The Surprising Convergence of Transhumanism and Posthumanism

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Abstract

The topic of the relationship between transhumanism and posthumanism is one that has received very little attention over the years. These two quickly growing schools of thought display a rather odd combination of similarities and differences that can make them appear both as completely independent and unrelated, or as heavily connected variations of the same idea. However, only a few attempts have been made at examining how they really correlate to each other. As such, in this article I will attempt to provide an analysis of both transhumanism and posthumanism, as well as the ways in which they resemble each other and those in which they differ, in order to show that the best solution is to take a third, middle option, and consider them as something akin to a case of convergent evolution: two different schools of thought that developed along separate lines, but converge on the same topics and ideas.

Keywords: Transhumanism, Posthumanism, Convergence, Convergent evolution, Posthuman.

1. Introduction

The term '*Posthuman*' literally means '*something that comes after the human*'; a fascinating, if vague, concept. But what exactly is a posthuman? For some, it means a superhuman, or perhaps a beyond-human, the next step in the evolution of mankind, gifted with capabilities that greatly surpass ours ("Transhumanist FAQ" n.d.); for others, the posthuman is instead closer to Nietzsche's *Übermensch* (overman), the human who has abandoned traditional Christian values in favor of creating a new paradigm and new values (Tuncel 2014). Similarly, the posthuman can be understood not as a new being or a distinct evolutionary step, but rather as a new framework, a new way of interpreting and interacting with the world, created as a replacement for the human, itself a framework that is now seen as insufficient or incorrect (Tuncel 2014). Two rather different interpretations of the same word, connected to two equally different schools of thought: *transhumanism* and *posthumanism*. Transhumanism and posthumanism share a rather odd relationship: they are clearly

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and obviously quite different from each other, as shown by their differing use of the term 'posthuman' (Sorgner 2020; Ferrando 2014); and yet, at the same time, the two are also often seen as interconnected or even related (Simon 2019), largely due to how they make use of similar (or even identical) terms, ideas and concepts (Nair 2022; Ranisch and Sorgner 2014). This naturally raises several questions: what is, exactly, the relationship between them? How similar, or dissimilar, are they really? What makes them distinct ideas? Are they compatible with each other? Unfortunately, this relationship has not been explored much over the years, with only a small number of works providing an in-depth analysis. Indeed, while it is not uncommon to see these schools of thought referenced together, it is much rarer to see them actively compared with each other to any substantial degree: in most cases they are either examined from a wider perspective, together with other -humanisms (as seen in Ferrando 2013 or Gladden 2018), or the perceived relationship between them leads to one being briefly mentioned when discussing the other (Nayar 2022), without any real attempt at exploring their connection. Only a handful of works have tried to provide a deeper analysis of the almost paradoxical relationship between the two, with one of the most notable being *Post- and Transhumanism: an introduction* (2014), a collection of essays that stands out as one of the most comprehensive and interesting studies on the topic.

As such, in this paper I will be attempting to answer the aforementioned questions, examining what posthumanism and transhumanism are, how they correlate to each other, and the ways in which they diverge, while also highlighting how the two can coexist with each other to a surprising degree.

2. Transhumanism

To conduct an effective analysis, we must first define what transhumanism and posthumanism are and examine their goals, methods and history. This will not only provide us with a better understanding of both perspectives but also help highlight some of their key differences. With that in mind, let us start with transhumanism.

Transhumanism is a "loosely defined movement" (Bostrom 2005) that advocates for *human enhancement*, the practice of using technology[1] to improve our physical, cognitive and psychological capabilities beyond human limits: a good example of such enhancements, and a central goal of transhumanism as a whole, is the elimination of aging, with the aim of eventually achieving immortality (Vita-More 2020; More 2013b); ultimately, this process of enhancement is envisioned as leading to the creation of a posthuman, explicitly defined as a being whose capabilities vastly exceed our own ("Transhumanist FAQ" n.d.). Crucially, transhumanism frames enhancement as a "breaking of limits", arguing that humans are imperfect or incomplete beings, constrained by the biological limitations imposed upon us by nature (More 2013a), and that technology offers us the means to go beyond these limitations and thus become something more than human ("The transhumanist declaration" 2012). However, it is important to note that this does not necessarily imply a simplistic dichotomy where nature is seen as evil and technology as good: "Mother Nature" is acknowledged as having done

[1] Technically speaking, human enhancement also includes several methods that are not based on technology, such as education, memorization techniques or healthy diets; however, due to their likely greater effects, transhumanism dedicates most of its attention to technological methods.

a good, though ultimately flawed, job in creating us, while technology is recognized as something that requires intelligence and caution to be used, given its potential risks (More 2013a). In any case, transhumanists consider enhancement to be highly desirable, a way of "fundamentally improving the human condition" ("Transhumanist FAQ" n.d.), and as a result the posthuman is framed as a goal that should be actively pursued through all available means (Vita-More 2020). Interestingly, this perspective also translates into transhumanism adopting a highly practical approach to enhancement: rather than engaging exclusively in theoretical debates, transhumanism encourages the development and adoption of enhancement technologies and practices, both as individuals and as an organization, with efforts that range from organizing conferences and publishing journals ("Transhumanist FAQ" n.d.) to the creation of political parties ("Constitution of the U. S. Transhumanist Party" 2021).[2] At the same time, transhumanism is also deeply concerned with examining the implications of enhancement for our society (More 2013b), which it does by envisioning possible posthuman futures (Pearce 1995; Pearce 2008) and warning us of the risks and dangers associated with these technologies (Bostrom 2002; Bostrom and Sandberg 2009). It is for this very reason that transhumanism is best described as a "movement": because it is an "organized effort to promote or attain an end"[3], actively working towards a specific goal, rather than simply a school of thought or a disconnected group of authors who share some ideas and beliefs.

As previously mentioned, technology plays a crucial role in transhumanist thought, with much of its attention being directed to the various methods through which a posthuman could be created, as well as their implications and potential dangers (Bostrom 2005). More specifically:

(1) Genetic engineering (and biotechnology more broadly) could be used to modify embryos, enhancing their intelligence or physical capabilities. However, this could also lead to discrimination and inequality between enhanced and unenhanced individuals (Bailey 2013);
(2) Brain uploading (Koene 2013; Merkle 2013) has the potential to grant us immortality as well as other advantages, such as the superior memory and processing speed of a computer. And yet, it also raises several moral and legal questions on the topic of identity and personal continuity (Hughes 2013);
(3) Artificial intelligence and nanotechnology are slightly different from the technologies we have discussed so far, given that, strictly speaking, they are not enhancement methods.[4] However, both serve as powerful tools that could vastly expand our industrial and technological capabilities, thus greatly benefiting the development of human enhancement. Nanotechnology offers a range of benefits, the most significant being the ability to manipulate matter at an atomic level (Freitas Jr. 2014), while artificial intelligence could potentially surpass human intelligence and be leveraged to solve numerous scientific and non-scientific problems through its superior cognitive abilities (Goertzel 2014). However, both technologies could also

[2] Admittedly very small parties, but nevertheless proof that transhumanism has, to some degree, entered the political sphere.
[3] Based on the definition of "movement" as found in the Merriam-Webster online dictionary.
[4] Although, it should be noted, an AI could also become a posthuman, a topic which I will explore more in detail later.

pose an existential risk, as exemplified by the famous 'Gray goo scenario', or Bostrom's 'Paperclip maximizer' thought experiment (Bostrom 2014).

It is important to note, however, that these technologies are still in a relatively early stage of development and remain far from the level of advancement required by the transhumanist ambitions. In other words, it can be said that the creation of a posthuman is currently impossible due to technological limitations (Mendz and Cook 2021); however, transhumanism posits that things may change in the future, making this goal achievable. This belief lies at the very core of transhumanist thought, but it is also a source of criticism: some have argued that transhumanism is overly optimistic in its assumptions (Mendz and Cook 2021), while others have accused it of selectively picking its arguments in a way that deliberately emphasizes the potential benefits while downplaying the challenges involved (Grion 2021). This is a reasonable critique, as transhumanism does indeed rely heavily on hypotheticals that cannot be definitively proven or disproven, but it is worth noting that this optimism is not completely unfounded: as noted by the *Transhumanist FAQ* the existence of multiple possible pathways to achieving posthuman status means that the feasibility of any given technology does not really matter, so long as at least one of them works ("Transhumanist FAQ" n.d.).

Moving on to its history and inspirations, transhumanism is a bit of an oddity: on the one hand, it is a relatively recent phenomenon, as elements of transhumanist thought can be found in various works from the 1920s and 30s, such as J. B. S. Haldane's *Daedalus: science and the future* (1924), *The world, the flesh and the devil* by J. D. Bernal (1929), and Aldous Huxley's 1932 *Brave new world*, although the term 'transhumanism' first appeared more than two decades later, in a 1957 book from Julian Huxley, *New bottles for new wine* (Carbonell 2014); importantly, Huxley's transhumanism is not the same as modern transhumanism, given that important ideas such as the breaking of limits and the beyond-human posthuman are completely absent (Ranisch and Sorgner 2014), with the author instead arguing in favor of a form of social and spiritual development focused on education (Hughes 2014). Transhumanism began developing into its modern form only in the 1960s and 1970s, under the influence of Robert Ettinger and FM-2030 (born F. M. Esfandiary): the former first published *The prospect of immortality* in 1964, which led to the creation of the cryonics movement, and then in 1972 *Man into superman*, whereas the latter authored *Are you a transhuman* (1989) (More 2013b, Ranisch and Sorgner 2014). The 1980s and 1990s saw these ideas grow and spread even further, but it was only near the end of the century that transhumanism became an actual movement, a transformation catalyzed first by the founding of the Extropy Institute in 1992, and then the World Transhumanist Association in 1998, as well as the publication of important texts such as *The Transhumanist Manifesto* (1998), *The Transhumanist FAQ* (1999) and the creation of the first journal for transhumanist studies (the *Journal of evolution and technology*) (More 2013b; Ranisch and Sorgner 2014).

However, in spite of its relative youth as a product of the second half of the 20th century, transhumanism actually follows in the footsteps of some truly ancient traditions, such as the pursuit of immortality, which can be traced as far back as the 4000 years old *Epic of Gilgamesh* (Rockoff 2014), or the depiction of technology as an almost divine source of power, which can be found in the Greek myths of Icarus (where technology makes it possible to "break the limits" by allowing the protagonist and his father to fly) and Prometheus (where fire, the symbol of technology, is

quite literally stolen from the gods, its original owners) (Grion 2021); medieval alchemy, the fountain of youth, and Mary Shelley's *Frankenstein* could also be mentioned as examples of these traditions, and similar concepts can be found in a wide variety of different cultures and time periods (Grion 2021; Bostrom 2013).[5] A similar pattern can be observed in regard to religion: the Pelagian and Arian heresies in the 4th and 5th centuries argued that it is within human means to achieve godhood (Fuller 2014b), while Manichaeism presented the body as an evil that must be transcended (Leidenhag 2020): both of these ideas, though predating transhumanism by centuries, align with its core themes. More recently, the 19th century Greek Orthodox Nikolai Fedorovich Fedorov expressed beliefs that resemble later transhumanist thought (Tirosh-Samuelson 2014) as did the Jesuit Pierre de Teilhard de Chardin, who may have inspired the term 'transhumanism' in the first place (Grion 2021). Interestingly, some religious traditions have shown themselves to be quite accepting of the transhumanist belief in human enhancement: such is the case of Mormon Transhumanism, to the point that it has been argued that "Mormonism actually mandates Transhumanism" (Cannon 2015), while James Hughes notes that several Asian belief systems, such as Hindu, Buddhism and Shinto, do indeed agree with some elements of transhumanism (Hughes 2007). Others, such as Orthodox Judaism and Lutheran theologians Philip Hefner and Ted Peters (Tirosh-Samuelson 2014), have argued that the use of technology to improve ourselves and the world is an inherent aspect of human nature as created by God, therefore rendering the pursuit of technological enhancement perfectly acceptable from a theological perspective (Hefner 2009).[6] Finally, it is worth noting that transhumanism has been compared to a new religious movement due to its surprising use of religious imagery and concepts, such as its emphasis on the pursuit of transcendence and the betterment of humanity, as well as its eschatological views (Tirosh-Samuelson 2014).

That said, while transhumanism has adopted many of its ideas and concepts from older traditions, its primary inspiration lies in the Enlightenment and rational humanism, of which it sees itself as a successor of sorts (Sorgner 2014). More specifically, two key tenets of transhumanist thought stem from these sources: the centrality of the human being, and a positive view of technology, science and progress (Sorgner 2014). Technology, as previously discussed, is the instrument through which humans can ascend from its imperfect, natural state and become posthumans, and as such is regarded by transhumanism as beneficial. However, this should not be mistaken for blind optimism, as transhumanist scholars readily acknowledge the potential risks associated with powerful technologies such as artificial intelligence and nanotechnology, cautioning us against reckless advancement and advocating for a more careful and measured approach instead ("The transhumanist declaration" 2012). Nevertheless, it is important to remember that the prevailing view among transhumanists is that technology is a valuable, if potentially dangerous, tool, and that progress is far more likely to benefit than harm us (Hauskeller 2014). At the same time, it is essential to recognize that transhumanism remains, at its core, an anthropocentric school of thought: despite all the attention given to technology, it is the human being that occupies a central

[5] Just to make an example, in Chinese folklore it is possible to acquire supernatural powers, become immortal and eventually ascend to a higher plane of existence through the use of alchemy or the practice of cultivation, a way of developing and bettering one's body and mind. The similarities to transhumanism are obvious.

[6] That said, most religious denominations will still disagree with transhumanism, mostly due to its individualistic and materialistic vision.

role in its reflections, both as the agent capable of leveraging technology to enhance itself and as the subject who is most affected, positively and negatively, by it (Franssen 2014). Humanity is, at once, both the protagonist and the focal point of transhumanist thought: every discussion revolves around it, and every topic is examined in relation to how it would affect (or be affected by) humanity. However, it is worth noting that the transhumanist anthropocentrism is quite distinctive and could perhaps be more accurately described as a "*postanthropocentrism*" instead, due to its unique traits. We will return to this topic later, when comparing transhumanism with posthumanism. For now, let us move on to the next section of our analysis.

3. Posthumanism

Posthumanism stands in stark contrast to transhumanism, and in many ways could be considered to be its polar opposite: where the latter is practical, the former is largely theoretical, where transhumanism is inspired by scientific methodology, posthumanism is rooted in philosophy, where one is closely tied to the English tradition, the other is heir to continental philosophy. As we progress through this brief examination of posthumanism, it will then become increasingly clear why many view transhumanism and posthumanism as being fundamentally different.

To begin with, where transhumanism is, for the most part, an organized movement, posthumanism would be better described as a loosely connected group of authors who share similar ideas and beliefs (Ranisch and Sorgner 2014; Hughes 2014); this is because 'posthumanism' is a very vague term, one that can be interpreted in multiple different ways and can refer to multiple different concepts, to the point that it may be more appropriate to talk about "posthumanisms", plural (Gladden 2018). Without delving too deeply into this topic, which would require its own article, it is important to note that the word 'posthumanism' is inherently ambiguous, since it can assume two very different meanings depending on whether it is read as "posthuman-ism" or "post-humanism" (Gladden 2018; Franssen 2014). Additionally, the term is sometimes used as an umbrella category encompassing a wide variety of schools of thought, among which we can find even transhumanism, which further adds to the confusion surrounding this word (Sorgner 2020). Based on this we can then distinguish between two main variants of posthumanism, critical and technological, which are roughly equivalent to, respectively, posthumanism as I will describe it in this article, and transhumanism (Ranisch and Sorgner 2014). That said, the term 'technological posthumanism' is also very broad, meaning that it doesn't necessarily refer to transhumanism alone: some authors use it instead to talk about a technologically oriented posthumanism, one that shares some traits but is fundamentally distinct from transhumanism proper (Tirosh-Samuelson 2014; Simon 2019). Finally, we also need to consider cultural posthumanism and philosophical posthumanism. Cultural posthumanism is variously regarded as being synonymous with critical posthumanism, as being a subset of it (or vice versa) (Gladden 2018), or as having developed simultaneously to it, but from different roots (Ferrando 2013). As the name implies, cultural posthumanism was born within the field of cultural studies (whereas critical posthumanism is seen as connected to literary criticism) and its origins can be traced back to the 1995 book *Posthuman Bodies* by Halberstam and Livingstone, and later through the works of Neil Badmington and Elaine Graham

(Miah 2009). Cultural posthumanism is largely similar to critical posthumanism, hence why they are sometimes treated as if they were the same, but with one key difference: cultural posthumanism focuses on examining how the posthuman and posthumanism are represented in a variety of cultural texts, both old and new (Gladden 2018). Philosophical posthumanism, on the other hand, only appeared in the late nineties, being influenced by the posthumanism of Fukuyama (2002) and Hayles (1999), as well as the works on cyborgism of Haraway (1985) and Gray (1997, 2002), and even Bostrom's transhumanism (1998) (Miah 2009). Drawing on the experience of its critical and cultural cousins, philosophical posthumanism can be understood either as a new form of philosophy that has integrated some elements of posthumanist thought, or as a new form of posthumanism that focuses on philosophical questions (Gladden 2018).

As evidenced by this brief overview, pinpointing the true nature of posthumanism can be quite complex; however, despite this lack of cohesiveness, we can still propose a rough definition of posthumanism as "a school of thought that rejects humanism and anthropocentrism", and consequently wishes to replace the human being with a new "posthuman" (Agin 2020; Simon 2019). Notably, this means that the concept of 'posthuman' exists in posthumanism as well, in a way that allows us to draw a direct parallel with transhumanism: the human being, flawed and imperfect, is replaced by a superior posthuman in both schools of thought (Agin 2020). However, this is very much the extent of their similarities here, as posthumanism develops this rejection in a completely different way, arguing that the "human" is a fundamentally incorrect cultural construct created by humanism, which should be replaced by a new, better one, the "posthuman" (Hauskeller 2014). As such, the posthumanist posthuman is not an enhanced human, but rather "a new way of looking at things and at ourselves" (Hauskeller 2014), a new framework that emphasizes interconnectedness and hybridity as key traits and rejects all forms of boundaries and dualities, in clear opposition to how anthropocentrism sees humans as unique and superior beings (Valera 2014; Kriman 2019). In fact, posthumanist thinkers argue that the human never really existed, being nothing more than an ideological construct created to impose a distinction and a hierarchy between itself and something else: what is not human, be it technology, animals or the environment, is different from and subjugated to the human exactly because it is not human (Hauskeller 2014). This hierarchy can even extend to humankind itself: race, class, gender, sexual orientation and religion have all been used as ways to establish similar distinctions, with those that do not conform to a particular ideal of what a human should be reduced to subhumans to be enslaved or destroyed (Hauskeller 2014). The posthuman, on the other hand, is a framework that recognizes that these distinctions do not exist, leading some posthumanists to state that we already are and have always been posthumans, and we simply need to recognize this fact (Hauskeller 2014). As such, the posthuman explicitly identifies itself as an animal like any other, as an embodied and situated being living in an environment with which it is inextricably connected, and as a cyborg, a hybrid defined by the union of human and technology, each of which could not exist without the other (Sorgner 2020). Before we continue, however, we need to briefly expand upon this specific choice of words, 'cyborg', as it is the source of a surprising amount of confusion. Indeed, the term would seem to suggest something out of science fiction, a creature that is part man and part machine; in reality, the posthumanist cyborg is far removed from such a concept. For posthumanism we are and have always been cyborgs,

as humanity is fundamentally intertwined with technology: we created technology, but technology is also what defines us as humans (Agin 2020).[7] This also means that posthumanism sees technology itself in a very different light than transhumanism: rather than focusing on certain applications and their effects, posthumanist thought prefers to examine the relationship between humanity and technology as a whole.

In addition to their views on the posthuman, transhumanism and posthumanism are also differentiated by their approach and origins: transhumanism, as mentioned earlier, finds its roots in the English philosophical tradition and is heavily influenced by scientific methodology, whereas posthumanism descends from continental philosophy and therefore draws mostly from cultural studies and literary theory (Sorgner 2020; Philbeck 2014). In this regard, it should also be mentioned that posthumanism is much more critical in nature, arguing against an already existing framework and attempting to replace it with its own; this, however, can cause it to lean towards the theoretical more than the practical, meaning that, by focusing primarily on its destructive critique of humanism and anthropocentrism, it ends up lacking a positive and constructive element of its own, leaving it unable to actually propose any meaningful alternative or practical course of action (Mendz and Cook 2021; Ranisch 2014). This is particularly evident when posthumanism is compared with the much more active and practical-oriented transhumanism, as the latter seeks to induce actual and measurable changes, while posthumanism prefers to focus on theoretical debates and critiques, leading to an approach that is often unable to provide the actions needed to solve many of today's world problems (Hughes 2014, Mendz and Cook 2021).

Continuing with the rest of this comparison, we unfortunately run into some small problems when dealing with the topic of the history of posthumanism, as the lack of coherence that we mentioned earlier also makes it somewhat difficult to provide a clear picture of its history, especially when talking about its origins and inspirations (Ranisch and Sorgner 2014). That said, an attempt can nonetheless be made to pinpoint its main elements: similarly to transhumanism, posthumanism is a fairly recent phenomenon, with the term itself being first used by Ihab Hassan in his 1977 book *Prometheus as performer: towards a posthumanist culture* (Franssen 2014), although posthumanism only really began developing in the 1990s with two extremely important works, these being Donna Haraway's *A Cyborg Manifesto* (1991) and N. Katherine Hayles *How We became posthuman: virtual bodies in cybernetics, literature, and informatics* (1999) (Hughes 2014). Its inspirations and predecessors, on the other hand, are vastly different from those of transhumanism, but also quite harder to identify: humanism quite obviously plays a key role, being the main target of posthumanist critique (Sorgner 2020), and it has been argued that posthumanism itself is actually part of the tradition born from the Enlightenment, adopting its ideas of "multiplicity and difference" (Hughes 2014) to oppose other Enlightenment values and concepts such as universalism, thus making posthumanism a humanist critique of humanism, the proverbial snake eating its own tail (Hughes 2014); another piece of the puzzle can be found in the works of Nietzsche, who is often mentioned as predating elements of posthumanist thought with his perspectivism and critique of Western rationality, his rejection of the centrality and superiority of the human being over animals,

[7] And, indeed, the ability to create and use tools is often (and mistakenly) thought to be exclusive to us, something that defines humanity as different from other animals.

and his view of humans as connected rather than isolated from their environment (Tuncel 2014). That said, most of the influences that directly shaped posthumanism are much more modern, belonging to the latter half of the twentieth century: postmodernism, continental philosophy, poststructuralism, literary theory and postcolonial studies (Ranisch and Sorgner 2014), as well as Derrida, Foucault (Tirosh-Samuelson 2014) and Deleuze (Sorgner 2014) can all be mentioned here, although with the caveat that different branches of posthumanism may be more deeply rooted in some sources rather than others. These, however, are not the only schools of thought to have heavily influenced posthumanism, as we must also consider what has been called the "non-human turn": a variety of movements and ideas that share an anti-anthropocentric view, attempting to reject human exceptionalism and bring attention to the (traditionally seen as inferior or unimportant) non-human side, which include environmental theory, ecocriticism, ecofeminism, animalism, critical theory, feminist critique, queer studies and postcolonial studies (Nayar 2022; Simon 2019).[8]

4. Distinct or Related?

Based on the brief analysis we have made in the previous sections, it would then seem that transhumanism and posthumanism have almost nothing in common: their goals are vastly different (becoming more than human versus redefining what is human), their methodologies are almost complete opposites (scientifical against hermeneutical), and even in terms of their history and inspirations they have almost nothing to do with each other (one follows in the footsteps of English philosophy and draws inspiration from older sources and tradition, while the other is part of Continental philosophy and finds most of its predecessors in the twentieth century) (Sorgner 2014; Sorgner 2020). In short, it would appear that the interpretation of transhumanism and posthumanism as being completely separate and unrelated, if not outright opposites (being, respectively, an intensification and a rejection of humanism), is correct; there is, however, a problem with this explanation: it does not justify the striking amount of similarities between the two, which are far too extensive to be considered mere coincidence. Simply put, transhumanism and posthumanism make use of similar terms, ideas and concepts, although often developed in completely different directions (Kriman 2019; Ranisch and Sorgner 2014). For example, both employ the concept of the 'posthuman': as I mentioned earlier, their interpretations of it differ drastically, but the posthuman itself plays a very similar role in both, acting as a superior replacement and successor to the imperfect human (Sorgner 2020); other comparisons that we can make include the concepts of 'breaking the boundaries' (Hauskeller 2014) and of 'technogenesis'[9] (Ferrando 2014; Agin 2020), the figure of the cyborg (Ranisch and Sorgner 2014; Miah 2009), the rejection of the uniqueness of man and the openness to new forms of existence (Sorgner 2020), and an interest in postgenderism (Hughes 2014; Hughes and Dvorsky 2008). Of course, it bears repeating that transhumanism and posthumanism develop these topics in wildly contrasting ways; and yet, it cannot be denied that the two seem to engage with the same

[8] Regarding the last three examples, posthumanism argues, as noted before, that any group that does not conform to a very narrow view of the human (the white heterosexual male) is often treated as a non-human.

[9] A term that refers to the process of co-evolution of humans and technology.

subjects, making it difficult to explain the extent of their similarities if we were to assume them to be entirely unrelated and incompatible.

But what does this mean exactly? As we have seen, transhumanism and posthumanism appear to be vastly different from each other, but they also share a surprising number of ideas and concepts; on the one hand, they are in opposition, and on the other, they are similar. This combination explains quite well why the two are usually seen either as being completely unrelated, or as branches of the same school of thought: the former interpretation is justified by their differences, which seem to imply that transhumanism and posthumanism were born and developed as separate and independent entities, whereas the latter is based on their shared choice of subjects, conflating the two under the umbrella term of 'posthumanism', understood as any attempt at moving beyond humanism (Lemmens 2015). Unfortunately, the former explanation, usually supported by posthumanist authors who wish to distance themselves from transhumanism (Nayar 2022; Simon 2019), is unable to deal with these similarities, as they run counter to its interpretation that there is no relationship at all between the two, whereas the latter attempts to conflate disparate and often unconnected ideas under the same label, with little care for how they actually relate to each other (Sorgner 2020; Gladden 2018), which results into the creation of an extremely generic definition of posthumanism, one that is often critiqued by both sides of the debate (Gilebbi 2020; Ferrando 2013).

Therefore, given that both explanations seem to fall short, we should seek a third option instead, one capable of explaining this odd relationship.

5. The Case for Convergent Evolution

This third option would be to argue that transhumanism and posthumanism are something akin to a case of "*convergent evolution*". 'Convergent evolution' is a term that refers to those cases where two (or more) distinct species independently develop similar adaptations in response to the same (or similar) environmental factors: an example of this process would be how birds, bats and flying reptiles all evolved wings that serve the same function (flying), despite differing in their structure. The case of transhumanism and posthumanism is rather similar: the two "evolved" as completely unrelated and independent "species", but they also share the same "environment" and are affected by the same "factors", leading them to develop "adaptations" that are similar in "function" but have different "structures". Overall, this seems to be an effective interpretation: it manages to justify their separate origins, goals and methods, while also explaining why they share terms, ideas and concepts. There is, however, one potential weakness in this interpretation: what is the "shared environment" that caused this case of convergent evolution? Or, in other words, what is the underlying influence that led these otherwise unrelated schools of thought to develop along the same lines? I believe that the answer to this question lies, once again, in the concept of 'posthuman': the posthuman is, at its core, a rejection of the human as imperfect, a rejection that is shared by both transhumanism and posthumanism (Sorgner 2020) and is symbolized by what Lorenz Sorgner calls the "mortifications" of Copernicus, Darwin and Freud (Sorgner 2014). These "mortifications", embodied by the heliocentric model, the theory of evolution, and psychoanalysis, are proof that we are not perfect, supreme beings, hence the name: Copernicus showed that the Earth is not the center of our solar system, thus denying

that humanity is at the center of the universe;[10] Darwin proved that humans and apes share a common ancestor, thus demonstrating that humans are the same as any other animal, rather than the product of divine design or some sort of unique process; finally, Freud studied the mind, revealing that man is not rational and in control, but rather a slave to its own unconscious, a fragmented subject instead of a flawless being (Sorgner 2014). These three mortifications can then be seen as exemplifying a paradigm change, the passage from a humanist and anthropocentric belief system, which had governed the West for centuries, into a new understanding, where the human being is no longer the center of everything. The reasons for this change are many and varied, but most of them can be traced back to the Enlightenment. While still fundamentally humanist in nature, the Enlightenment laid the seeds for the end of human exceptionalism in several different ways, among which we can find three key elements: the belief in progress, the power of reason and the relevance of critique (Sorgner 2014). It is through these traits that the Enlightenment starts to reject the old systems and moves towards modernity: reason is used as a tool to critique the old absolutes and seek progress instead. Religion, for example, is shown to be unjustifiable through reason, and so its truths are abandoned in favor of new rational truths, more capable of explaining the world and thus more beneficial to us; the old political systems are critiqued and gradually replaced by more liberal ones, granting greater power and freedom to the people (Sorgner 2014), and so on. Overall, the Age of Enlightenment can be seen as a divide between the old, represented by religion, faith and absolute truths, and the new, the domain of science, reason and pluralism. Rationality, subjectivity and belief in progress are the key words for this modern era, and with them the human also starts to change: no longer an (almost) perfect being created by God in its image, it now becomes a self-made creature, identical to any other animal and yet capable of raising itself to a position of prominence through its intellect. Here we can then see how the first two mortifications symbolize the destruction of the idea of humanity as special, but also the realization that progress is possible thanks to reason and science, something that lines up quite well with transhumanist thought (More 2013a; Bostrom 2005). At the same time, however, the second and third mortification also prove that reason itself is limited, prone to failure and ultimately unreliable, meaning that "the truth" (if such an absolute even exists) is unreachable to us, a realization that gave rise to pluralism and Nietzsche's perspectivism and, eventually, to the postmodernism from which posthumanism arose (Sorgner 2014).

It is for this very reason that we could say that not only transhumanism and posthumanism belong to the same tradition, in spite of their otherwise very different origins, but also that they can be interpreted as two different answers to the same problem, that being the collapse of the old humanist framework and its anthropocentric view of the human: they both deal with the same subjects, but focus on different elements and thus develop in different directions. In this regard, the "convergent evolution" interpretation can also be seen as a literal middle ground, or perhaps a fusion, of the two explanations I mentioned earlier, unifying a weak version of both arguments: transhumanism and posthumanism are indeed defined as separate and independent entities, but not to the point where there is no possible point of contact between them, and while they can be seen as connected due to both being schools of thought that attempt to go beyond humanism and having

[10] Something that was only made more obvious by further discoveries in the field of astronomy, which went to show how far we are from being the center of anything.

a shared ancestor, this should not be taken to imply that they should be conflated together under the same label.[11]

6. Compatibility

Having analyzed transhumanism, posthumanism, and how they relate with each other, we can now ask one final question: are these two schools of thought compatible? We have seen how they often deal with the same topics, but also how they develop them in distinct, and at times contrasting, ways. Does this mean that accepting one means completely rejecting the other, that a posthumanist posthuman cannot be a transhumanist posthuman, or vice versa? Or is it possible to agree with both, and put them together into a single, coherent belief system without incurring contradiction?

To answer this question, we need to consider if "different" means "mutually exclusive"; therefore, let us examine, once again, the example of the posthuman. I have already shown that transhumanism and posthumanism interpret the concept of 'posthuman' in very different ways, but now I will attempt to argue that there is no real contradiction between them. As a reminder, transhumanism identifies the posthuman simply as a being whose capabilities exceed ours (More 2013b), whereas posthumanism sees it as a framework that emphasizes hybridity and connectiveness (Philbeck 2014; Valera 2014); in other words, the former specifies that a posthuman being must possess certain physical and cognitive capabilities, while the latter argues that it must adopt a particular way of understanding and defining itself. As such, in theory, an enhanced human that understands itself as an embodied, situated, hybrid being, would meet the requirements to be considered a posthuman by both schools of thought; in fact, technological posthumanism, which we have already mentioned before as a strand of posthumanism that shares some traits with transhumanism, supports a similar view, arguing that the posthuman (understood as an enhanced human) would be a completely new, postanthropocentric and postdualistic subjectivity, far removed from that of a normal human (Simon 2019; Nair 2022). In this respect, it should also be noted that transhumanism is well aware of the fact that a posthuman subjectivity would likely be vastly different from ours ("Transhumanist FAQ" n.d.; Moravec 2013), leading it to emphasize some boundary-breaking elements that are somewhat reminiscent of posthumanism; at the same time, several posthumanist thinkers, despite opposing the pursuit of human enhancement (seen as a way of preserving the anthropocentric humanism) (Gladden 2018), display a surprising degree of openness to the possibility of creating new forms of existence such as AIs (Gladden 2018), cyborgs (Gilebbi 2020) or uploads (Valera 2014), and to some degree even support the idea of abandoning the traditional human form and attempting to find alternative modes of embodiment, as part of the posthumanist rejection of the human and its emphasis on hybridization and blurring the boundaries (Lemmens 2015; Valera 2014). Both elements lend further credence to the possibility of an enhanced human adopting a posthumanist framework (or, for that matter, of a posthumanist possessing an enhanced body).

Another interesting point of overlap between the two traditions can be found in the topic of anthropocentrism: as I have repeatedly mentioned, the rejection of

[11] Which, as mentioned earlier, results into an extremely generic idea of 'posthumanism', creating confusion and misinterpretations.

anthropocentrism is one of the core tenets of posthumanist critique, while transhumanism is usually interpreted as maintaining (or even intensifying) an anthropocentric worldview (Simon 2019; Fuller 2014a). However, a closer examination reveals that transhumanism is much more ambiguous in how it deals with this subject: the human being certainly plays a key role in transhumanist thought, and the influence of humanism can easily be felt, but transhumanism is also explicitly dismissive of anthropocentrism, arguing, for example, that "the arrival of superintelligence will clearly deal a heavy blow to anthopocentric worldviews" ("Transhumanist FAQ" n.d.); in some ways, this is not surprising at all, as the stated goal of transhumanism is to lead us to become posthumans, and posthumans are described as "no longer unambiguously humans" ("Transhumanist FAQ" n.d.). Even beyond this, transhumanism is willing to extend the label of 'posthuman' to a much wider variety of beings (Valera 2014), including not only enhanced humans, but also "completely synthetic artificial intelligences" ("Transhumanist FAQ" n.d.), uploads (Rothblatt 2013), and potentially even uplifted animals[12] (Hauskeller 2017). Some transhumanist thinkers have even suggested that moral status should be granted not based on an increasingly vague concept of "humanness" but rather on sentience and self-awareness (Hughes 2014).

Yet another case of transhumanism and posthumanism overlapping, despite seemingly being at odds with each other, comes from their views on the topic of the mind-body relationship: posthumanism interprets the (post)human as an embodied being (Gladden 2018; Agin 2020), emphasizing how mind and body are deeply interconnected, to the point that the former requires the latter to exist; this stands in clear opposition to Cartesian dualism, which asserts that mind and body are separate and independent entities. Transhumanism, on the other hand, seems to support a dualistic understanding of body and mind, based on the fact that brain uploading, a theoretical technology that would make it possible to create digital copies of human minds (Sandberg and Bostrom 2008), appears to require that the mind be independent from the body in order for the process to work (Philbeck 2014). However, once again, things are quite a bit more complicated than that: some posthumanist authors, starting with Katherine Hayles, have argued that "patterns of information are more essential to the state of being than any material instantiation" (Tirosh-Samuelson 2014) and that our embodiment in a human body is "an accident of history" (Tirosh-Samuelson 2014), the result of the randomness of evolution, rather than an inevitability, while the body itself is "nothing more than a prosthesis" (Tirosh-Samuelson 2014) that can be freely exchanged for another "prosthesis", so long as the mind remains embodied (Tirosh-Samuelson 2014; Tuncel 2014). Transhumanism, on the other hand, is perfectly cognizant of the fact that the human mind is supposed to be embodied, and notes that disembodied uploads would likely not work at all, or at least heavily suffer from negative effects, akin to sensory and motor deprivation, thus requiring uploads to be provided with robotic bodies or virtual avatars to ensure that their experience is as close to the "natural body experience" as possible (Sandberg and Bostrom 2008; Moravec 2013).

To answer the question I previously posed, I would then say that yes, transhumanism and posthumanism are indeed compatible with each other, to a

[12] Meaning animals whose capabilities have been enhanced to be equivalent to those of a human being.

surprising degree: despite the many apparent contradictions between them, trans- and posthumanism are not mutually exclusive, and in fact even overlap at points.

7. Conclusion

The topic of the relationship between transhumanism and posthumanism is a rather interesting one, but also one that has, unfortunately, not been explored as much as it deserves. Surrounded by confusion and misunderstandings, the two are alternatively seen as bitter enemies and opposites, or as closely related branches of the same school of thought, owing to how the two display a complex combination of similarities and differences; I have, instead, attempted to show that this relationship is something more akin to a case of convergent evolution, two schools of thought that developed independently, but also deal with the same subject, the collapse of the humanist and anthropocentric vision of the human, thus justifying how two traditions that are so obviously distinct can also overlap with each other to such a considerable degree. I also sought to demonstrate that, despite their undeniable differences, transhumanism and posthumanism are not mutually exclusive, but are, in fact, compatible with each other.

This last point is particularly important, because, as I have mentioned, trans- and posthumanism are most often seen as so different from each other that no comparison can be drawn between them (or, alternatively, as simple variations on the same idea), making it almost impossible for the two to interact in any meaningful way. By recognizing that the relationship between them is far more complex, and far more open to coexistence, it becomes possible for transhumanism and posthumanism to engage with each other in a much more constructive manner: a broader willingness to examine and understand the other's ideas could benefit both sides, allowing them to identify their weaknesses and integrate new elements in order to grow beyond them. For example, transhumanism could help in grounding the posthumanist critique by providing it with practical questions and examples in the form of the posthuman being and how it would necessitate a redefining of our understanding of what is human; posthumanism, on the other hand, could assist transhumanist thinkers in reimagining and developing their enhancement project in a way that would better account for the ethical and political challenges posed by the existence of a posthuman, a being which is, by its own definition, no longer human.[13]

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