builds houses, lays carpets,
plants forests, and paints pictures of clouds and birds.
In the beginning all this must have been contained in the egg and
the seed. (5)*

The format of this first chapter evokes citation thanks to indentation and italics, implying the presence of a human enunciator rather than a disembodied, omniscient narrating voice. Yet, the extent of this narrator's knowledge exceeds human capacities, as it encompasses the future: "*He would be dead within four hours*" (6). The narrator even acknowledges this discrepancy between the state of their knowledge and that of the person they describe: "*Of course he didn't know that all hope was lost anyway*" (6).

The "he" of this last extract refers to LoveStar, which could specifically identify the narrator as *not* LoveStar. Yet, as mentioned, the similarity between this first chapter and the authorless citation might indicate that they have the same enunciator; and

⁶³ The original version reads: „*Fræ verður skógur,*“ which means "Seeds become forests." However, translations differ: the English version ("A seed becomes a forest") and the German version („*Ein Samenkorn wird ein Wald*“) read the same sentence and both have it between quotation marks, which implies that it is uttered by one of the two characters left, Indridi and Sigridur. By contrast, the French version (*Graine devient arbre.*) ends with the word 'tree' (not 'forest') and appears without quotation marks. As such, it is an exact replica of the first sentence of the novel in terms of content and parameters of enunciation, which might indicate a shared enunciator. The fact that the French version is the only one to present these particularities should dissuade me from using it as a part of my argumentation. However, when interviewed on this topic, Magnason recalled that he had worked closely and lengthily with French translator Éric Boury and that the French version was thus the truest to the original version. When asked about that last sentence, he answered: "who says this and where it is from is left open" (see Appendix 1).

given the similarity of these two with some passages transcribing reflections that can clearly be attributed to LoveStar, it could also be concluded that this enunciator, this narrator, is LoveStar himself. This conclusion could seem blatantly incompatible with the narrator's attested omniscience and the use of the third person to refer to LoveStar in the first chapter, were it not for LoveStar's changing nature across the plot. Indeed, touching the seed that receives all prayer waves seems to give LoveStar supernatural abilities:

The child put the seed into LoveStar's hand and with that the world warped before his eyes. [...] Abruptly he lost control of time. To his right, time was standing still and a bird hung in the air, while under the bird a house rose and crumbled, another rose and crumbled, and around it people grew and declined, flowers sprouted and shriveled, trees rose and rotted, while the bird hung still in the sky. Clouds piled up and the sun raced across the sky again and again and again as if the earth was a blue fist and the sun a yellow stone in a sling, swinging in circles, and a glacier sailed forth from it like a white ship, clearing all before it, cities and cars, mountains and planes, all out to sea. Icebergs broke off into the sea and filled the world to the horizon and ice covered the earth which became as white as the clenched fist that was swinging the sun around it, making daylight flash like a strobe at a disco, until the glacier receded and waves washed the rocks, washed the rocks, washed the rocks but there was nothing left, not a car, not a house until the hand released the sling and the sun was hurled into space, dwindling small and pale as a star until all was dark. (263-264)

Having to do with time perception, these newly earned powers verge on the divine, especially as they remind one of an earlier passage of the novel in which LoveStar reflects upon God's perception of time:

*For God, every day is like 1,000 years
every hour 41.67 years
every minute 0.69 years or 251 days
every second 0.012 years, which is 4.2 days
a moment is a day.
The speed of light is 186,000 miles per second, so light travels 186,000 miles in 4.2 days, according to God's sense of time. (44)*

Coupled with the original godly nature of the seed, this earlier extract allows making a connection between God's perceptions of time and what LoveStar later experiences, thus implying that, more than a superhuman, *God* is actually what LoveStar has become. This extract also presents the indented and italicized format of the first chapter, which reinforces the idea that LoveStar, God and the narrator are one and the same. This may seem far-fetched at first glance, but identifying an omniscient narrator with God is not unprecedented. Indeed, critics have often described the omniscience of some narrators as godlike: most famously, in *Expositional Modes and Temporal Ordering in Fiction* (Culler 25; Nelles 118), Meir Sternberg "assumes narrators to be persons and has only two possible models: mortal persons and a divine person" (Culler 25). However, critics do not argue (and readers rarely assume) that such omniscient narrator *is* God. Rather, they use the figure of God as a metaphor⁶⁴ to characterise and make sense of an over-viewing, all-knowing narrator, and readers accept this voice simply by convention. Nonetheless, in *LoveStar*, what readers initially accept (and, therefore, do not question) as a traditional third-person omniscient narrator turns out to be an actual character who has become an omniscient God. This turn of events bestows an unusual status upon LoveStar / the narrator's reflexive discourse. Given his divine nature, his *perspective* can no longer be *just that* since it now encompasses everything, everywhere, in the past, present and future. Thus if he (He!) knows everything about everything, the accuracy of his judgments becomes unquestionable and his discourse automatically truthful, at least in the world of the story.

⁶⁴ Culler actually argues that, rather than using God as a metaphor for such "omniscient" narration, there would be more relevance in using this type of narration as a metaphor to describe God's omniscience (23).

Double Referentiality

In *LoveStar* as in many other science-fiction novels, philosophical considerations do not manifest through discursive reflections only. Ideas can indeed emerge from other aspects of a narrative. Or, to adopt *LoveStar*'s theory, seeds of ideas hide in many other parts of the novel. Cunningham indeed mentions the way some works (especially amongst Modernist ones such as Kafka's *The Trial* or Beckett's *Trilogy*) spark philosophical reflections "at the level of their literary form itself" (610). But plot can also lead to just as powerful philosophical considerations without actually having to resort to discursive passages.

More than fiction in general, science fiction in particular has been described as a genre that is particularly propitious to philosophical activity (both within and around narratives). In his account of the early days of science-fiction criticism, Edward James notices that the latter focuses on *ideas* over the "literary ways in which they were expressed" (27), recalling Stanley Frank's description of science fiction as "compounded mainly of philosophy with a sugar-coating of fiction" (qtd. in James 27). In *Fictions philosophiques et science-fiction* (1988), Guy Lardeau states that "science fiction is a 'thinking' type of literature" (my translation),⁶⁵ thereby differentiating it from realist fiction in terms of goals: while realist fiction mainly aims at "world-making", science fiction uses fiction "to produce a philosophy", to test "a vision of the world" (my translation).⁶⁶

⁶⁵ "La science-fiction est une littérature "pensante" (Lardeau 12).

⁶⁶ "Si [la science-fiction] requiert une fiction, c'est pour produire une philosophie, si elle construit un monde, c'est pour mettre à l'épreuve une vision du monde" (Lardeau 12).

The kinship between science fiction and philosophy has indeed been noted on numerous occasions. Most recently, Susan Schneider's 2016 *Science Fiction and Philosophy* claims that "some of the best science fiction tales are in fact long versions of philosophical thought experiments"(n.p.), while 2017 saw the launch of the *Journal of Science Fiction and Philosophy* by the University of Pittsburgh. In the essay collection *Philosophie et Science-Fiction* (edited by Gilbert Hottois in 2000), Guy Bouchard's "Science-fiction, utopie et dystopie: l'art de s'étonner" exposes not only the similarities between science-fiction and philosophy – in that they both exploit the reader's capacity to be astonished (43) – but also the added value of SF's modal variety in terms of time and place (45). In the same collection, Isabelle Stengers ("Science-fiction et expérimentation") provides a reflection that is even more relevant to this study: one should not confuse authors whose fiction is instrumentalised "at the service of philosophical theses, in the sense that, as it is the case with most fictional dialogue produced by philosophers, characters would be spokespersons,"⁶⁷ with authors who dare engage "with the risks peculiar to science fiction"⁶⁸ and whose characters

express a point of view [to] materialise and explore the risks to which this point of view expose them, the possibilities of transformation, the questions they ask to others, and those that others, or the situation, ask them. And it is about going "all the way", in the sense that the reader stimulated by these questions should not be able to diagnose the author's decisional intervention [...].⁶⁹

⁶⁷ All quotations from this article by Isabelle Stengers are personal translations from the French version. "Il est important de ne pas confondre: les auteurs de science-fiction tels que David Brin ne mettent pas la fiction au service de thèses philosophiques, au sens où, comme c'est le cas pour beaucoup des dialogues fictifs produits par des philosophes, les personnages seraient des porte-parole" (Stengers 99).

⁶⁸ "les risques propres à la science-fiction" (Stengers 99).

⁶⁹ "si un personnage de fiction occupe bel et bien un "point de vue", c'est pour faire exister et explorer les risques auxquels ce point de vue l'expose, les possibilités de transformation, les questions qu'il pose aux autres, et que les autres, ou la situation, lui posent. Et il s'agit d'aller "jusqu'au bout", au sens où le lecteur éveillé par les questions ne doit pas pouvoir diagnostiquer l'intervention décisionnelle de l'auteur" (Stengers 99).

This second type of author does not have a predetermined idea of where their narrative is supposed to go. These authors are indeed led by their characters and, above all, what they *experiment*, what affects, attaches and tests them (100); the characters' affections and perceptions "build and explore the consequences of an hypothesis putting the contemporary world at the risk of fiction".⁷⁰ According to this observation – which is strikingly reminiscent of the previously described distinction between the two variants of philosophical fiction – the writer of such "experimental science fiction" is like a scientist testing what would happen if a hypothesis were true:

such authors [...] are operators of innovation too. Starting from a diagnosis of the potential novelty that is contained within the present and which sparks their interest, they work to build a world where this possibility would have become concrete, where the novelty they foresee would have reached its full extent.⁷¹

However, these authors-explorers-scientists do not use fiction to predict future technologies but rather to predict their impacts on "ways of living, perceiving and being affected" – a speculative exploration that scholars in the humanities refuse to do (109). Like Bouchard, Stengers thus emphasises the value of science fiction compared to both realist (*i.e.* non-speculative) and scholarly approaches to the consequences of innovation. In *How to Live Forever* (1995), Stephen R. L. Clark also identifies the various advantages of science fiction compared to scholarly works such as the freedom induced by imagination (5), the possibility to explore topics, such as immortality, that have been rather neglected by scholars (6) and the availability to mainstream readers (7). He even

⁷⁰ "construisent et explorent les conséquences d'une hypothèse mettant le monde contemporain au risque de la fiction" (Stengers 105).

⁷¹ "de tels auteurs [...] eux aussi sont des opérateurs de l'innovation. A partir du diagnostic d'un possible nouveau dont est gros le présent et qui éveille leur intérêt, ils travaillent à construire un monde où ce possible serait devenu concret, où la nouveauté qu'ils pressentent aurait acquis toute sa portée" (Stengers 109).

ventures to state that, in virtue of this, science fiction is “our century’s single greatest gift to literature” (5).

The philosophical aspect of science fiction is also implicitly acknowledged in many theoretical and poetical explorations of the genre, generally based on Suvin’s emphasis on science fiction’s “knowledgeable, dialectical and cognitive approach” (Suvin and Favier 105), which is what distinguishes it from the other “non-naturalistic” (i.e. not realist, not mimetic) genres (Suvin, *Metamorphoses* 4). According to him,

cognitiveness’ or ‘cognition’ [...] implies not only a reflecting of but also on reality [...] combining a belief in the potentialities of reason with methodical doubt in the most significant cases. The kinship of this cognitive critique with the philosophical fundamentals of modern science is evident. (Suvin, *Metamorphoses* 10)

If cognition is a constitutive part of science fiction, the latter is therefore closer to “realistic literature, naturalist science and materialist philosophy” (my translation)⁷²: all seek to “provide information on the human condition” or on humans’ relationships with each other and with their environment (Suvin and Favier 103). Suvin’s definition of science fiction “as the *literature of cognitive estrangement*” (Suvin 4), which inspired many further studies on science fiction such as the collection of essays *Learning from Other Worlds* (ed. Parrinder), emphasises the centrality of cognition, i.e. something that encompasses perception and learning, but also thinking and reasoning.⁷³ Estrangement, for its part, is the enabler of cognition and is equally central to the philosophical interest of science fiction. Indeed, it seems that what also provokes readers’ thoughts is

⁷² “la SF adopte, tout comme la littérature réaliste, la science naturaliste et la philosophie matérialiste, une démarche savante, dialectique et cognitive” (Suvin and Favier 105).

⁷³ In Audi’s *Cambridge Dictionary of Philosophy*, William Bechtel identifies seven domains covered by cognitive sciences: artificial intelligence, psychology, linguistics, neurosciences, thinking and reasoning, memory, attention and learning, and perception and motor control (148-152). Rarely do theoreticians of (science) fiction refer to all of these at once when they describe its cognitive function. For example, as Schaeffer discusses the cognitive function of *mimesis*, he focuses entirely on learning.

confronting the fictional world of the SF novel with their factual reality, thereby considering the latter in light of the former. Reflection can be triggered by the novel's plausibility (which is conferred upon science fiction by the rationality of its creation process), but also by its double referentiality, that is to say the way a story simultaneously refers both to itself (or, 'the world that it builds' according to Lavocat's possible worlds theory) and a real-world situation ('the actual world') via an allegorical process. Allegory is "a major symbolic mode" (Childs 4) of literature and also what preserves its relevance on a societal level, despite its non-factuality. The great strength of science fiction is therefore that it captivates not solely because it is plausible, or solely because it is allegorical, but precisely because it is able to be both simultaneously. Its philosophical potential lies therein.

This predisposition of science fiction to invite philosophical reflection makes it more likely for science-fiction narratives to be regarded as philosophical fiction (including its 'novel of ideas' subcategory). Yet, if its combination of cognition and estrangement is largely responsible for its reflexive potential, the posthuman might be the most philosophical of science fiction tropes. The presence of posthuman life in a narrative is highly conducive of a comparison between posthuman and human conditions, usually leading to a reevaluation of the latter. In other words, the reader's estranging confrontation with posthuman subjects achieves the goal of cognitive genres, which is to "provide information on the human condition" (Suvin 103). For example, in *LoveStar*, the discovery of the bird waves leads to the creation of a new wireless technology that allows humans to not only transmit data and communicate, but

also carry out most of everyday-life actions, from checking their bank accounts to turning on the faucet. This is the advent of “cordless men”:

The cordless man has little as possible to do with cords and cables—not that they were called cables anymore. They were known as chains, and gadgets were known as weights or burdens. People looked at the chains and burdens of the past and thanked their lucky stars. In the old days, people said, we were wire-slaves chained to the office chair, far from birdsong and sunshine. (Magnason 17)

This early excerpt from the novel sets out the way cordless men are an improvement on their merely human ancestors, hence from readers. Lengthy descriptions of what became of the human lifestyle after this technological shift allows readers to measure the extent of such a change, as well as its cultural, social and economic implications. Of course, as often in SF, these implications do not always constitute actual improvements. When one of the characters considers quitting the bird-wave network, he comes to the following realisation:

“It was possible to become a wire-slave and cease to be a cordless connected subscriber, but it was only a theoretical option as most home appliances were cordless, switchless, and remote controlled via lenses. Of course, one could pick up a phone and call 234.415.333.333 in order to turn on the tap in the bath (or was it 334) and use the same number but ending in 537, to flush the toilet and it was possible to open the car door by calling 395.506.432.664 and tapping in a one-hundred-digit code for the car alarm.” (LoveStar 121)

The network has managed to infiltrate most aspects of everyday life, so much so that embracing technology is no longer a choice but a practical obligation, making this newfound freedom quite relative: the bird-wave technology might indeed be liberating humans from their material bonds, but by forcing them to use it, it actually subjects them to new, immaterial but just as tight – if not tighter – bonds. Paradoxically, freedom remains the reigning ideology, even though it is but a false promise that cannot be held: one is either a “wire-slave”, or a slave to technology, especially when the latter is

in the service of neoliberal capitalism. On the one hand, by depicting how a communication technology breakthrough precipitates the advent of a technocratic (or even, techno-dictatorial) world, *LoveStar's* cordless men warn readers about misused and uncontrolled technological progress. This is the speculative aspect of the novel, whose interest relies upon the causal link between its dystopian vision of the future and the current state of things. On the other hand, through their subjection to technology, their radical worship of liberty, their crushing rationalism, or their companies' ruthless marketing techniques, cordless men might also elicit comments on contemporary matters. Therefore, the reflexive effect that these "cordless men" have on readers is due, not only, to the plausibility of their future realisation, but also to all the ways in which their nature echoes our turn-of-the-century Western condition. This is the metaphorical aspect of the novel, whose interest relies upon the analogy between its dystopian vision of the future and the current state of things.⁷⁴

Margaret Atwood's 2003 speculative novel *Oryx and Crake* (the first part of the *MaddAddam* trilogy) allows for the same observation. In a time where almost all humans have been decimated by a pandemic, Snowman appears to be the last human standing amongst genetically engineered animals and anthropomorphic creatures, and spend his day remembering stories of the pre-apocalyptic world, when he was just Jimmy, a creative but troubled young man. Jimmy's society seems to be a dystopian future

⁷⁴ "The current state of things" is a deliberately vague formulation that hides the infinite variety of reception contexts, all of which project onto the novel a singular perspective. When read nowadays, SF novels like *LoveStar*, which was published 17 years ago – after the spread of personal computers and the Internet, but before social media, smart phones, big data, and many other redefining inventions –, or more famously Orwell's *1984* provide insight into the *Zietgeist* of their production context, but they also miraculously remain relevant through the years, for mutating reasons. This could be called the "prophetic" interest of science fiction; one that can only be appreciated *a posteriori*, when the accuracy of literary speculations can finally be verified. A prophetic approach relies not so much on the fictional chain of events leading to a speculative future as on this speculated future itself.

version of the twenty-first century, in which our current flaws have reached their heights. Our superficiality and obsession with beauty evolve into a society dominated by biotechnological corporations such as OrganInc Farm, HelthWyzer, RejoovenEsence, AnooYoo, BlissPluss, etc., producing cosmetics and genetically modified alimentation. In this future era, the Internet provides even more extreme means to satisfy our violent, morbid or libidinous obsessions:

They'd watch open-heart surgery in live time, or else the Noodie News[...]. Or they'd watch animal snuff sites, Felicia's Frog Squash and the like [...]. Or they might watch hedsoff.com, which played live coverage of executions in Asia. [...] Or they could watch alibooboo.com, with various supposed thieves having their hands cut off and adulterers and lipstick-wearers being stoned to death by howling crowds, in dusty enclaves that purported to be in fundamentalist countries in the Middle East. [...] Shortcircuit.com, brainfrizz.com, and deathrowlive.com were the best; they showed electrocutions and lethal injections. [...] There was an assisted-suicide site too – nitee-nite.com, it was called [...]. (81–83)

But the mutation is not just cultural: society is divided into two classes – the privileged few who work for one of the aforementioned companies and live in private, secured “Compounds” out of which they hardly ever venture, and the rest of the people who live in the “pleeblands”, a nest for corruption and vices – and these two classes diverge economically and culturally, but also physically – “Asymmetries, deformities: the faces here were a far cry from the regularity of the Compounds. There were even bad teeth” (288) and even biologically:

Before setting out, Crake had stuck a needle in Jimmy's arm—an all-purpose, short—term vaccine he'd cooked himself. The pleeblands, he said, were a giant Petri dish: a lot of guck and contagious plasm got spread around there. If you grew up surrounded by it you were more or less immune, unless a new bioform came raging through; but if you were from the Compounds and you set foot in the pleeb, you were a feast. (287)

Due to their geographical separation, the pleeblanders and compounders' bodies have adapted to their environments and what used to be two different social classes are not far from becoming two different species. This bleak portrait of the future humans of Western societies identifies and criticises our most harmful flaws, but also warns us about their potential evolution, thus fulfilling the two usual effects of science fiction.

These effects, which in the former cases result from the confrontation between (human) readers and posthuman characters, are heightened when this confrontation occurs within the narrative, such as in the later timeline of *Oryx and Crake*, in which Snowman describes his interactions with the anthropomorphic creatures called "Crakers". The latter were engineered by Crake (Jimmy's best friend before the catastrophe) in the hope of making the world a better place:

What had been altered was nothing less than the ancient primate brain. Gone were its destructive features, the features responsible for the world's current illnesses. For instance, racism—or, as they referred to it in Paradise, pseudospeciation—had been eliminated in the model group, merely by switching the bonding mechanism: the Paradise people simply did not register skin colour. Hierarchy could not exist amongst them, because they lacked the neural complexes that would have created it. Since they were neither hunters nor agriculturalists hungry for land, there was no territoriality: the king-of-the-castle hard-wiring that had plagued humanity had, in them, been unwired. They ate nothing but leaves and grass and roots and a berry or two; thus their foods were plentiful and always available. Their sexuality was not a constant torment to them, not a cloud of turbulent hormones: they came into heat at regular intervals, as did most mammals other than man.

In fact, as there would never be anything for these people to inherit, there would be no family trees, no marriages, and no divorces. They were perfectly adjusted to their habitat, so they would never have to create houses or tools or weapons, or, for that matter, clothing. They would have no need to invent any harmful symbolisms, such as kingdoms, icons, gods, or money. Best of all, they recycled their own excrement. (305)

This new species is explicitly presented as an improvement on humans; and not just Crake and Jimmy's contemporaries, but also the readers'. Such explicit comparison is

not exceptional; on the contrary, it seems that the confrontation between humans and posthumans occurring within the narrative increases the chances that the differences and similarities between these species shall be verbally described and questioned at some point by a character or narrator.

In Ishiguro's *Never Let Me Go*, the confrontation between humans and posthumans is central to the narrative. It is indeed through the description of interactions between Hailsham students and personnel that readers progressively realise the true nature of these students and their place and fate in society: as the woman behind schools such as Hailsham (called "Madame") visits the latter, her discomfort towards the students hints at their profound difference; her sadness when she sees young Kathy rocking an imaginary baby indicates that the latter will never be able to have any; or when they later visit their former teacher, Miss Emily, her confidence when telling Kathy and Tommy that there is no escaping the donation system shows how unambiguously society feels about the status of these clones. Furthermore, interaction between humans and clones is also at the heart of Madame's strategy to rehabilitate clones as human beings: "we demonstrated to the world that if students were reared in humane, cultivated environments, it was possible for them to grow to be as sensitive and intelligent as any ordinary human being" (256). On the one hand, being raised by humans, in a human environment, with human knowledge and values had been aimed at making their humanity stand out; on the other hand, the results of experiments such as Hailsham were communicated to the outside world so as to make society acquainted with a species that only differed from them in terms of production process. For readers, lastly, the juxtaposition of clones' heightened humanity and humans' unflinching

determination to use them as spare body part container anyway is bound to make them question the humanity of certain human practices – not all of which would be speculative. Indeed, as the speculative aspect of the novel leads to pondering issues related to the creation of a sentient species, the novel can also be understood as a comment on humans' ruthless exploitation of non-human species.

In *The Possibility of an Island* (which is divided into two narratives that unfold in parallel), the later narrative consists of comments made by Daniel's clones, "neohumans" Daniel²⁴ then Daniel²⁵, on Daniel's autobiography, through which they try to know and understand the entire human race. Predictably, these comments provide an extended comparison between the two species, just as they prompt readers to draw comparisons between themselves and neohumans. Yet, the most interesting aspect of these comments might be that the way they create estrangement amongst readers, as they force them to envision their own species from another – *an Other* – perspective. Interestingly, the autobiographical narrative also features explicit comparisons between human and neohumans that prompt a new perspective on humankind. See, for example, when Daniel visits Vincent, one of the cult's highest members and engineer of the clones:

Vincent's drawings prefigured the man of the future. For a long time animal nutrition had seemed to him to be a primitive system, of mediocre energy efficiency, producing a clearly excessive quantity of waste, waste that not only had to be evacuated but which in the process provokes a far from negligible wear and tear of the organism. For a long time he had been thinking of equipping the new human animal with that photosynthetic system that, by some curiosity of evolution, was the property of vegetables. [...] The human being thus transformed would subsist, solar energy aside, on water and a small quantity of mineral salts[...]. (323-324)

Engineering neohumans has forced Vincent, and now Daniel, to consider how the human species could improve, and thus to adopt the perspective of an outsider regarding his own species. And through them, readers are thereby likely to cast an estranged look upon their own kind as well – an effect that is enhanced by the clones' first-person narrative, which forces readers into a posthuman point of view. In that narrative, neohumans share the remains of our planet with the "savages", as Daniel24 recurrently calls them, namely the few unmodified and uncloned humans who have survived the various cataclysms but have returned to a primitive way of life. Since neohumans are not supposed to leave their homes, Daniel24 has met very few savages, except the few, isolated specimens occasionally prowling around his property. But when Daniel24's successor, Daniel25, decides to leave his home permanently to see what lies beyond his fences, he discovers the savages' customs as a group as well as the material remains of the extinct human civilisation. These encounters and discoveries fill his journey with meditation on human nature as well as his own posthuman condition:

Compared with a human, I benefited from a suppleness, endurance and functional autonomy that were greatly enhanced. My psychology, of course, was also different; I did not comprehend fear, and whilst I was able to suffer, I felt none of the dimensions of what humans called regret; this feeling existed in me, but it was accompanied by no mental projection. I already felt a sense of loss when I thought of Fox's caresses, of the way he had of nuzzling against my knees; of his baths, his races, above all the joy that could be read in his eyes, this joy that overwhelmed me because it was so foreign; but this suffering, this loss seemed to me inevitable, because of the simple fact that *they existed*. The idea that things could have been different did not cross my mind, no more than a mountain range, present before my eyes, could vanish to be replaced by a plain. Consciousness of a total determinism was without doubt what differentiated us most clearly from our human predecessors. Like them, we were only conscious machines; but, unlike them, we were aware of only being machines. (408-409)

While, before leaving his home, he would contemptuously see nothing in common between humans neohumans, he eventually gets to discover a few similarities, as the

relationship with and then loss of his dog, Fox, has brought him to experience what humans identified as joy, love and sadness. Therefore, just like the confrontation with posthuman life brought by the novel provokes estrangement amongst its readers, the confrontation between Daniel²⁵ and human life (both pre-cataclysmic, thanks to the autobiographies, and post-cataclysmic, thanks to his journey) leads him to see his own species under a new light. The estrangement effect is reinforced in most explicit ways by the clone's constant alienation of the humans, in the sense that clones's comments distance human from clones as well as from themselves. The last quotation is quite emblematic of this double alienation, as it established a thorough comparison between clones and humans which culminates in the clone describing humans as machines, thereby forcing readers to at least a questioning and possibly a reconceptualisation of their own nature.

The descriptions of the interactions between theory and fiction in theoretical texts (Chapter 5) and in fictional texts (Chapter 6) were elaborated independently. Yet, they uncover that, regardless of the type of discourse that is under scrutiny, the presence of one into the other follows a similar pattern that is determined by the formalisation stage of ideas. The presence of ideas is not limited to any type of discourse: the difference between theory and fiction, or between fiction that is philosophical or ideological and that which is not (if it even exists), does not lie in whether they feature ideas. Rather, as Andri Snær Magnason puts it in an interview about *LoveStar*, it is a matter of concentration:

LoveStar is an ode to ideas, and to the way in which they try to be carried to their extremities. [...] If ideas in a book are like the percentage of alcohol in a

drink, then there are books that contain 5% of ideas, some 15% of ideas, like white or red wine, and I wanted to write a book that had the same percentage as Tequila or Caribbean rum; a book with quite a high percentage of ideas. (Interview, Magnason, *Interview*, my translation)⁷⁵

Therefore, it is not so much the presence of ideas as their concentration that might justify considering a fiction to be philosophical (and, in some cases, ideological). Of course, this statement about ideas is only part of the wider theory of ideas that is developed in *LoveStar*, which is that the world is filled with ideas waiting (or rather, in the novel, trying actively) to be realised.

If one considers the realisation of an idea as its explicit formalisation into theory, Magnason's metaphor turns out to be extremely helpful in making sense of the interpenetration of fiction and theory. As mentioned in the last chapter, their relationship can indeed be characterised according to the developmental status of ideas in texts (whether fictional or theoretical); each idea falls somewhere on a spectrum between *unrealised* (or 'latent') and *realised* (or 'formalised'), and this is what determines the (expected) consequence of the presence of fiction in theory and *vice versa*.

⁷⁵ "Lovestar est aussi une ode aux idées, et à la manière dont toutes les idées essayent d'être poussées jusqu'à leurs extrémités. [...] Si les idées dans un livre sont comme l'alcool dans un verre, alors il y a des livres qui contiennent 5 % d'idées, certains 15 % comme les vins blancs ou rouges, et j'avais envie d'écrire un livre qui avait le même degré que la tequila ou le rhum des caraïbes, un livre avec un degré d'idées assez fort."

	In theory	In fiction	
Unrealised (or latent) ideas	<i>Fiction precedes theory: the ideas present in fiction may participate in the development of theory.</i>		Knowledge
	Inductive approach	Reflexive discourse Double referentiality	
Semi- realised ideas	<i>Theory precedes fiction: theory uses fiction as means of evaluation.</i>		
	Constructive deductive approach	(Concomitance with references to theory)	
Realised (and formalised) ideas	<i>Theory precedes fiction: theory uses fiction as means of explanation / presentation / illustration.</i>		
	Driven deductive approach	References to theory	
	<i>Theory precedes fiction: theory uses fiction as means of validation and persuasion.</i>		
	Ideological approach	Marks of didacticism	Persuasion

In *LoveStar*, ideas seem to be floating around, waiting for human hosts who, under their control, would make every effort to realise them. Transposed to the context of this study, the initial status of ideas as awaiting realisation (as *latent*, in a way) may refer to situations where theory does not pre-exist fiction. In theoretical texts, this corresponds to the inductive approach, where theory develops on the basis of fiction (cf. Chapter 5, "Phase 1"); in fictional texts, this can describe the narratives that foster the development of ideas through double referentiality or, less subtly, through reflexive discourse (cf. Chapter 6, "Knowledge").

On the opposite side of the spectrum, realised ideas would be ideas that have been formalised into theory. Their presence in a text (whether this text is theoretical or fictional) implies that theory has preceded the elaboration of that text and therefore determines the relationship between fiction and theory in that text. In a theoretical text,

this relationship is deductive and driven,⁷⁶ that is to say that theory provides a framework that fiction may illustrate or validate. Although in both cases, the presence of fiction in theory is *driven*, final objectives differ: in the former (illustration, explanation or exemplification), fiction is used to secure the reader's understanding of theory (cf. Chapter 5, "Phase 2"); by contrast, in the latter (validation), fiction is used to convince the reader of the righteousness of the theory (cf. Chapter 5, "Special Case"). The presence of realised ideas (*i.e.* theory) in fictional texts follow a pattern that demonstrates a division similarly based on purpose. On the one hand, a fictional text may aim at securing the understanding of a theory by being an illustration of that theory. One way of recognising this situation is by spotting theoretical references in fiction (cf. Chapter 6, "Intertextuality"). On the other hand, a fictional text may aim at persuading the reader of the validity of a theory, which can be uncovered by detecting marks of didacticism (cf. Chapter 6, "Persuasion").

In between these two extremes, a multitude of what could be called *semi-realised* ideas can be found. These ideas are in the process of being formalised (into a theory); they are based on pre-existing theory, but fiction still has a role to play in their formalisation. The relationship between fiction and theory is thereby impacted: in theoretical texts, fiction impacts ideas according to a constructive deductive approach, that is to say that some pre-existing theory has provided a framework for the analysis of fiction, but the latter is still liable to uncover needs for adjustment, relativisation or contradiction of the original framework, leading to an updated or improved version of the framework (cf. Chapter 5, "Phase 2"). That new framework is the result of both

⁷⁶ See the difference between the constructive and the driven deductive approach at the end of Chapter 5, "The Deductive Approach."

realised and unrealised ideas. In fictional texts, semi-realised ideas emerge from both narrative and pre-existing theory. In other words, they are concomitant with (and probably prompted by) realised, formalised ideas, but have not yet been formalised themselves. For example, the presence of a character named Haraway in Oshii's *Innocence: Ghost in the Shell 2* signals the presence of an already formalised idea, but the narrative, through that theoretical reference as much as through its plot, generates new ideas that are a bit more patent than if they had emerged from the plot only. The presence of a theoretical framework facilitates the detection of all ideas, even those that are not implied by that framework. It should be noted, as this last example shows, that the typology developed across this second Part is not meant to classify texts as a whole, but rather the ideas that they contain, for a single text, such as Oshii's, may contain different types of ideas.

Besides showing that the relationship between fiction and theory can be characterised according to the level of development and the purpose of these ideas, this second Part also leads to the general observation that, regardless of the type of text under scrutiny, fiction seems to be the one serving theory: latent ideas therefore facilitate a kind of relationship between fiction and theory where fiction serves as inspiration (in theory) or incubator (in fiction) for theoretical discourse; semi-realised ideas are part of a configuration where fiction serves as evaluation of theory; and formalised ideas are more likely to be found in configurations where fiction serves as either illustration / explanation or validation of theoretical discourse. In short, theory of the posthuman seems to benefit from fiction – as a body of texts or as a medium – in many ways, but the opposite might not be so easily arguable.

Consider theories of the posthuman: do they feature references to fiction that serve these fictions? Generally speaking, one could argue that these fictions may benefit from being theorised upon or being referred to in theory, in that these theories might provide interpretations that could exalt the quality of these fictions. However, this effect only concerns the surroundings of fiction, its aura, its cultural status; it does not bring anything to the fiction in question, and it never can, as that fiction has already been written. Now consider fictions of the posthuman: do they feature theoretical aspects (explicit references to theory or implicit affiliation to a theoretical movement) that actually serve fiction? The philosophical extent of fictions of the posthuman may be nourished by a theoretical intertext (cf. the constructive deductive approach), but does the latter truly nurture the strictly *fictional* aspects of these fictions (*i.e.* aesthetics, narration, etc.)? I have not yet encountered a narrative that would allow me to believe so.

This observation has partly motivated my desire to subtitle this study “From Creature to Concept”. Most obviously, it is a reference to Mary Shelley’s *Creature*, which can be considered the first instance of the posthuman that I have been describing along this study (*i.e.* the form of being resulting from the use of technology), just as *Frankenstein* (1818) itself has been described as the first science-fiction novel (Aldiss and Wingrove 29).⁷⁷ If the *Creature* is both a cautionary tale about humans’ demiurgic aspirations and an allegory of literary creation (cf. Desmarests), calling the posthuman ‘a creature’ is a way to do justice to how it results from human creation, and how such creation has primarily been the result of imagination: within stories, posthumans

⁷⁷ Most famously by Brian Aldiss in the *Trillion Year Spree: The History of Science Fiction* (1973).

(whether they are an enhanced form of humanity or a non-human sentient species) are engineered by humans; but these stories of the posthuman have also been brought into existence through humans' artistic creativity. Therefore, even though I have repeatedly emphasised the coexistence and equivalence of the posthuman's various defining aspects,⁷⁸ studying the relationship between fiction and theory of the posthuman – between the creature and the concept – has led me to postulate the pre-existence of the creature, and, above all, to assert its subsequent significance to the concept, thereby reaffirming my previous statements⁷⁹ according to which the posthuman is always both at once.

⁷⁸ My first presentation on this topic was even entitled "The Chicken or the Egg?"

⁷⁹ See the conclusions of Chapters 2, 3 and 4.

CONCLUSION

At the end of the Introduction, I suggested that, even though Part I and Part II could seem to carry projects so different that one could be tempted to consider them independent, there has in fact been a valid reason for this dissertation to be made of these two parts specifically. According to Jon Erickson "the difference between philosophers and theorists is that philosophers make arguments, while theorists make assertions and call them arguments" (145). Although Erickson was deliberately exaggerating (143), he nonetheless pinpointed an aspect of my own struggle with both theory and *writing about* theory: how to carry out scientific research about theory if theory indeed tends to be quite "dogmatic," as Erickson writes (145)? This questioning might justify the existence of Part I: I did not want to provide a ready-made notion of the posthuman through a couple of famous quotations from "authorities who everyone simply agree with" (Erickson 145) Quite the contrary, I wanted to explore as much theorisation of the posthuman as I could in order build a faithful picture that would

account for all of its variations. Concretely, my goal has been not to simply *claim* the posthuman's hybridity by citing Donna Haraway and Katherine Hayles' canonic definitions; I wanted to *demonstrate* it by going through numerous and, especially, diverse writings on this topic. Only in this way could I achieve a foundation stable enough to support the attempt at further theorisation that constitutes Part II; that foundation has turned out to be the posthuman's multidimensional hybridity (see Chapter 4).

Part I has indeed led to the conclusion that the posthuman is hybrid in more than one ways. *First-degree hybridity* (for lack of a better term) denotes the posthuman as a mixed being (human and non-human, organic and non-organic, material and immaterial, etc.). By contrast, *second-degree hybridity* is related to the way in which the posthuman is the (usually speculative) post-biological or technological being described above as well as the subsequent reconceptualisation of what it means to be human. The posthuman is therefore both a (speculative) creature and a (theoretical) concept. *Second-degree hybridity* implies other forms of hybridity: one is *disciplinary*, as studies of the posthuman usually combine literary, philosophical and technological perspectives; another one is *ontological*, as the posthuman is usually presented as both speculative (as a potential development of our species) and factual (as a reconceptualisation of the human).

These observations resulted from the study carried out in Part I and inspired me, in Part II, to not only examine how theories and fictions of the posthuman present signs of hybridity as well, but also to tie that form of textual hybridity to the posthuman inherent hybridity by a link of causality. In other words, I have meant to argue that the

posthuman's hybridity is truly responsible for the hybridisation of other aspects surrounding the posthuman. As I focused on that of fictional and theoretical texts,¹ I covered its forms and effects, and I may have sometimes hinted at how it might have been a consequence of the posthuman's hybridity; but I now shall make it more explicit and systematic.

The posthuman's first-degree hybridity (*i.e.* the *creature's* hybrid nature) facilitates the interpenetration of fiction and theory. On the one hand, that first-degree hybridity alone inevitably sparks off philosophical thought without the reader or audience having to know about any kind of theory beforehand. Faced with (and most of the time, being led to empathise with) a creature that is either a modified version of our species or the latter's sentient creation, readers and spectators are triggered to consider the implications of the posthuman's hybridity on traditional notions of human nature. This may sometimes result in a reconceptualisation of the human; other times, as Callus and Herbrechter noted, it may instead lead to a "reaffirmation and reconfirmation of the human" (99). In short, the mere presence of a posthuman element in a narrative increases the likelihood of reflexive discourse within, around or about that narrative (*i.e.* in the text itself, in its paratext or its metatext). On the other hand, posthuman's first-degree hybridity is what brings a series of writings together under a common thematic banner, thereby making fictions and theories more visible to both theoreticians and writers who wish to work on the posthuman or any related topic.

The latter effect is reinforced by the fact that the posthuman is both a creature and a concept (which corresponds to its second-degree hybridity). As it is a now well-

¹ As I shall mention in the last part of this conclusion, many others aspects could be studied.

developed topic, theoretical conceptualisations of the posthuman are more likely to be present (*i.e.* cited or alluded to) in fictional works (cf. Chapter 6, "Intertextuality"). Similarly, the fact that the posthuman, despite its numerous theorisations, most of the time remains a speculative creature as well makes fiction quite attractive to theoreticians. As a source, it provides a *repertoire* of posthumans to theorise with (cf. Chapter 5); as a medium, it allows thinkers of all kinds to freely explore the posthuman and its ramifications (cf. Chapter 6, "Knowledge") or, on the contrary, build stories that validate their own concepts of or beliefs about the posthuman (cf. Chapter 6, "Persuasion").

As mentioned above, the posthuman's second-degree hybridity implies an ontological aspect and a disciplinary aspect, both of which are intertwined. As both a theoretical concept and a speculative creature, the posthuman may hardly be considered either concrete or abstract, either existing or non-existing. Moreover, as a fictional character, the posthuman is most often the result of a science-fictional creation process, which (as explained in Chapter 4, "The Posthuman as a Science-Fiction Motif" and Chapter 6, "Double Referentiality") entails the rational confrontation of the existing world with non-existing, yet plausible versions of this world (usually future versions, but not always). The significant number of posthumans produced by science fiction is hard to ignore, and, as this study has shown, few theoreticians have resisted alluding to these fictional posthumans in their works, thereby generalising the presence of fiction in theory (cf. Chapter 5). Similarly, the expansion and growing popularity of the posthuman as a theoretical topic made the most commented of these theories well

known, even in places outside of academia, including fiction (cf. Chapter 6, "Intertextuality").

Lastly, and as announced in the Introduction, the posthuman's ontological hybridity results in the hybridity of the research methods that are needed in any thorough study. The posthuman indeed requires knowledge and skills that correspond to more than one discipline; I have been insisting on the importance of literature, the arts and various fields of philosophy (epistemology, ethics, metaphysics, and philosophy of science, amongst others), but enlightening perspectives may also come from anthropology, sociology, ethology, communication, law or the hard sciences.

The latter disciplines do open up an endless realm of research possibilities, but I should limit myself to covering the ones that remain within the range of literary studies. The disciplinary, in particular, leads to a number of unexplored issues. One that I find particularly promising is the authorial postures of writers and theoreticians of the posthuman, as the latter is a topic that clearly straddles several disciplines. I have mentioned how Donna Haraway and Katherine Hayles have presented themselves as *storytellers* (cf. Chapter 2), and how some transhumanists have ventured to write fiction, but I have explored these phenomena more textually than sociologically. Yet, there is some interest in accounting for Julian Huxley being Aldous Huxley's brother and friends with H.G. Wells; for writers Vernor Vinge and Greg Bear having attended transhumanist meetings in the 1990s; or for Katherine Hayles having a background in chemistry and Michel Houellebecq in informatics. Between the sociology of literature and that of academia, studying the production context of works on the posthuman uncovers, for example, how important is a mixed background and entourage, and whether it is the

cause or the consequence of the posthuman's own hybridity. Still related to these sociological aspects, it might be relevant to conduct a study of the distribution and reception of these works, for example, by focusing on issues related to legitimacy and popularity. Indeed, the fiction and non-fiction authors that I have mentioned across this study differ in terms of cultural statuses, which is sometimes given away by labels such as 'genre', 'mainstream', 'legitimate', 'popular', 'scholarly', etc. I have briefly touched upon such difference as I described the specificities of critical transhumanism in Chapter 1, or the issues around French *intellectuels médiatiques* in Chapter 3, but I believe that more could be said about how nowadays' posthuman is the result of a mix of scholarly writings, mainstream works about science, science-fiction literature, mainstream literature, Hollywood blockbusters and Silicon Valley culture, to name but a few. It could entail, for example, an investigation of the reasons why theories of the posthuman specifically dealing with literature (mine included) usually allude to the same few novels, and that most of these novels were written by acclaimed mainstream writers instead of typically SF writers² – a phenomenon that Bruce Sterling described as "Slipstream" ('Slipstream' n.p.)³ in 1989.

Besides the exploration of new topics, the present investigation could also lead to new perspectives concerning the relationship between theory and fiction. Whether my observations regarding that relationship could lead to an operational general model

² Amongst others: Mads Rosendhal Thomsen's *The New Human in Literature* analyses works by Virginia Woolf, William Carlos Williams, Louis-Ferdinand Céline, Chinua Achebe, Mo Yan, Orhan Pamuk, Don DeLillo, Michel Houellebecq, Kazuo Ishiguro and Margaret Atwood; Maud Granger Remy devoted her dissertation *Le Roman Posthuman* to Michel Houellebecq and Bret Easton Ellis alongside SF writers Maurice Dantec, William Gibson; and in *Posthumanism*, Pramod K. Nayar alludes to Italo Calvino, J.M. Coetzee, Kazuo Ishiguro, alongside William Gibson, Ursula LeGuin, Marge Piercy.

³ The term and the concept that it denotes have since then been lengthily debated, leading to the creation of new labels and categories such as "Transrealist Fiction, New Wave Fabulism, Interstitial Fiction, New Weird, Avant Pop" (Latham n.p.). The March 2011 issue of *Science-Fiction Studies* provides an ambitious update on this topic.

could be one of them. It could, for example, be tested on a broader or different corpus. I have focused mainly on philosophical theory, but sociological, scientific, or legal texts about the posthuman might also make an interesting use of fiction. I have studied texts ranging from the late 1980s to the late 2010s, but there might be earlier texts – maybe texts that deal with a figure rather close to the posthuman but do not call it so – which could be examined through this model. I would also be quite intrigued to see a similar study conducted ten or twenty years from now, as the possibility of the posthuman gets increasingly concrete.

Indeed, besides a theoretical concept and a fictional creature, ‘posthuman’ is progressively becoming an accurate way to describe people who have had technology make them gain new abilities. Most famously, artist Neil Harbisson has compensated his colorblindness by having an antenna implanted in his skull which “allows him to perceive visible and invisible colours via audible vibrations in his skull including infrareds and ultraviolets as well as receive colours from space, images, videos, music or phone calls directly into his head via internet connection” (cyborgarts.com). Harbisson, who has been officially acknowledged as a cyborg in 2004 by the British government, has created two organisations: on the one hand, the *Cyborg Foundation* (co-founded in 2010 with cyborg dancer Moon Ribas) aims at promoting cyborg



Fig. 5. Neil Harbisson, from cyborgarts.com.

identity, rights and arts; on the other hand, the *Transpecies Society* (co-founded in 2017 with Moon Ribas and cyborg performance artist Manel Muñoz) “gives voice to people with non-human identities, defends the freedom of self-design and offers the creation of new senses and new organs in community” (*cyborgarts.com*). Personalities like Harbisson, Ribas and Muñoz are part of a greater community of people who recreationally experience with technological enhancements, thereby stretching the limits of human experience and questioning their status as homogeneously human.⁴

From a textual point of view, these new actors coming into play have the potential to disrupt the relationship between fiction and theory by rendering fictional posthumans obsolete; surprisingly, they could also reaffirm their relevance. Theories of the posthuman desperate for illustration and case studies will likely be seduced by these new figures, but fiction has elaborated such culturally pervasive notions and aesthetics for the posthuman that it might in fact have been inspiring more than one breakthrough toward the posthuman. Hayles mentioned how influential William Gibson’s *Neuromancer* has been on tri-dimensional imagery (21); how influential will fictional forms of the posthuman be on future bio-technological developments and body-enhancing technologies? Will we draw from the *repertoire* provided by science fiction seeking for desirable ways of becoming posthumans, or even ways of socially and legally handling such change? And will theory play a part? Creature and Concept might have bright days ahead.

⁴ For a detailed presentation and typology of the profiles of these actual cyborgs, see Cecilia Calheiros’s sociological enquiry developed in her PhD dissertation *Vouloir la transcendance, croire dans les technosciences. Humanité augmentée et utopie pratiquée chez les transhumanistes francophones (forthcoming)*.

“The future is there... looking back at us. Trying to make sense of the fiction we will
have become.”

— William Gibson, *Pattern Recognition*

WORKS CITED

- '2017 Update to the Technoprogressive Declaration'. *Transvision Conference*, 2017, <https://transvision-conference.org/tpdec2017/>.
- Aarseth, Espen J. *Cybertext: Perspectives En Ergodic Literature*. Johns Hopkins University Press, 1997.
- Abram, David. 'Becoming Animal'. *Green Letters*, vol. 13, no. 1, 2010, pp. 7–21.
- Aldiss, Brian W., and David Wingrove. *Trillion Year Spree: The History of Science Fiction*. Paladin, Grafton Books, 1986.
- Alexandre, Laurent. *La Défaite Du Cancer: Histoire de La Fin d'une Maladie*. J.-C. Lattès, 2014.
- . *La Mort de La Mort: Comment La Technomédecine va Bouleverser l'humanité*. J.-C. Lattès, 2011.
- Alexandre, Laurent, and Jean-Michel Besnier. *Les Robots Font-Ils l'amour?: Le Transhumanisme En 12 Questions*. Dunod, 2016.
- Anders, Günther. *Le Temps de La Fin*. L'Herne, 2007.
- Angenot, Marc. *Les Dehors de La Littérature. Du Roman Populaire à La Science-Fiction*. Honoré Champion, 2013.

- . 'L'intertextualité: Enquête Sur l'émergence et La Diffusion d'un Champ Notionnel in Le Texte et Ses Réceptions'. *Revue Des Sciences Humaines Lille*, no. 189, 1983, pp. 121–32.
- . 'Théorie Du Discours Social. Notions de Topographie Des Discours et de Coupures Cognitives'. *COntEXTES. Revue de Sociologie de La Littérature*, no. 1, 2006, <https://journals.openedition.org/contextes/51>.
- Annas, George J. *American Bioethics: Crossing Human Rights and Health Law Boundaries*. Oxford University Press, 2004.
- Atlan, Henri. 'Les Frontière Revisitées'. *Les Frontières de l'humain*, by Henri Atlan and Frans B. M. De Waal, Le Pommier, 2014, pp. 7–46.
- Atwood, Margaret. *Oryx and Crake*. Anchor Books, 2004.
- Babich, Babette. 'Nietzsche's Zarathustra and Parodic Style: On Lucian's Hyperanthropos and Nietzsche's Übermensch'. *Diogenes*, vol. 58, no. 4, 2012, pp. 58–74, <https://journals.sagepub.com/doi/abs/10.1177/0392192112467410>.
- Badmington, Neil. *Alien Chic: Posthumanism and the Other Within*. Psychology Press, 2004.
- , editor. *Posthumanism*. Palgrave Macmillan, 2000.
- . 'Theorizing Posthumanism'. *Cultural Critique*, no. 53, Winter 2003, pp. 10–27, <https://www.jstor.org/stable/1354622>.
- Bailey, Matthew. 'Review: Elysium'. *H+ Magazine*, Aug. 2013, <https://hplusmagazine.com/2013/08/12/review-elysium/>.
- Balsamo, Anne Marie. *Technologies of the Gendered Body: Reading Cyborg Women*. Duke University Press, 1996.
- Baofu, Peter. *The Future of Post-Human Semantics: A Preface to a New Theory of Internality and Externality*. Cambridge Scholars Publishing, 2012.
- Barad, Karen. 'Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter'. *Gender and Science*, vol. 28, no. 3, Spring 2003, pp. 801–31, <http://www.jstor.org/stable/10.1086/345321> .
- Baudrillard, Jean. *Simulacra and Simulation*. Translated by Sheila Faria Glaser, University of Michigan press, 1994.
- . *Simulacres et Simulation*. Galilée, 1981.

- Baum, Seth D. 'Film Review: District 9'. *Journal of Evolution and Technology*, vol. 20, no. 2, Dec. 2009, <https://jetpress.org/v20/baum.htm>.
- . 'Film Review: Transcendence'. *Journal of Evolution and Technology*, vol. 24, no. 2, Sept. 2014, <https://jetpress.org/v24/baum.htm>.
- Baum, Seth D., and James E. Thatcher. 'Film Review: Inception'. *Journal of Evolution and Technology*, vol. 21, no. 1, July 2010, <https://jetpress.org/v21/baum-thatcher.htm>.
- Béland, Jean-Pierre, editor. *L'homme Biotech: Humain Ou Posthumain?* Presses de l'Université Laval, 2006.
- Besnier, Jean-Michel. *Demain Les Posthumains?* Hachette Littérature, 2009.
- Bewes, Timothy. 'What Is "Philosophical Honesty" in Postmodern Literature?' *New Literary History*, vol. 31, no. 3, Summer 2000, pp. 421–34, <https://www.jstor.org/stable/20057613>.
- Blackford, Russel. 'Book Review: Zoltan Istvan's The Transhumanist Wager'. *Journal of Evolution and Technology*, vol. 24, no. 2, Sept. 2014, pp. 89–91, <https://jetpress.org/v24/blackford.pdf>.
- Bolter, Jay David, and Richard Grusin. *Remediation: Understanding New Media*. MIT Press, 2000.
- Bonny, Yves. 'Postmodernisme et Postmodernité: Deux Lectures Opposées de La Fin de La Nation'. *Controverses*, no. 3, Oct. 2006, pp. 135–51.
- Bostrom, Nick. *A History of Transhumanist Thought*. 2005, <https://nickbostrom.com/papers/history.pdf>.
- Bouchard, Guy. 'Science-Fiction, Utopie et Philosophie: L'art de s'étonner'. *Philosophie et Science-Fiction*, by Gilbert Hottois, Vrin, 2000, pp. 43–66.
- Boudès, Thierry. 'Les Attracteurs de La Notion de Récit Dans Les Organisations et Les Rôles Des Managers'. *Le Storytelling. Concepts, Outils et Applications*, edited by Eddie Soulier, Lavoisier, 2006.
- Bowering, Peter. *Aldous Huxley: A Study of the Major Novels*. Bloomsbury, 2014.
- Bozzetto, Roger. *La Science-Fiction*. Armand Colin, 2007.
- Braidotti, Rosi. *The Posthuman*. John Wiley & Sons, 2013.
- Bréan, Simon. *La Science-Fiction En France: Théorie et Histoire d'une Littérature*. PU

- Paris-Sorbonne, 2012.
- Bru, Sascha, et al., editors. *Literature Now*. Edinburgh University Press.
- Bukatman, Scott. 'Postcards from the Posthuman Solar System'. *Science Fiction Studies*, vol. 18, no. 3, 1991, <https://www.depauw.edu/sfs/backissues/55/bukatman55art.htm>.
- . *Terminal Identity: The Virtual Subject in Postmodern Science Fiction*. Duke University Press, 1993.
- Carbonell, Curtis D. 'Brave New World'. *Post- and Transhumanism: An Introduction*, by Robert Ranisch and Stefan Lorenz Sorgner, Lang, Peter GmbH, 2014, pp. 109–18.
- Castree, Noel, and Catherine Nash. *Posthuman Geographies*. 2006.
- Chassay, Jean-François. 'Intertextualité'. *Dictionnaire Du Littéraire*, edited by Paul Aron et al., Presses Universitaires de France, 2002, pp. 305–07.
- . 'Le Génome Est Un Champ de Ruines'. *Les Frontières de l'humain et Le Posthumain*, edited by Jean-François Chassay and Marie-Ève Tremblay-Cléroux, Université du Québec à Montréal, 2014, pp. 41–54.
- Chassay, Jean-François, and Marie-Ève Tremblay-Cléroux, editors. *Les Frontières de l'humain et Le Posthumain*. Université du Québec à Montréal, 2014.
- Chazal, Gérard. *Philosophie de La Machine: Néo-Mécanisme et Post-Humanisme*. Éditions Universitaires de Dijon, 2013.
- Childs, Peter, and Roger Fowler. *The Routledge Dictionary of Literary Terms*. Routledge, 2006.
- Cirkovic, Milan. 'A Review of Ian McDonald's *Brasyl*'. *Journal of Evolution and Technology*, vol. 17, no. 1, Mar. 2008, <https://jetpress.org/v17/cirkovic.htm>.
- . 'Book Review: Justina Robson's *Natural History*'. *Journal of Evolution and Technology*, vol. 16, no. 1, June 2007, pp. 167–70, <https://jetpress.org/v16/cirkovic.pdf>.
- Clark, Stephen R. L. *How to Live Forever: Science Fiction and Philosophy*. Routledge, 1995.
- Clarke, Bruce. *Posthuman Metamorphosis: Narrative and Systems*. Fordham University Press, 2008.
- Clarke, Bruce, and Manuela Rossini, editors. *The Cambridge Companion to Literature*

- and the Posthuman*. Cambridge UP, 2017.
- Clément, Murielle Lucie. *Michel Houellebecq Revisited: L'Écriture Houellebecquienne*. L'Harmattan, 2007.
- Coeurnelle, Didier, and Marc Roux. *Technoprog, Le Transhumanisme Au Service Du Progrès Social*. FYP Éditions, 2016.
- Coulombe, Maxime. *Imaginer Le Posthumain: Sociologie de l'art et Archéologie d'un Vertige*. Presses de l'Université Laval, 2009.
- Courtés, Joseph. *Le Conte Populaire: Poétique et Mythologie*. Presses universitaires de France, 1986.
- Cuddon, John Anthony. *Penguin Dictionary of Literary Terms and Literary*. Penguin Books, 1999.
- Cudworth, Erika, and Stephen Hobden. *Posthuman International Relations: Complexity, Ecologism and Global Politics*. Zed Books, 2011.
- Culler, Jonathan. 'Omniscience'. *Narrative*, vol. 12, no. 1, 2004, pp. 22–34, <https://www.jstor.org/stable/20107328>.
- Cunningham, David. 'Philosophical Novel'. *The Encyclopedia of the Novel*, edited by George Olakunle et al., Wiley-Blackwell.
- Cusset, François. *French Theory: Foucault, Derrida, Deleuze & Cie et Les Mutations de La Vie Intellectuelle Aux États-Unis*. La Découverte, 2003.
- Dahan-Gaida, Laurence. 'La Fin de l'histoire (Naturelle): Les Particules Élémentaires de Michel Houellebecq'. *Tangence*, no. 73, 2003, pp. 93–114, <https://www.erudit.org/en/journals/tce/2003-n73-tce772/009120ar.pdf>.
- Damour, Franck. *La Tentation Transhumaniste*. Salvator, 2015.
- . 'Le Mouvement Transhumaniste: Approches Historiques d'une Utopie Technologique Contemporaine'. *Vingtième Siècle. Revue d'histoire*, vol. 138, no. 2, 2018, pp. 143–56.
- Damour, Franck, and David Doat. *Le Transhumanisme: Quel Avenir Pour l'humanité?* Le Cavalier Bleu, 2018.
- de Gramont, Dominique. *Le Christianisme Est Un Transhumanisme*. Éditions du Cerf, 2017.
- DeLillo, Don. *Zero K*. Picador, 2016.

- Delruelle, Edouard. 'Humanisme Pratique et Antihumanisme Théorique'. *Espace de Libertés*, Apr. 2012, <http://edouard-delruelle.be/humanisme-pratique-antihumanisme-theorique/>.
- Deprez, Stanislas, and Jean-Baptiste Lecuit, editors. *L'homme, Une Chose Comme Les Autres ? Exploration Interdisciplinaire de La Frontière Homme-Chose*. L'Harmattan, 2012.
- Desmarets, Hubert. *Création Littéraire et Créatures Artificielles: «L'Ève Future», «Frankenstein», «Le Marchand de Sable» Ou Le Je (u) Du Miroir*. Editions du temps, 1998.
- Després, Elaine. 'Saltation Virale Pour Un Post-Homo Communicans. La Série Darwin de Greg Bear'. *Les Frontières de l'humain et Le Posthumain*, edited by Jean-François Chassay and Marie-Ève Tremblay-Cléroux, Université du Québec à Montréal, 2014, pp. 21–40.
- Després, Elaine, and Hélène Machinal, editors. *PostHumains: Frontières, Évolutions, Hybridités*. Presses Universitaires de Rennes, 2014.
- Dick, Philip K. *Do Androids Dream of Electric Sheep?* Orion Books, 1968.
- Dijon, Xavier. *Le Transhumanisme*. Éditions jésuites, 2017.
- Dinello, Daniel. *Technophobia!: Science Fiction Visions of Posthuman Technology*. University of Texas Press, 2005.
- Dominguez Leiva, Antonio. 'Les Voies Douloureuses Du Posthumain Dans Les Mangas et Animes Nippons'. *Les Frontières de l'humain et Le Posthumain*, edited by Jean-François Chassay and Marie-Ève Tremblay-Cléroux, Université du Québec à Montréal, 2014, pp. 129–50.
- Donawerth, Jane. 'Feminisms'. *The Routledge Companion to Science Fiction*, edited by Mark Bould et al., Routledge, 2011, pp. 214–24.
- Doré, Kim. 'Doléances d'un Surhomme Ou La Question de l'évolution Dans Les Particules Élémentaires de Michel Houellebecq'. *Tangence*, no. 70, 2002, pp. 67–83, <https://www.erudit.org/en/journals/tce/2002-n70-tce609/008486ar.pdf>.
- Eoff, Sherman H. 'The Spanish Novel of " Ideas": Critical Opinion (1836-1880)'. *Publications of the Modern Language Association of America*, 1940, pp. 531–58, https://www.jstor.org/stable/pdf/458460.pdf?casa_token=W3zBcHfguNoAAAAA:

- KSJqvuanZ21k4yTyfv_QqP9aFBlyUMoqDzKMeRW0BeCp1ogUCt0H6DuRPyxVleK
KbPITPjs-Q_ExmC0dN24zd_Zp56ZnryMSIQkmZNqPP9AKetDTMkg.
- Erickson, Jon. 'Philosophy and Theory'. *Journal of Dramatic Theory and Criticism*, 2001, pp. 143–48, <https://journals.ku.edu/jdetc/article/view/3387>.
- Esfandiary, Fereidoun M. *Up-Wingers*. John Day Company, 1973.
- Eskelinen, Markku. *Cybertext Poetics: The Critical Landscape of New Media Literary Theory*. Bloomsbury, 2012.
- Ettinger, Robert C. W. *Man into Superman*. Cryonics Institute, 1972.
- . *The Prospect of Immortality*. Cryonics.org, 1964.
- Fernbach, Amanda. *Fantasies of Fetishism: From Decadence to the Post-Human*. Rutgers University Press, 2002.
- Ferone, Geneviève, and Jean-Didier Vincent. *Bienvenue En Transhumanie: Sur l'homme de Demain*. Grasset, 2011.
- Ferrando, Francesca. 'Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms'. *Existenz*, vol. 8, no. 2, 2013, pp. 26–32.
- . 'Towards a Posthumanist Methodology: A Statement'. *Frame Journal For Literary Studies*, vol. 25, no. 1, 2012, pp. 9–18, https://www.researchgate.net/profile/Francesca_Ferrando/publication/270900549_Towards_a_Posthumanist_Methodology_A_Statement/links/5776b39b08aead7ba071d0cb/Towards-a-Posthumanist-Methodology-A-Statement.pdf.
- Ferry, Luc. *La Révolution Transhumaniste: Comment La Technomédecine et l'uberisation Du Monde Vont Boulverser Nos Vies*. Plon, 2016.
- Fischer, Hervé. *Les Défis Du Cybermonde*. Les Presses de l'Université Laval, 2003.
- FM-2030. *Are You a Transhuman? Monitoring and Stimulating Your Personal Rate of Growth in a Rapidly Changing World*. Warner, 1989.
- Folscheid, Dominique, et al., editors. *Critique de La Raison Transhumaniste*. Éditions du Cerf, 2018.
- Foucault, Michel. *The Order of Things*. Vintage books, 1971.
- Freud, Sigmund. 'A Difficulty in the Path of Psycho-Analysis'. *Freud - Complete Works*, by Ivan Smith, 1917, pp. 3608–15.
- Fukuyama, Francis. *Our Posthuman Future: Consequences of the Biotechnology*

- Revolution*. Macmillan, 2003,
https://www.carnegiecouncil.org/studio/multimedia/20020510/index.html:pf_printable?
- . 'Transhumanism'. *Foreign Policy*, Oct. 2009,
<https://foreignpolicy.com/2009/10/23/transhumanism/>.
- Fuller, Steve. 'Evolution'. *Post- and Transhumanism: An Introduction*, by Robert Ranisch and Stefan Lorenz Sorgner, Lang, Peter GmbH, 2014, pp. 201–11.
- Genette, Gérard. *Palimpsests. Literature in the Second Degree*. Translated by Channa Newman and Claude Doubinsky, University of Nebraska Press, 1997.
- Gervás, Pablo, et al. *Narrative Models: Narratology Meets Artificial Intelligence*. 2006,
<http://www.academia.edu/download/34314111/2006-gervas-narrative.pdf>.
- Gibbs, Samuel. 'Google AI Project Writes Poetry Which Could Make a Vagon Proud'.
The Guardian, 17 May 2016,
<https://www.theguardian.com/technology/2016/may/17/googles-ai-write-poetry-stark-dramatic-vogons>.
- Gladwell, Malcolm. 'In the Air'. *The New Yorker*, Dec. 2008,
<https://www.newyorker.com/magazine/2008/05/12/in-the-air>.
- Glazier, Loss Pequeño. *Digital Poetics: The Making of E-Poetries*. University of Alabama Press, 2002.
- Godfraind, Théophile. *Hominisation et Transhumanisme*. Académie Royale de Belgique, 2016.
- Godin, Christian. 'Le Post-Humain, La Barbarie Qui Vient'. *Cités*, no. 3, 2013, pp. 79–93.
- Goertzel, Ben. "'Nexus" by Ramez Naam'. *H+ Magazine*, Dec. 2012,
<https://hplusmagazine.com/2012/12/18/nexus-by-ramez-naam-review-by-ben-goertzel/>.
- . "'The Transhumanist Wager" by Zoltan Istvan'. *H+ Magazine*, May 2014,
<https://hplusmagazine.com/2014/05/12/the-transhumanist-wager-by-zoltan-istvan-review-by-ben-goertzel/>.
- Goodley, Dan, et al. 'Posthuman Disability Studies'. *Subjectivity*, vol. 7, no. 4, 2014, pp. 342–61.
- Graham, Elaine L. *Representations of the Post/Human: Monsters, Aliens, and Others in*

- Popular Culture*. Rutgers University Press, 2002.
- Granger Remy, Maud. *Le Roman Posthumain*. 2006.
- Gray, Chris Hables. *Cyborg Citizen: Politics in the Posthuman Age*. Routledge, 2000.
- Habermas, Jürgen. *The Future of Human Nature*. Polity, 2003.
- Hackman, Paul. "' I Am a Double Agent": Shelley Jackson's *Patchwork Girl* and the Persistence of Print in the Age of Hypertext'. *Contemporary Literature*, vol. 52, no. 1, 2011, pp. 84–107.
- Halberstam, Judith M., and Ira Livingston. *Posthuman Bodies*. Indiana University Press, 1995.
- Haney, William S. *Cyberculture, Cyborgs and Science Fiction: Consciousness and the Posthuman*. Rodopi, 2006.
- Haraway, Donna. 'A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s'. *The Haraway Reader*, Psychology Press, 2004, pp. 7–46.
- . 'Ecce Homo, Ain't (Ar'n't) I a Woman, and Inappropriate/d Others: The Human in a Post-Humanist Landscape'. *The Haraway Reader*, Psychology Press, 2004, pp. 47–62.
- . *Staying with the Trouble: Making Kin in the Chthulucene*. Duke University Press, 2016.
- Hassan, Ihab. *Paracriticisms: Seven Speculations of the Times*. University of Illinois Press, 1974.
- . 'Prometheus as Performer: Toward a Posthumanist Culture?' *The Georgia Review*, vol. 31, no. 4, 1977, pp. 830–50.
- . 'Toward a Concept of Postmodernism'. *A Postmodern Reader*, by Joseph P. Natoli and Linda Hutcheon, State University of New York Press, 1993, pp. 273–86.
- Hauskeller, Michael. 'Utopia'. *Post- and Transhumanism: An Introduction*, by Robert Ranisch and Stefan Lorenz Sorgner, Lang, Peter GmbH, 2014, pp. 101–08.
- Hayles, N. Katherine. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. University of Chicago Press, 1999.
- . *My Mother Was a Computer: Digital Subjects and Literary Texts*. University of Chicago Press, 2010.
- Hazareesingh, Sudhir. 'The Decline of the French Intellectual'. *Politico*, 19 Sept. 2015,

- <https://www.politico.eu/article/decline-of-french-intellectual-culture-literature-art-philosophy-history/>.
- Hébert, Louis. 'The Functions of Language'. *Signo [Online]*, 2011, <http://www.signosemio.com/jakobson/functions-of-language.asp>.
- Herbrechter, Stefan. *Posthumanism: A Critical Analysis*. Bloomsbury, 2013.
- . 'Postmodern'. *The Cambridge Companion to Literature and the Posthuman*, edited by Bruce Clarke and Manuela Rossini, Cambridge UP, 2017, pp. 54–68.
- Herbrechter, Stefan, and Ivan Callus. *Cy-Borges: Memories of the Posthuman in the Work of Jorge Luis Borges*. Bucknell University Press, 2009.
- . *Posthumanist Shakespeares*. Palgrave Macmillan, 2012.
- Hervé, Christian, and Jacques J. Rozenberg, editors. *Vers La Fin de l'homme? De Boeck Supérieur*, 2006.
- 'Heterogeneous'. *Merriam-Webster*, <https://www.merriam-webster.com/dictionary/heterogeneous>. Accessed 27 Oct. 2019.
- Hocquet, Thierry. *Cyborg Philosophie*. Seuil, 2011.
- Hoffman, Frederick J. 'Aldous Huxley and the Novel of Ideas'. *College English*, vol. 8, no. 3, Dec. 1946, pp. 129–37, https://www.jstor.org/stable/371436?seq=1#metadata_info_tab_contents.
- Hollinger, Veronica. 'Posthumanism and Cyborg Theory'. *The Routledge Companion to Science Fiction*, edited by Mark Bould et al., Routledge, 2011, pp. 267–78.
- Hottois, Gilbert, et al., editors. *L'humain et Ses Prefixes: Encyclopédie Du Transhumanisme et Du Posthumanisme*. Vrin, 2015.
- Houellebecq, Michel. *La Possibilité d'une Île*. Fayard, 2005.
- . *The Possibility of an Island*. Translated by Gavin Bowd, Pheonix, 2006.
- Hughes, James. *On Democratic Transhumanism*. Interview by Marc Roux, 24 June 2009, <https://transhumanistes.com/on-democratic-transhumanism/>.
- . *Technoprogressive Declaration - Transvision 2014*. 22 Nov. 2014, <https://ieet.org/index.php/IEET2/more/tpdec2014>.
- Hutcheon, Linda. *A Poetic of Postmodernism: History, Theory, Fiction*. Routledge, 1988.
- Huxley, Julian. *New Bottles for New Wine: Essays*. Chatto & Windus, 1957.
- 'Hybrid'. *Merriam-Webster*, <https://www.merriam-webster.com/dictionary/hybrid>.

Accessed 27 Oct. 2019.

Ipsen, Guido. 'Hybridity and Heterogeneity: The Balance of Interpretation'. *SEED Journal*, vol. 4, no. 3, 2004, p. 90, <http://see.library.utoronto.ca/SEED/Vol4-3/Ipsen.htm>.

Ishiguro, Kazuo. *Never Let Me Go*. Faber & Faber, 2005.

Istvan, Zoltan. *The Transhumanist Wager*. Futurity Imagine Media LLC, 2013.

Jackson, Shelley. *Patchwork Girl*. 1995.

Jakobson, Roman. 'Linguistics and Poetics'. *Style in Language*, by Thomas A. Sebeok, MA: MIT Press, 1960, pp. 350–77.

James, Edward. 'Before the Novum'. *Learning from Other Worlds: Estrangement, Cognition, and the Politics of Science Fiction and Utopia*, by Patrick Parrinder, Liverpool University Press, 2000.

Jastrow, Robert. 'Post-Human Intelligence'. *Natural History*, vol. LXXXVI, no. 6, July 1977, pp. 12–18.

Joseph-Vilain, Mélanie. 'Corps et Corporalité Dans *Moxyland* de Lauren Beukes'. *Les Frontières de l'humain et Le Posthumain*, edited by Jean-François Chassay and Marie-Ève Tremblay-Clérout, Université du Québec à Montréal, 2014, pp. 73–90.

Jousset-Couturier, Béatrice. *Le Transhumanisme: Faut-Il Avoir Peur de l'avenir?* Eyrolles, 2016.

Joyce, Elisabeth. 'Sutured Fragments: Shelley Jackson's *Patchwork Girl* in *Piecework*'. *Close Reading New Media: Analyzing Electronic Literature*, vol. 16, 2003, p. 39.

Karkulehto, Sanna, et al. *Reconfiguring Human, Nonhuman and Posthuman in Literature and Culture*. Routledge, 2019.

Kass, Leon. *Life, Liberty and the Defense of Dignity: The Challenge for Bioethics*. Encounter books, 2002.

Klein, Alexandre. 'Quelle Médecine Pour l'homme Augmenté? Étude Des Enjeux Philosophiques de l'anthropotechnie'. *Les Frontières de l'humain et Le Posthumain*, edited by Jean-François Chassay and Marie-Ève Tremblay-Clérout, Université du Québec à Montréal, 2014, pp. 55–74.

Koleva, Neli. "'Le Meilleur Des Mondes': Kitsch and Humanity in Michel Houellebecq's *La Possibilité d'une Île*'. *Modern Horizons*, 2011, pp. 1–8,

<http://modernhorizonsjournal.ca/wp-content/uploads/Issues/201106/Issue-201106-Koleva.pdf>.

- Kristeva, Julia. 'Le Mot, Le Dialogue et Le Roman'. *Sémeiotikè, Recherches Pour Une Sémanalyse*, 1969, pp. 82–112.
- Kroker, Arthur. *Exits to the Posthuman Future*. Polity, 2014.
- Lamarque, Peter, and Stein Haugom Olsen. *Truth, Fiction, and Literature: A Philosophical Perspective*. Oxford University Press, 1994.
- Lambert, Xavier. *Le Post-Humain et Les Enjeux Du Sujet*. L'Harmattan, 2011.
- Landy, Joshua. *Philosophy as Fiction: Self, Deception, and Knowledge in Proust*. Oxford University Press, 2004.
- Langlet, Irène. *La Science-Fiction: Lecture et Poétique d'un Genre Littéraire*. Armand Colin, 2006.
- Lardeau, Guy. *Fictions Philosophiques et Science-Fiction: Récréation Philosophique*. Acte Sud, 1988.
- Latham, Rob. 'Introduction and Critical Bibliography'. *Science Fiction Studies*, vol. 38, no. 1, Mar. 2011, <https://www.depauw.edu/sfs/abstracts/a113.htm#sterling>.
- Latimer, Heather. 'Reproductive Technologies, Fetal Icons, and Genetic Freaks: Shelley Jackson's Patchwork Girl and the Limits and Possibilities of Donna Haraway's Cyborg'. *MFS Modern Fiction Studies*, vol. 57, no. 2, 2011, pp. 318–35.
- LaTorra, Michael. 'Review: "The Golden Age" Trilogy by John C. Wright'. *Journal of Evolution and Technology*, vol. 15, no. 1, Feb. 2006, pp. 105–07, <https://jetpress.org/volume15/latorra.pdf>.
- Lavocat, Françoise. *Fait et Fiction. Pour Une Frontière: Pour Une Frontière*. Le Seuil, 2016.
- . *La Théorie Littéraire Des Mondes Possibles*. CNRS Editions, 2010.
- Lecourt, Dominique. *Humain, Posthumain: La Technique et La Vie*. Presses universitaires de France, 2003.
- Leiduan, Alessandro. 'Préface. Nouvelles Frontières Du Récit. Au-Delà de l'opposition Entre Factuel et Fictionnel'. *Cahiers de Narratologie. Analyse et Théorie Narratives*, no. 26, 2014, pp. 1–12.
- Lepaludier, Laurent. *Métatextualité et Métafiction*. Presses Universitaires de Rennes,

- 2003, <https://books.openedition.org/pur/29648>.
- Levy, Simon! D. 'David's Sling by Marc Stiegler'. *Extropy*, no. 8, Winter /92 1991, pp. 44–45.
- Lewis, Danny. 'An AI-Written Novella Almost Won a Literary Prize.' *Smithsonian*, 28 Mar. 2016, <http://www.smithsonianmag.com/smart-news/ai-written-novella-almost-won-literary-prize-180958577/>.
- Lippert-Rasmussen, Kasper, et al., editors. *The Posthuman Condition: Ethics, Aesthetics and Politics of Biotechnological Challenges*. Aarhus University Press, 2012.
- Lorent, Fanny. 'La Collection "Poétique": Terre d'accueil'. À l'épreuve, 2 Nov. 2015, <https://orbi.uliege.be/bitstream/2268/187564/1/La%20collection%20c2%ab%c2%a0Po%c3%a9tique%c2%a0%c2%bb%c2%a0:%20terre%20d%e2%80%99accueil%20%7c%20A%20L'%c3%a9preuve.pdf>.
- Luebbe, Chris. 'Reviewed Work: A Poetics of Postmodernism: History, Theory, Fiction. by Linda Hutcheon'. *MLN*, vol. 105, no. 5, 1990, pp. 1113–17, doi:10.2307/2905181.
- Liotard, Jean-François. *La Condition Postmoderne: Rapport Sur Le Savoir*. Éditions de Minuit, 1979.
- . *The Postmodern Condition: A Report on Knowledge*. Translated by Geoff Bennington and Brian Massumi, University of Minnesota Press, 1984.
- Magnason, Andri Snær. *Interview d'Andri Snaer Magnason Aux Imaginales 2017*. Translated by Éric Boury, 18 May 2017, https://www.youtube.com/watch?v=SJA_xgXac5c.
- . *Lovestar*. Translated by Victoria Cribb, Seven Stories Press, 2012.
- Mahon, Peter. *Posthumanism: A Guide for the Perplexed*. Bloomsbury Publishing, 2017.
- Marciniak, Paweł. 'Transfictionality'. *Forum of Poetics*, Fall 2015, pp. 80–85, http://fp.amu.edu.pl/wp-content/uploads/2015/12/PMarciniak_Transfictionality_ForumOfPoetics_fall2015.pdf.
- Marsen, Sky. 'Film Review: Advantageous'. *Journal of Evolution and Technology*, vol. 27, no. 1, Feb. 2017, <https://jetpress.org/v27.1/marsen.htm>.
- Mazlish, Bruce. 'The Fourth Discontinuity'. *Technology and Culture*, vol. 8, no. 1, Jan.

- 1967, pp. 1–15, <http://www.jstor.org/stable/3101522>.
- Méra, Brigitte. 'Le Roman Philosophique Balzacien et La Passion de l'absolu'. *L'Annee Balzacienne*, no. 1, 2006, pp. 161–78, <https://www.cairn.info/revue-l-annee-balzacienne-2006-1-page-161.htm>.
- Merrell, Floyd. *Sensing Corporeally: Toward a Posthuman Understanding*. University of Toronto Press, 2003.
- Milani, Silvia. 'Siamo Tutti Cyborg'. *Tom's Hardware*, 20 June 2018, <https://www.tomshw.it/culturapop/ghost-in-the-shell-la-donna-segreta-del-secondo-film/siamo-tutti-cyborg/>.
- Monfort, Anne. 'Après Le Postdramatique: Narration et Fiction Entre Écriture de Plateau et Théâtre Néo-Dramatique'. *Trajectoires. Travaux Des Jeunes Chercheurs Du CIERA*, no. 3, 2009, pp. 1–8, <https://journals.openedition.org/trajectoires/392>.
- Moor, Louise. 'Posture Polémique Ou Polémisation de La Posture? Le Cas de Michel Houellebecq'. *COntEXTES*, no. 10, 2012.
- More, Max. 'Editorial'. *Extropy*, no. 6, Summer 1990, pp. 4–5.
- . 'The Extropian Principles'. *Extropy*, no. 6, Summer 1990, pp. 17–18.
- . 'The Silicon Man by Charles Platt'. *Extropy*, no. 8, Winter -92 1991, pp. 47–48, Silicon Man.
- . 'Transhumanism: Toward a Futurist Philosophy'. *Extropy*, no. 6, Summer 1990, pp. 6–12.
- Morreall, John. 'The Myth of the Omniscient Narrator'. *The Journal of Aesthetics and Art Criticism*, vol. 52, no. 4, 1994, pp. 429–35, https://www.jstor.org/stable/pdf/432030.pdf?casa_token=zMVVg4v1QCQAAAAA:nIhibO8P4q48iD9l6UmWa2soVZOI3LMQengpbMfMqV_m2XHv1oEBsic3D7RWzMYpBeg4Ga9OI3S5wAk9CNeVufooKnRD3ejh37fj0Ooyu_6lqhqWNzE.
- MP-Infinity. 'The Transhuman Taste'. *Extropy*, no. 6, Summer 1990, p. 23.
- Nachez, Michel. *Transhumanisme et Posthumanisme: Nos Futurs... En Mode 'Cyber'?* UPPR Éditions, 2016.
- Nayar, Pramod K. *Posthumanism*. Polity, 2014.
- Nelles, William. 'Omniscience for Atheists: Or, Jane Austen's Infallible Narrator'. *Narrative*, vol. 14, no. 2, 2006, pp. 118–31,

- <http://www.sscnet.ucla.edu/polisci/faculty/chwe/austen/nelles.pdf>.
- Nichols, Steve. 'The Post-Human Movement'. *Games Monthly*, 1988,
<http://web.archive.org/web/20160317205801/http://posthuman.org/page2.html>.
- Njoh Mouelle, Ebénézer. *Quelle Éthique Pour Le Transhumanisme ? Des 'Hommes Augmentés' et Des 'Posthumains', Demain, En Afrique?* L'Harmattan Cameroun, 2018.
- . *Transhumanisme, Marchands de Science et Avenir de l'homme*. L'Harmattan Cameroun, 2017.
- Oshii, Mamoru. *Innocence: Ghost in the Shell 2*. Tōhō; Go Fish Pictures, 2004.
- Oziewicz, Marek. 'Speculative Fiction'. *Oxford Research Encyclopedia of Literature*, Oxford University Press, 29 Mar. 2017,
<https://oxfordre.com/literature/view/10.1093/acrefore/9780190201098.001.0001/acrefore-9780190201098-e-78>.
- Parrinder, Patrick. *Learning from Other Worlds: Estrangement, Cognition, and the Politics of Science Fiction and Utopia*. Liverpool University Press, 2000.
- Pastourmatzi, Domna. 'Science Fiction Literature'. *Post- and Transhumanism: An Introduction*, by Robert Ranisch and Stefan Lorenz Sorgner, Lang, Peter GmbH, 2014, pp. 271–86.
- Pepperell, Robert. *The Post-Human Condition*. Intellect books, 1997.
- . *The Posthuman Condition: Consciousness beyond the Brain*. Intellect books, 2003.
- PL2061. 'Review: Dan Brown's Inferno'. *H+ Magazine*, June 2013,
<https://hplusmagazine.com/2013/06/11/review-dan-browns-inferno/>.
- Plunkett, Adam. *The Contemporary Novel of Ideas Finds Its Footing*. *New Republic*, 13 Mar. 2014, <<http://www.newrepublic.com/article/116650/teju-coles-every-day-thief-and-novel-ideas>>.
- Pressman, Jessica. 'The Posthuman Reader in Postprint Literature: Between Page and Screen'. *Frame*, vol. 28, no. 1, May 2015, pp. 53–69,
https://www.jessicapressman.com/wp-content/uploads/2012/07/Frame-28_1-The-Posthuman-Reader.pdf.
- Prisco, Giulio. 'Book Review: Dan Brown's Inferno'. *H+ Magazine*, May 2013,
<https://www.kurzweilai.net/book-review-dan-browns-inferno>.

- . 'Book Review: The Transhumanist Wager'. *Kurzweil AI*, May 2013,
<https://www.kurzweilai.net/book-review-the-transhumanist-wager>.
- . 'Book Review: *Zendegi*, by Greg Egan'. *H+ Magazine*, Jan. 2011,
<https://hplussmagazine.com/2011/01/31/book-review-zendegi-by-greg-egan/>.
- Rabaté, Jean-Michel. *The Future of Theory*. Blackwell, 2002.
- Rand, Ayn. *Atlas Shrugged*. Signet, 1957.
- Ranisch, R., and Stefan Lorenz Sorgner. *Post- and Transhumanism: An Introduction*.
 Lang, Peter GmbH, 2014.
- Ranisch, Robert. 'Morality'. *Post- and Transhumanism: An Introduction*, by Robert
 Ranisch and Stefan Lorenz Sorgner, Lang, Peter GmbH, 2014, pp. 149–72.
- Regnauld, Arnaud. 'Patchwork Girl de Shelley Jackson, Ou Le Spectre d'une Mémoire
 Dés/Incarnée'. *PostHumans: Frontières, Évolutions, Hybridités*, edited by Elaine
 Després and Hélène Machinal, Presses Universitaires de Rennes, 2014, pp. 73–84.
- Rey, Olivier. *Leurres et Malheurs Du Transhumanisme*. Desclée de Brouwer, 2018.
- Ricoeur, Paul. *Soi-Même Comme Un Autre*. Le Seuil, 1990.
- Rinesi, Marcelo. 'Film Review: *Watchmen*'. *Journal of Evolution and Technology*, vol. 20,
 no. 1, June 2009, <https://jetpress.org/v20/rinesi.htm>.
- Robitaille, Antoine. *Le Nouvel Homme Nouveau. Voyage Dans Les Utopies de La
 Posthumanité*. Boréal, 2007.
- Rockoff, Marcus. 'Literature'. *Post- and Transhumanism: An Introduction*, by Robert
 Ranisch and Stefan Lorenz Sorgner, Lang, Peter GmbH, 2014, pp. 251–70.
- Roodthoof, Dominique. *Cocon!* Théâtre de Liège, 2018.
- Rosendahl Thomsen, Mads. *The New Human in Literature: Posthuman Visions of
 Changes in Body, Mind and Society after 1900*. Bloomsbury, 2013.
- Rowlins, James. 'Michel Houellebecq: The Impossibility of Being an Island'. *Paroles
 Gelées*, vol. 25, no. 1, 2009, pp. 57–72,
<https://escholarship.org/content/qt8h50z8df/qt8h50z8df.pdf>.
- Rutsky, Randolph L. *High Technē: Art and Technology from the Machine Aesthetic to
 the Posthuman*. U of Minnesota Press, 1999.
- Ryerson, James. 'The Philosophical Novel'. *The New York Times*, 20 Jan. 2011,
<https://www.nytimes.com/2011/01/23/books/review/Ryerson->

t.html?rref=collection%2Fbyline%2Fjames-ryerson&action=click&contentCollection=undefined®ion=stream&module=stream_unit&version=search&contentPlacement=1&pgtype=collection&mtrref=www.nytimes.com&gwh=841BB1AE346CB7D9C685C5737466999B&gwt=pay&assetType=REGIWALL.

Saint-Gelais, Richard. *Fictions Transfuges. La Transfictionnalité et Ses Enjeux*. Seuil, 2011.

Salmon, Christian. *Storytelling: La Machine à Fabriquer Des Histoires et à Formater Les Esprits*. La Découverte, 2013.

Sandberg, Anders. *Transhuman Principles*. 1996,
http://www.aleph.se/Trans/Cultural/Philosophy/Transhumanist_Principles.html#about.

Sapiro, Gisèle. *L'inquiétante Dérive Des Intellectuels Médiatiques*. Le Monde, 16 Jan. 2016, https://www.lemonde.fr/idees/article/2016/01/16/la-revolte-des-clerics-contre-les-demunis_4848388_3232.html.

Scarpa, Marie. 'Dialogisme'. *Le Lexique Socius*, edited by Anthony Glinoyer and Denis Saint-Amand, 2016, <http://ressources-socius.info/index.php/lexique/21-lexique/64-dialogisme>.

Schaeffer, Jean-Marie. *Pourquoi La Fiction*. Seuil, 1999.

Schneider, Susan. *Science Fiction and Philosophy: From Time Travel to Superintelligence*. John Wiley & Sons, 2016.

Seed, David. *Science Fiction: A Very Short Introduction*. Oxford University Press, 2011.

Seidel, Asher. *Immortal Passage: Philosophical Speculations on Posthuman Evolution*. Lexington Books, 2010.

---. *Inhuman Thoughts: Philosophical Explorations of Posthumanity*. Lexington Books, 2008.

Serres, Michel. *Hominescence*. Le Pommier, 2000.

Shanahan, Murray. *The Technological Singularity*. MIT press, 2015.

Sheehan, Michael J. *Word Parts Dictionary: Standard and Reverse Listings of Prefixes, Suffixes, Roots and Combining Forms*. McFarland, 2000.

Shep, Sydney J. 'Book'. *Literature Now: Key Terms and Methodes for Literary History*,

- by Sascha Bru et al., Edinburgh University Press.
- Sibilia, Paula. *El Hombre Postorgánico: Cuerpo, Subjetividad y Tecnologías Digitales*. Fondo de cultura económica, 2005.
- Simon, Bart. *Introduction: Toward a Critique of Posthuman Futures*. Winter 2003, pp. 1–9.
- Šmihula, Daniel. 'Long Waves of Technological Innovations'. *Studia Politica Slovaca*, vol. 4, no. 2, 2011, pp. 50–68.
- Sommers, Stephen. *Van Helsing*. Universal, 2004.
- Sorgner, Stefan Lorenz. 'Pedigrees'. *Post- and Transhumanism: An Introduction*, by Robert Ranisch and Stefan Lorenz Sorgner, Lang, Peter GmbH, 2014, pp. 29–48.
- Stengers, Isabelle. 'Science-Fiction et Expérimentation'. *Philosophie et Science-Fiction*, by Gilbert Hottois, Vrin, 2000, pp. 95–114.
- Sterling, Bruce. 'Cicada Queen'. *Universe 13*, edited by Terry Carr, Doubleday, 1983.
- . 'Slipstream'. *SF Eye*, no. 5, July 1989,
<https://www.journalscape.com/jlundberg/page2>.
- Stone Allucquère, Rosanne. *The War of Desire and Technology at the Close of the Mechanical Age*. MIT press, 1995.
- Suleiman, Susan Rubin. *Authoritarian Fictions: The Ideological Novel as a Literary Genre*. Princeton University Press, 1993.
- Suvin, Darko. *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre*. Yale University Press, 1979.
- . *Pour Une Poétique de La Science-Fiction*. P U Québec, 1977.
- Suvin, Darko, and Jacques Favier. 'La Science-Fiction et La Jungle Des Genres. Un Voyage Extraordinaire'. *Littérature*, vol. 10, no. 2, 1973, pp. 98–113,
https://www.persee.fr/doc/litt_0047-4800_1973_num_10_2_1071.
- Sweeney, Carole. "'Le Mot Déclin Est Presque Trop Doux": Michel Houellebecq's (Euro) Déclinisme'. *Modern & Contemporary France*, vol. 27, no. 1, 2019, pp. 45–59.
- . *Michel Houellebecq and the Literature of Despair*. Bloomsbury, 2013.
- Terence, Mathieu. *Le Transhumanisme Est Un Intégrisme*. Éditions du Cerf, 2016.
- The Fable of the Dragon-Tyrant*. 2005, <https://nickbostrom.com/fable/dragon.pdf>.
- Thweatt-Bates, Jeanine. *Cyborg Selves: A Theological Anthropology of the Posthuman*.

- Routledge, 2016.
- Tirosh-Samuelson, Hava. 'Religion'. *Post- and Transhumanism: An Introduction*, by Robert Ranisch and Stefan Lorenz Sorgner, Lang, Peter GmbH, 2014, pp. 49–72.
- Toffoletti, Kim. *Cyborgs and Barbie Dolls: Feminism, Popular Culture and the Posthuman Body*. IB Tauris, 2007.
- 'Transhumanist FAQ (v. 3.0)'. *Humanity+*, 2017, <https://humanityplus.org/philosophy/transhumanist-faq/>.
- Tsing, Anna. *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton University Press, 2015.
- Ulin, David. 'Books 2012'. *Los Angeles Times*, 14 Dec. 2012, <https://www.latimes.com/books/la-xpm-2012-dec-14-la-ca-jc-best-books-2012-20121216-story.html>.
- Usul2000. *Le Philosophe (BHL)*. Youtube, 2014, https://youtu.be/-pGTU-t_Duw.
- Van Wesemael, Sabine. *Michel Houellebecq: Le Plaisir Du Texte*. L'Harmattan, 2005.
- Vas-Deyres, Natacha. *Ces Français Qui Ont Écrit Demain. Utopie, Anticipation et Science-Fiction Au XXe Siècle*. Honoré Champion, 2013.
- Versins, Pierre. *Encyclopédie de l'utopie, Des Voyages Extraordinaires et de La Science-Fiction*. L'Age d'Homme, 1972.
- Vint, Sherryl. *Bodies of Tomorrow: Technology, Subjectivity, Science Fiction*. University of Toronto Press, 2007.
- Vita-More, Natasha. 'Aesthetics: Bringing the Arts & Design into the Discussion of Transhumanism'. *The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future*, 2013, pp. 18–27.
- . *The Extropic Art Manifesto*. 1997, <https://391.org/manifestos/1997-extropic-art-manifesto-natasha-vita-more/>.
- . *Transhumanist Arts Statement*. 1998 1982, <https://web.archive.org/web/19980523093459/http://www.extropic-art.com/transart.htm>.
- Vultur, Ioana. 'La Communication Littéraire Selon Paul Ricœur'. *Poétique*, vol. 2, no. 166, 2011, pp. 241–49.

- Waldby, Cathy. *The Visible Human Project: Informatic Bodies and Posthuman Medicine*. Psychology Press, 2000.
- Wallace, Jeff. *DH Lawrence, Science and the Posthuman*. Palgrave Macmillan, 2005.
- Waters, Brent. *From Human to Posthuman: Christian Theology and Technology in a Postmodern World*. Ashgate Publishing, Ltd., 2013.
- Weil, Michèle. 'Comment Repérer et Définir Le Topos?' *Topiques, Études Satoriennes*, vol. 2, 2016, pp. 123–37.
- Weiss, Thomas D. 'Nature'. *Post- and Transhumanism: An Introduction*, by Robert Ranisch and Stefan Lorenz Sorgner, Lang, Peter GmbH, 2014, pp. 185–200.
- Williams, Merle A. *Henry James and the Philosophical Novel*. Cambridge University Press, 2009.
- Wolfe, Cary. *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory*. University of Chicago Press, 2003.
- . 'In Search of Post-Humanist Theory: The Second-Order Cybernetics of Maturana and Varela'. *Cultural Critique*, no. 30, 1995, pp. 33–70.
- . *What Is Posthumanism?* University of Minnesota Press, 2010.
- Wolff, Francis. *Trois Utopies Contemporaines*. Fayard, 2017.

APPENDICES

1 – Correspondence with Andri Snær Magnason

2 – List of publications

Appendix 1: Correspondence with Andri Snær Magnason⁵

Carole Guesse: I have noticed that the English and French translations of your novel *LoveStar* show great discrepancies: some sentences and paragraphs change place while other simply disappear. Could you provide me with any information regarding the translation process, such as whether you supervised one of these translations, for example? Would you say that one of them closer to the original?

Andri Snær Magnason: I would say that both versions of the book are true as I worked on both versions, Seven Stories Press wanted a faster pace so they had an editor's work on the book that came with some suggestions that I approved and I added some of my own as happens when a story is opened up for creativity again. The French version is translated directly from the Icelandic original version with very limited or no changes at all. Eric Boury, the French translator, is a great friend of mine – he is very good and I believe that his version is very true to the original Icelandic version. He is a top-quality translator and we spoke in length about many translational issues. So you can say that the French version is most true – but I accepted some editing on the English version without that being out of my comfort zone. I have worked so much in theater and in the archives of the Árni Magnússon Institute in Iceland that I have started to appreciate different versions of my work!

C.G.: It is indeed an unusual situation. I was also wondering about the original, Icelandic formulation you had for “cordless man”. In English and French, ‘man’ / ‘homme’ means

⁵ This correspondence was held between March 2017 and October 2019.

both 'human' (in general) and 'male human'. Does the Icelandic word you used for "cordless man" have the same ambiguous meaning?

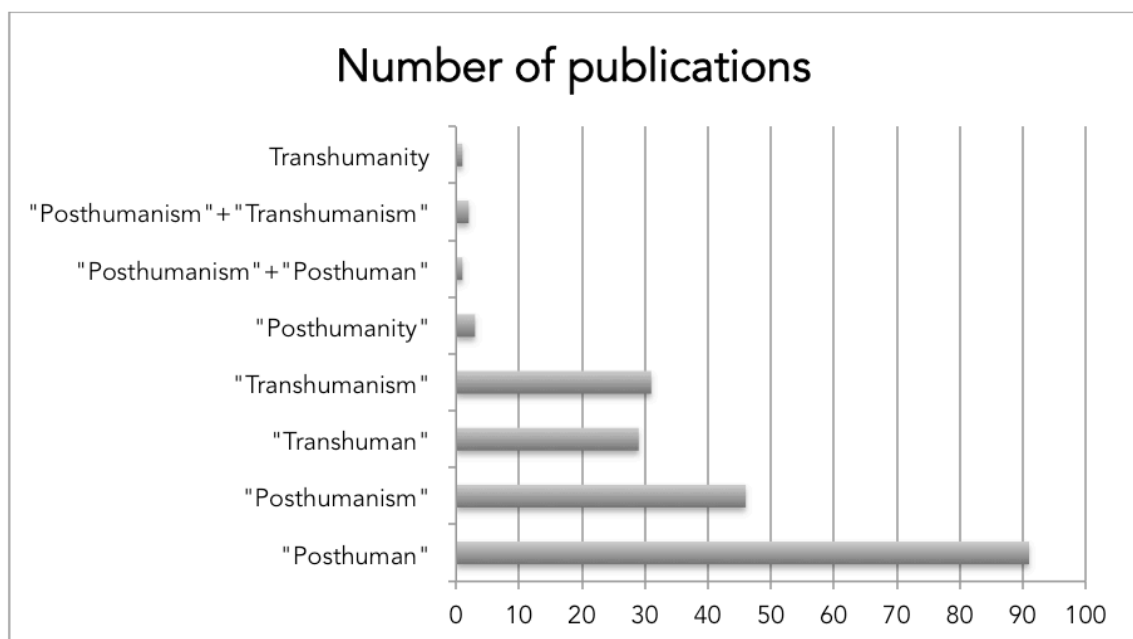
A.S.M.: In Icelandic I use the word "*handfrjáls nútímamaður*", for the "cordless man" – at the time of writing "hands-free" equipment was being introduced and the first people talking to themselves on the street were being seen, and I saw this as a norm for the future. So the word also contained the word "freedom" and *nútímamaður* is modern man, and it is as in many other languages – 'man' referring to man and woman – but, of course, in a dominant male world, it is always more man than woman, even though in dictionaries it is both.

C.G.: Okay. I have another crucial question concerning the original version of *LoveStar*. In the French version, the last sentence [Graine devient arbre.] is written without quotation marks, but in the American version, ["A seed becomes a forest."], it appears with quotation marks. Could you tell me how it was originally?

A.S.M.: So in Icelandic it is between quotation marks, but who says this and where it comes from is left open.

Appendix 2: List of Publications

The list on the following page results from a personal data-gathering effort whose main objective was to get a sense of the popularity of each of the neologisms that have been mentioned in this study. It should not be considered an attempt at exhaustiveness, for the information sought is merely proportional. Therefore, it is based on a sample (works listed on *Google Books*) and has been constituted according to the following criteria: having at least one of the terms 'posthuman', 'posthumanism', 'transhumanism', 'transhuman', 'posthumanity' or 'transhumanity' in the title, being in English, being a complete work such as a monograph, a comic book, a collection, an anthology, a journal, etc. and having identifiable author, publisher and year of publication. Regarding the sole object of my enquiry, it has provided the following data:



Year	Title	Author(s)	Publisher	Type	Claimed topic
1952	<i>De Aneunysmatibus: Opus Posthuman</i>	Lancisi, Giovanni Maria	Macmillan	Book	Posthuman
1978	<i>Immortal: short novels of the transhuman future</i>	Dann, Jack	HarperCollins	Roman	Transhuman
1989	<i>Are You a Transhuman?: Monitoring and Stimulating Your Personal Rate of Growth in a Rapidly Changing World</i>	FM-2030	Warner Books	Book	Transhuman
1990	<i>Great Mambo Chicken and the Transhuman Condition: Science Slightly Over the Edge</i>	Regis, Ed	Addison-Wesley	Book	Transhuman
1992	<i>Post human</i>	Deitch, Jeffrey & Dan Friedman	FAE Musée d'Art Contemporain	Art Book	Posthuman
1993	<i>The End of Education: Toward Posthumanism</i>	William Spanos	U of Minnesota P	Book	Posthumanism
1995	<i>Modernism and the Posthumanist Subject: The Architecture of Hannes Meyer and Ludwig Hilberseimer</i>	Hays, K. Michael	MIT P	Book	Posthumanism
1995	<i>The Post-human Condition</i>	Pepperell, Robert	Intellect Books	Book	Posthuman
1995	<i>Posthuman Bodies</i>	Halberstam, Judith M. & Ira Livingston	Indiana U P	Book	Posthuman
1998	<i>Last Flesh: Life in the Transhuman Era</i>	Dewdney, Christopher	HarperCollins	Book	Transhuman
1998	<i>Virtual Futures: Cyberotics, Technology and Posthuman Pragmatism</i>	Joan Broadhurst Dixon, Eric Cassidy	Routledge	Book	Posthuman
1998	<i>Posthuman: Identity at the Close of the Mechanical Age</i>	Amtower, Richard	Columbia State U	Book	Posthuman
1999	<i>High Techné: Art and Technology from the Machine Aesthetic to the Posthuman</i>	Rutsky, R.L.	U of Minnesota P	Book	Posthuman
1999	<i>How we became Posthuman: Virtual Bodies in in Cybernetics, Literature, and Informatics</i>	Hayles, N. Katherine	U of Chicago P	Book	Posthuman
2000	<i>Posthumanism</i>	Badmington, Neil	Palgrave Macmillan	Book	Posthumanism
2000	<i>Posthuman: The Art of Joachim Luetke</i>	Thienemanns, K.	Verlag GmbH	Art book	Posthuman
2000	<i>The Visible Human Project: Informatic Bodies and Posthuman Medicine</i>	Waldby, Catherine	Routledge	Book	Posthuman

2000	<i>Cyborg Citizen: Politics in the Posthuman Age</i>	Hables Gray, Chris	Routledge	Book	Posthuman
2000	<i>Still Too Human: The Limits and Limitations of the Posthuman in Contemporary Visual Culture</i>	Beebe, Robert	Duke U	Book	Posthuman
2001	<i>Doctor Tandy's First Guide to Life Extension and Transhumanity</i>	Tandy, Charles et al.	Universal publishers	Book	Transhumanity
2001	<i>Humanity Sucks: Zen and the Art of Transhuman Evolution: Or Charles Darwin Meets the Buddha at Woodstock</i>	Garland, Ron	Infinity P	Book	Transhuman
2002	<i>The Coding of Posthumanism: Mut(ill)ation, Trauma, and Infection in Contemporary Speculative Fiction</i>	Lucas, Gerald R.	U of South Florida	Book	Posthumanism
2002	<i>Representations of the Post/human: Monsters, Aliens and Others in Popular Culture</i>	Graham, Elaine L.	Manchester U P	Book	Posthuman
2002	<i>Supermen: Tales of the Posthuman Future</i>	Dozois, Gardner	Macmillan	Anthology	Posthuman
2002	<i>Fantasies of Fetishism: From Decadence to the Post-human</i>	Fernbach, Amanda	Edinburgh U P	Book	Posthuman
2003	<i>Transhuman Space: Deep Beyond</i>	Pulver, David	Psi	Roman	Transhuman
2003	<i>From Kant to Deleuze: Transhuman Aesthetics</i>	Urpeth, Jim	Macmillan	Book	Transhuman
2003	<i>Cyberidentities: Posthumanism in the Context of Cyberpunk Fiction</i>	Foster, Ben	Southern Illinois U Carbondale	Book	Posthumanism
2003	<i>Sensing Corporeally: Toward a Posthuman Understanding</i>	Merrell, Floyd	U of Toronto P	Book	Posthuman
2003	<i>Our Posthuman Future: Consequences of the Biotechnology Revolution</i>	Fukuyama, Francis	Picador	Book	Posthuman
2003	<i>Org's Odyssey: A Tale of Post-Human Earth</i>	Otterland, Duke	iUniverse	Roman	Posthuman
2003	<i>The Posthuman Condition: Consciousness Beyond the Brain</i>	Pepperell, Robert	Intellect Books	Book	Posthuman
2004	<i>Avatar Bodies: A Tantra for Posthumanism</i>	Weinstone, Ann	U of Minnesota P	Book	Posthumanism
2004	<i>Alien Chic: Posthumanism and the Other Within</i>	Badmington, Neil	Routledge	Book	Posthumanism
2004	<i>The Rat in Art: Conrad Botes, Pop, and the Posthuman</i>	Jamal, Ashraf	Erdmann Contemporary	Art book	Posthuman
2005	<i>The Souls of Cyberfolk: Posthumanism as Vernacular Theory</i>	Foster, Thomas	U of Minnesota P	Book	Posthumanism

			Łódzkie		
2005	<i>Posthumanism Or New Humanism: Man in Contemporary Art</i>	Sztabinski, Grzegorz	Towarzystwo Naukowe	Book	Posthumanism
2005	<i>Technophobic! Science Fiction Visions of Posthuman Technology</i>	Dinello, Daniel	U of Texas P	Book	Posthuman
2005	<i>D.H. Lawrence, Science and the Posthuman</i>	Wallace, Jeff	Palgrave Macmillan	Book	Posthuman
2006	<i>Designer Evolution: A Transhumanist Manifesto</i>	Young, Simon	Prometheus Books	Book	Transhumanism
2006	<i>The Path to Posthumanity: 21st Century Technology and Its Radical Implications for Mind, Society and Reality</i>	Goertzel, Ben & Stephan Vladimir Bugaj	Academai P Bethasda	Book	Posthumanity
2006	<i>What is a Human, Anyway? Representations of Posthumanism in Thomas Pynchon's "V." and William Gibson's "Neuromancer".</i>	Reilly, Geza Arthur George	U of Manitoba	Book	Posthumanism
2006	<i>Cyberculture, Cyborgs and Science Fiction: Consciousness and the Posthuman</i>	Haney II, William S.	Rodopi	Book	Posthuman
2006	<i>The Future of Post-human Space-time: Conceiving a Better Way to Understand Space and Time</i>	Baofu, Peter	Peter Lang Pub Inc.	Book	Posthuman
2006	<i>Minds and Machines: Creativity, Technology, and the Posthuman in Electronic Musical Idioms</i>	Brett, J. Thomas	NYU	Book	Posthuman
2006	<i>The Prosthetic Impulse: From a Posthuman Present to a Biocultural Future</i>	Smith, Marquard & Joanne Morra	MIT P	Book	Posthuman
2007	<i>Cyborgs and Barbie Dolls: Feminism, Popular Culture and the Posthuman Body</i>	Toffoletti, Kim	I.B. Tauris	Book	Posthuman
2008	<i>Medical Enhancement and Posthumanity</i>	Gordijn, Bert & Ruth Chadwick	Springer	Book	Posthumanity
2008	<i>Posthumanism in Harry Potter: Hallows, Horcruxes and Humanism</i>	Lareau, Kristina Jean	Simmons College	Book	Posthumanism
2008	<i>Animal Subjects: An Ethical Reader in a Posthuman World</i>	Castricano, Jodey P	Wilfrid Laurier U	Book	Posthuman
2008	<i>Corpus Modificatus: Transmutational Belonging and Posthuman</i>	Massie, Raya	U of Tech, Sidney	Book	Posthuman

Becoming

2008	<i>Plugged in: Technology, Rhetoric, and Culture in a Posthuman Age</i>	Worsham, Lynn & Gary A. Olson	Hampton P	Book	Posthuman
2008	<i>Posthuman Metamorphosis: Narrative and Systems</i>	Clarke, Bruce	Fordham U P	Book	Posthuman
2008	<i>The Future of Post-Human Knowledge: A Preface to a New Theory of Methodology and Ontology</i>	Baofu, Peter	Chandos P	Book	Posthuman
2008	<i>The Future of Post-Human Mathematical Logic</i>	Baofu, Peter	Cambridge Scholar P	Book	Posthuman
2008	<i>The Future of Post-Human Unconsciousness: A Preface to a New Theory of Anomalous Experience</i>	Baofu, Peter	Cambridge Scholar P	Book	Posthuman
2009	<i>Rapture: A Raucous Tour of Cloning, Transhumanism, and the New Era of Immortality</i>	Alexander, Brian	Basic Books	Book	Transhumanism
2009	<i>Transhuman</i>	Van Name, Mark L. & T.K.F. Weiskopf	Baen	Roman	Transhuman
2009	<i>Inhuman Thoughts: Philosophical Explorations of Posthumanity</i>	Seidel, Asher	Lexington Books	Book	Posthumanity
2009	<i>The Paradox of the Posthuman: Science Fiction/Techno-Horror Films and Visual Media</i>	Clarke, Julie	VDM P	Book	Posthuman
2009	<i>Beyond Blood Identities: Posthumanity in the Twenty-first Century</i>	Hill, Jason D.	Rowman & Littlefield	Book	Posthuman
2009	<i>The Posthuman Dada Guide: tzara and lenin play chess</i>	Codrescu, Andrei	Princeton U P	Book	Posthuman
2009	<i>Human Rights in a Post Human World: Critical Essays</i>	Baxi, Upendra	Oxford U P	Book	Posthuman
2009	<i>Cy-Borges: Memories of the Posthuman in the Work of Jorge Luis Borges</i>	Herbrechter, Stefan & Ivan Callus	Lewisburg Bucknell UP	Book	Posthuman
2009	<i>The Mutant Flesh: Fabrication of a Posthuman</i>	Baron, Denis	Distributed Art Pub Incorporated	Book	Posthuman
2009	<i>Globalization and the Posthuman</i>	Haney II, William S.	Cambridge Scholar P	Book	Posthuman
2009	<i>The Future of Post-Human Engineering: A Preface to a New Theory of Technology</i>	Baofu, Peter	Cambridge Scholar P	Book	Posthuman

2009	<i>The Future of Post-Human Creative Thinking</i>	Baofu, Peter	Cambridge Scholar P	Book	Posthuman
2009	<i>The Future of Post-Human Mass Media: A Preface to a New Theory of Communication</i>	Baofu, Peter	Cambridge Scholar P	Book	Posthuman
2009	<i>The Future of Post-Human Martial Arts</i>	Baofu, Peter	Cambridge Scholar P	Book	Posthuman
2010	<i>Kolašin, Lovčen: From Human to Trans-human : Architect Marko Mušič</i>	Košir, Fedja	SASA	Book	Transhuman
2010	<i>What is Posthumanism?</i>	Wolfe, Cary	U of Minnesota P	Book	Posthumanism
2010	<i>Tokyo Cyberpunk: Posthumanism in Japanese Visual Culture</i>	Brown, Steven T.	Palgrave Macmillan	Book	Posthumanism
2010	<i>Educating the Posthuman: Biosciences, Fiction, and Curriculum Studies</i>	Weaver, John A.	Sense Publisher	Book	Posthuman
2010	<i>Education Out of Bounds: Reimagining Cultural Studies for a Posthuman Age</i>	Lewis Tyson E. & Kahn, Richard	Palgrave Macmillan	Book	Posthuman
2010	<i>Immortal Passage: Philosophical Speculations on Posthuman Evolution</i>	Seidel, Asher	Lexington Books	Book	Posthuman
2010	<i>Posthuman Suffering and the Technological Embrace</i>	Miccoli, Anthony	Lexington Books	Book	Posthuman
2010	<i>Faust and the Posthuman Condition</i>	Grimaldi, John T.	Duke U	Book	Posthuman
2010	<i>The Future of Post-Human Formal Science: A Preface to a New Theory of Abstraction and Publication</i>	Baofu, Peter	Cambridge Scholar P	Book	Posthuman
2010	<i>The Future of Post-Human War and Peace: A Preface to a New Theory of Aggression and Pacificity</i>	Baofu, Peter	Cambridge Scholar P	Book	Posthuman
2011	<i>H+/-: Transhumanism and Its Critics</i>	R. Hansel, Gregory & William Grassie	Xlibris Corporation	Book	Transhumanism
2011	<i>Transhumanism and Transcendence: Christian Hope in an Age of Technological Enhancement</i>	Cole-Turner, Ronald	Georgetown U P	Book	Transhumanism
2011	<i>Trans-Human</i>	Simpson, David	iUniverse	Roman	Transhuman
2011	<i>From Transgender to Transhuman: A Manifesto on the Freedom of Form</i>	Rothblatt, Martine	Princeton Architectural Press	Book	Transhuman

2011	<i>The Human Animal: Posthumanism in John Steinbeck's Cannery Row</i>	Rohwedder, CeCe	North Dakota State U	Book	Posthumanism
2011	<i>Posthuman International Relations: Complexity, Ecologism and Global Politics</i>	Cudworth, Erika & Stephen Hobden	Zed Books	Book	Posthuman
2011	<i>Better Off Dead: The Evolution of the Zombie as Post-human</i>	Christie, Déborah & Sarah Juliet Lauro	Fordham U P	Book	Posthuman
2011	<i>The Future of Post-Human Education: A Preface to a New Theory of Teaching and Learning</i>	Baofu, Peter	Cambridge Scholar P	Book	Posthuman
2012	<i>Transhumanism and Society: The Social Debate over Human Enhancement</i>	Lilley, Stephen	Springer	Book	Transhumanism
2012	<i>Building Better Humans?: Refocusing the Debate on Transhumanism</i>	Tirosh-Samuelson, Hava & Kenneth L. Mossman	Peter Lang Pub Inc.	Book	Transhumanism
2012	<i>Transhumanism: A Grimoire of Alchemical Agendas</i>	P. Farrell, Joseph & Scott D. De Hart	Feral House	Book	Transhumanism
2012	<i>Beyond Human: From Animality to Transhumanism</i>	Blake, Charlie & Claire Molloy, Steven Shakespeare	Continuum	Book	Transhumanism
2012	<i>Viroid Life: Perspectives on Nietzsche and the Transhuman Condition</i>	Pearson, Keith Ansell	Routledge	Book	Transhuman
2012	<i>Trans-human express</i>	Kremo, Lukha B.	Kipple Officina Libraria	Roman	Transhuman
2012	<i>Transhumanist Art</i>	Russell, Jesse & Ronald Cohn	Self-published	Book	Transhuman
2012	<i>Phenomenology and Posthumanism: The Twenty-sixth Annual Symposium of the Simon Silverman Phenomenology Center : Lectures</i>	Caputo ,John D. & Trish Glazebrook, Lawrence Vogel	Simon Silverman Phenomenology Center	Book	Posthumanism
2012	<i>Posthumanist Shakespeares</i>	Herbrechter, Stefan & Ivan Callus	Palgrave Macmillan	Book	Posthumanism
2012	<i>The Posthuman Condition: Ethics, Aesthetics and Politics of Biotechnological Challenges</i>	Lippert-Rasmussen, Kasper et al.	U of Aarhus P	Book	Posthuman

2012	Hot Spots: American Foreign Policy in a Post-Human-Rights World	Etzioni, Amitai	Transaction Publishers	Book	Posthuman				
2012	Post-Human	Simpson, David	Self-published	Roman	Posthuman				
2012	The Future of Post-Human Migration: A Preface to a New Theory of Sameness, Otherness and Identity	Baofu, Peter	Cambridge Scholar P	Book	Posthuman				
2012	The Future of Post-Human Semantics: A Preface to a New Theory of Internality and Externality	Baofu, Peter	Cambridge Scholar P	Book	Posthuman				
2012	The Future of Post-Human Performing Arts: A Preface to a New Theory of the Body and its Presence	Baofu, Peter	Cambridge Scholar P	Book	Posthuman				
2012	The Future of Post-Human Transportation: A Preface to a New Theory of Networks and Operations	Baofu, Peter	Cambridge Scholar P	Book	Posthuman				
2012	Posthuman Ethics: Embodiment and Cultural Theory	MacCormack, Patricia	Ashgate	Book	Posthuman				
2012	Post human conditions	Harkaway, Nick et al.	Arc (1.2)	Journal issue	Posthuman				
2013	The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future	More, Max & Natasha Vita-More	Wiley-Blackwell	Book	Transhumanism				
2013	Singularities: Technoculture, Transhumanism, and Science Fiction in the Twenty-first Century	Raulerson, Joshua	Liverpool U P	Book	Transhumanism				
2013	How Black Ops Military Stopped Ascension: Transhumanism - End of the Human Era	Jenkins, Sam	AuthorHouse	Book	Transhumanism				
2013	Rhetoric and Ethics in the Cybernetic Age: The Transhuman Condition	Pruchnic, Jeff	Routledge	Book	Transhuman				
2013	Eclipse Phase - Transhuman	Cross, Brian & Adam Jury	Posthuman Studios	Book	Transhuman				
2013	The Transhumanist Wager	Istvan, Zoltan	Futurity Imagine Media LLC	Roman	Transhuman				
2013	The Victories: Transhuman Part 1-5	Avon Oeming, Michael	Dark Horse Comics	Comic book	Transhuman				
2013	The Face in the Mirror: A Transhuman Identity Crisis	Brown, T.R.	Self-published	Roman	Transhuman				
2013	Voiceless Bodies: Feminism, Disability, Posthumanism	Clark, Emily	U of Wisconsin	Thesis	Posthumanism				
2013	Posthumanism	Nayar, Pramod K.	Polity P	Book	Posthumanism				

2013	Corporeal Ontology: Merleau-Ponty, Flesh, and Posthumanism	McBlane, Angus	Cardiff U	Book	Posthumanism
2013	Posthumanism: A Critical Analysis	Herbrechter, Stefan	Bloomsbury	Book	Posthumanism
2013	A Genealogy of Cyborgothic: Aesthetics and Ethics in the Age of Posthumanism	Yi, Dongshin	Routledge	Book	Posthumanism
2013	Human Nature in an Age of Biotechnology: The Case for Mediated Posthumanism	Sharon, Tamar	Springer	Book	Posthumanism
2013	Posthuman Personhood	Wennemann, Daryl J.	U P of America	Book	Posthuman
2013	Prophets of the Posthuman: American Fiction, Biotechnology, and the Ethics of Personhood	Bieber Lake, Christina P	U of Notre Dame	Book	Posthuman
2013	Universes Without Us: Posthuman Cosmologies in American Literature	A. Taylor, Matthew	U of Minnesota P	Book	Posthuman
2013	A Zoology for the Posthuman: The Cyborg in Film and Literature	Schaab, Benjamin	Textkontor Verlag	Book	Posthuman
2013	Architectural Theories of the Environment: Posthuman Territory	Harrison, Ariane L.	Routledge	Book	Posthuman
2013	Posthuman Blues: Volume I (2003 - 2004) - Volume 1	Tonnies, Mac	Redstar Books	Anthology	Posthuman
2013	Abandoned Futures: A Journey to the Posthuman World	Lam, Tong	Pro-Actif Communications	Book	Posthuman
2013	The Posthuman	Braidotti, Rosi	Polity P	Book	Posthuman
2013	The Future of Post-Human Sports: Towards a New Theory of Training and Winning	Baofu, Peter	Cambridge Scholar P	Book	Posthuman
2013	From Human to Posthuman: Christian Theology and Technology in a Postmodern World	Waters, Brent	Ashgate	Book	Posthuman
2013	Cyborg Selves: A Theological Anthropology of the Posthuman	Thweatt-Bates, Jeanine	Ashgate	Book	Posthuman
2014	Religion and Transhumanism: The Unknown Future of Human Enhancement	Mercer, Calvin & Tracy J. Trothen	Praeger Frederick A	Book	Transhumanism
2014	Transhumanism and the Body: The World Religions Speak	Mercer, Calvin & Derek F. Maher	Palgrave Macmillan	Book	Transhumanism
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2014	Sex and the Posthuman Condition	Hauskeller, Michael	Palgrave Macmillan	Book	Posthuman
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2014	Thinking Italian Animals: Human and Posthuman in Modern Italian Literature and Film	Amberson, Deborah & Elena Past	Palgrave Macmillan	Book	Posthuman
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2014	Exits to the Posthuman Future	Kroker, Arthur	John Wiley & Sons	Book	Posthuman
2014	Post Human	Nall, Tristan	Hound Comics, Inc.	Comic book	Posthuman

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2014	The Ashgate Research Companion to Posthuman Dialogues in International Relations	Cudworth, Erika et al.	Ashgate	Book	Posthuman
2014	Post- and Transhumanism: An Introduction	Ranisch, Robert & Stefan L. Sorgner	Peter Lang	Book	Post/Transhumanism
2015	Transcendence: The Disinformation Encyclopedia of Transhumanism and the Singularity	Sirius, R. U. & Jay Cornell	Red Wheel/Weiser	Book	Transhumanism
2015	Transhumanism: History And Birth Of Manmade Life	Roseman, Hilarie	Self-published	Book	Transhumanism
2015	Robot Zombies: Transhumanism and the Robot Revolution	Haze, Xaviant & Estrella Eguino	Adventures Ulimit. P	Book	Transhumanism
2015	Transcend the Flesh: Transhumanism debate	Mazan, Tobiasz	Self-published	Book	Transhumanism
2015	A Portrait of a Visionary Trans Human and His Work	Katz, Benjamin	Xilbris	Book	Transhuman
2015	The Transhuman Antihero: Paradoxical Protagonists of Speculative Fiction from Mary Shelley to Richard Morgan	Michael Grantham	McFarland and co.	Book	Transhuman
2015	MARZENA Transhuman Ambrosia	Martel, K.T.	HML Press	Roman	Transhuman
2015	TRANSHUMAN: Volume 1 : The Deconstruction of Hu Ying Chao	Moroney, Laurence	Self-published	Roman	Transhuman
2015	The Palgrave Handbook of Posthumanism in Film and Television	Hauskeller, Michael & Thomas D. Philbeck, Curtis D. Carbonell	Palgrave Macmillan	Book	Posthumanism
2015	Modernist Ethics and Posthumanism	Ryan, Derek & Mark West	Duke U P	Book	Posthumanism
2015	Reading Posthumanism: Collected Essays 14fa487	Welsh, Timothy	Self-published	Book	Posthumanism
2015	Posthumanism	Peters, Victoria	Blurb, Inc.	Book	Posthumanism
2015	The Hidden God: Pragmatism and Posthumanism in American Thought	White, Ryan	Columbia U P	Book	Posthumanism
2015	Writing Posthumanism, Posthuman Writing	Dobrin, Sidney I.	Parlor P	Book	Posthuman(ism)
2015	Parables of the Posthuman: Digital Realities, Gaming, and the Player Experience	Boulter, Jonathan	Wayne State U P	Book	Posthuman
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2015	<i>Deus Ex Machina: Biopunk, Transhumanism, and Posthumanism</i>	Andracki, Coleman	LULU P	Book	Post/Transhumanism	
2016	<i>Mythologies of Transhumanism</i>	Hauskeller, Michael	Springer	Book	Transhumanism	
2016	<i>Carnal Anomaly: Transhuman Form and Flesh</i>	Lander, Maxwell	ThreeL Media	Art book	Transhuman	
2016	<i>Postcolonialism, Posthumanism and Political Ontology</i>	Jackson, Mark	Taylor and Francis Group	Book	Posthumanism	
2016	<i>Posthumanism and the Massive Open Online Course: Contaminating the Subject of Global Education</i>	Knox, Jeremy	Routledge	Book	Posthumanism	
2016	<i>Renaissance Posthumanism</i>	Campana, Joseph & Maisano Scott	Fordham U P	Book	Posthumanism	
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2017	<i>Nietzsche and Transhumanism: Precursor or Enemy?</i>	Tuncel, Yunus	Cambridge Scholars P	Book	Transhumanism	
2017	<i>Simak, The Transhuman</i>	Jodorowsky, Alejandro et al.	Humanoids Inc.	Comic book	Transhuman	
2017	<i>Posthumanism : Anthropological Insights</i>	Smart, Alan; Smart, Josephine	U Toronto P	Book	Posthumanism	
2017	<i>Critical Posthumanism and Planetary Futures</i>	Banerji, Debashish; Paranjape, Makarand	Springer	Book	Posthumanism	
2017	<i>Audiovisual Posthumanism</i>	Sampanikou, Evi D	Cambridge Scholars P	Book	Posthumanism	

2017	<i>Posthumanism, A Guide for the Perplexed</i>	Mahon, Peter	Bloomsbury	Book	Posthumanism
2018	<i>Transhumanism: What Is It?</i>	Vita-More, Natasha	R R BOWKER LLC	Book	Transhumanism
2018	<i>Posthumanism in Young Adult Fiction: Fiding Humanity in a Posthuman World</i>	Tarr, Anita; White, Donna R	U P of Mississippi	Book	Posthumanism
2018	<i>European Posthumanism</i>	Herbrechter, Stefan; Callus, Ivan; Rossini, Manuela	Routledge	Book	Posthumanism
2018	<i>Posthumanism in the Age of Humanism: Mind, Matter, and the Life Sciences after Kant</i>	Landgraf, Edgar; Trop, Gabriel; Weatherby, Leif	Bloomsbury	Book	Posthumanism
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2019	<i>The Transhumanism Handbook</i>	Lee, Newton	Springer	Book	Transhumanism
2019	<i>Transhumanism, Nature, and the Ends of Science: A Critique of Technoscience</i>	Froderman, Robert	Routledge	Book	Transhumanism
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2019	<i>Transhumanism and the Image of God: Today's Technology and the Futur of Christian Discipleship</i>	Shatzer, Jacob	IVP Academic	Book	Transhumanism
2019	<i>Handbook of Research on Learning in the Age of Transhumanism</i>	Sisman-Ugur; Serap; Kurubacak; Gulsun	IGI Global	Book	Transhumanism
2019	<i>Black Bodies and Transhuman Realities : Scientifically Modifying the Black Body in Posthuman Literature and Culture</i>	Hill, Melvin G.	Rowman & Littlefield	Book	Transhuman
2019	<i>The Transhuman Code: How to Program Your Future</i>	Moreira, Carlos; Fergusson, David	Greenleaf Book Group	Book	Transhuman
2019	<i>Posthumanism and Higher Education: Reimagining Pedagogy, Practice and Research</i>	Taylor, Carol A; Bayley, Annouchka	Palgrave macmillan	Book	Posthumanism

2019	<i>Classical Literature and Posthumanism</i>	Chesi, Giulia Maria; Spiegel, Francesca	Bloomsbury	Book	Posthumanism
2020	<i>The Bloomsbury Handbook of Posthumanism</i>	Thomsen, Mads Rosendahl; Wamberg, Jacob	Bloomsbury	Book	Posthumanism

