



## WRESTLING WITH THE POSTHUMAN: UNDERSTANDING THE RELATIONSHIP BETWEEN HUMAN AUTONOMY AND TECHNOLOGY

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### KEYWORDS

*Humanism  
Transhumanism  
Posthumanism  
Posthuman  
Autonomy  
Philosophy of Technology*

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### ABSTRACT

*In this paper, I examine the term "posthuman," which is often used to describe the possible future state of humanity. However, it is often difficult to understand what this term is meant to describe. I examine the claims of two movements that use this term: transhumanism and posthumanism. These movements are presented in the context of humanism. Both movements present how technologies are changing human autonomy and how posthuman beings arise out of this change. I formalise and critique these accounts of the posthuman. I conclude that neither movement adequately explains the transition from the human to the posthuman.*

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Received: 18/ 03 / 2022

Accepted: 02/ 06 / 2022

## 1. Introduction

Ever since Darwin's (2008) *On the Origin of Species*, we have had to contend with the question of the change in human nature. No longer could we rely upon essentialist theories to support our view of human development. Since the discovery of evolution, there have been several authors, such as Nietzsche (2006), Teilhard de Chardin (2002, 2004) and Julian Huxley (1957a, 1961), who argued that our concept of the human ought to change or is subject to change. However, the idea of human nature being subject to change and evolution is currently gaining greater prominence than before. With the rise of NBIC (nano-, bio-, information, and cognitive) technologies,<sup>1</sup> the possibility that we might radically change human nature is increasing. As a result, we more frequently encounter the talk about the *posthuman*. The term *posthuman* was formulated to describe a new state that humanity might achieve after this change. (Bostrom, 2005a, 2013; More, 2013; Hayles, 1999; Pepperell, 2003; Ferrando, 2019; Braidotti, 2013; Fukayama, 2002). That, however, brings about a problem. What exactly makes something posthuman, and what would posthuman beings look like?

Questions like this are difficult to answer, and it is not my goal to do so in this paper. My ambition is far more humble. If we are to answer the hard questions, we must first know how to ask them properly. We have to determine what exactly our terms mean. In this paper, I intend to do precisely that. My goal is to disentangle how the term *posthuman* is being currently used. Because one thing that makes these questions difficult is that we have disparate movements that use the term *posthuman* differently, this paper concentrates its attention on two movements that use this term: transhumanism and posthumanism. These movements attempt to provide an account of what they call the posthuman and offer it as an alternative to our current understanding of the human. I aim to delineate how these movements use this term and judge the merits of their usage. To do so, I examine and formalise the individual conceptions of the posthuman these movements offer.

What connects these movements is that they both react to humanism. Humanism itself has different forms and connotations. There are historical variants, such as *renaissance humanism* and *enlightenment humanism*.<sup>2</sup> We can also see the term *secular humanism* describing the modern humanist movement (Lamont, 1997; Norman, 2004; Copson & Grayling, 2015; Pinn, 2014). I concentrate on one particular thread of ideas that humanists put forward. Human beings are traditionally recognised as unique by having a capacity for autonomy. Autonomy is commonly understood as signifying one's ability for self-governance, and it is often discussed in moral and political philosophy (Christman, 2020). In virtue of our autonomy, humanists argue that human life is valuable and should be protected as a result. I specifically want to use the concept of autonomy as it appears in humanist literature. My goal is to use the notion of autonomy to analyse the conceptions of the posthuman. For these reasons, I represent humanism as a specific stance toward the human. I call it a *humanist stance* (hereafter as HS), which presents us with the following picture of the human:

HS: There exists being *H* that is autonomous and therefore valuable.

In this paper, I differentiate between *H* and the human. The former should be understood as the conception of the human that humanism offers. The latter will be used when discussing the concept of the human in general, without any humanist connotations. I use *H* to refer to the humanistic concept of man. Further, I use the term *posthuman* to discuss it in general terms. Specific conceptions of the posthuman will be used as they are developed.

Autonomy as a concept brings an essential ethical dimension into the analysis of the posthuman. If new technologies will create brand new posthuman beings, judging this event's ethical significance is vital. Will these new beings have the same freedom as present humans, or will they be created not to be as autonomous? Will human nature be altered to improve human lives, or will it be done for totalitarian control? These questions are essential because the state of the posthuman beings will dictate how we will cooperate with them and how we might become posthuman. If the posthuman states were less autonomous than our current ones, it would discourage us from becoming posthuman.

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<sup>1</sup> See Bainbridge & Roco (2016) for a detailed overview.

<sup>2</sup> Authors such as della Mirandola (1956), Descartes (2008), and Kant (1996, 1998, 2007) can be taken as exemplifying these historical strands of humanism.

However, I will not treat autonomy only as a moral concept. I find it critical that we cannot think of autonomy only in terms of self-governance, and I would argue that not even humanists use the concept only in this way. I am not only interested in it as a person's ability to self-govern but also in a broader, more ontological sense. Often, when we describe something as autonomous, we use the term to denote that it is self-contained. When humanists invoke the idea of autonomy, they do not only point out the self-governance of human beings. They also use it to identify human beings as unique and individual. Therefore, the idea of autonomy in the more moral and political sense is deeply intertwined with ontological autonomy. I would argue that in humanist thought, one is somewhat derived from the other and that these two concepts of autonomy cannot be easily separated. I classify the two sides of autonomy as (1) *self-governing autonomy* and (2) *individuating autonomy*. While we cannot separate these two senses from each other, it is possible to lean on one sense. Throughout the text, I will be referring to these different notions as A1 and A2, respectively, to show when a particular sense is in play.

Transhumanism and posthumanism will be presented as different reactions to HS. I argue that their understanding of the posthuman is predicated on how they perceive changes to human autonomy thanks to new technologies. The second section is dedicated to transhumanism. Transhumanists argue that, with NBIC technologies, we will further enhance the inherent autonomy of *H* and, as a consequence, create posthumans. In the third section, I explore posthumanism. Posthumanists present themselves as critics of humanism. For them, NBIC technologies are one of the many developments undermining *H* and its autonomy. The fourth section features my critique of the arguments of these movements. I argue that neither conception of the posthuman can sufficiently explain the transition from *H*. In conclusion, I recommend that we approach the posthuman differently, with greater emphasis on how posthuman beings will use their autonomy.

## **2. Transhumanism and the enhancement of human autonomy**

Transhumanists themselves offer us several different definitions of their movement.<sup>3</sup> However, for my purposes, the description that Bostrom offers will be the most useful:

Transhumanists view human nature as a work-in-progress, a half-baked beginning that we can learn to remold in desirable ways. Current humanity need not be the endpoint of evolution. Transhumanists hope that by responsible use of science, technology, and other rational means, we shall eventually manage to become posthuman beings with vastly greater capacities than present human beings have. (Bostrom, 2005a, p. 4)

This description sets out all the essential points that need to be discussed. Firstly, it presents the transhumanist's view of human nature. It is understood as something that we can mould into myriad different forms. Secondly, it states how transhumanists seek to achieve this. They plan to use science and technology to radically change humanity. Thirdly, it gives a reason why we should attempt to mould our nature. We should do so to become posthuman beings. However, each of these points has to be elaborated.

Let us start with how transhumanists view human nature. In the article cited above, Bostrom (2005a) lists several capacities by which human beings can be identified. He mentions lifespan, intellectual capacity, bodily functionality and others. However, the most important one listed is self-control. In his opinion, one of the things that we are able to enhance is our capacity for autonomy. I argue that all the capacities listed can ultimately be tied to autonomy, in this case, especially in the A1 sense. Bostrom's characterisation of the individual capacities points in that direction. When describing the benefits of the possible changes, he always mentions how they could open up for us new possibilities of self-governance. For example, changes to our bodily functionality would grant us control over our metabolism and allow us to shape our bodies in whatever way we wish. More importantly, Bostrom lists these capacities because he accepts the humanist view of human nature.

Transhumanists see their movement as the continuation of humanism. The Transhumanist FAQ states that: "Transhumanism can be viewed as an extension of humanism, from which it is partially

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<sup>3</sup> See Various (2003) and More (1990).

derived." (Various, 2003, para. 11). Bostrom (2005b, 2005c) states that, similarly to enlightenment thinkers, transhumanists seek to improve the human condition by using the power of reason. Yudkowsky (2007) calls transhumanism *simplified humanism*. Where humanism saw limits to how we can improve the human condition, transhumanists seek to break these boundaries. Similarly, More (2013a) recognises how transhumanism operates within the context of humanism. Unlike Yudkowsky and Bostrom, he argues that transhumanism also goes beyond humanism. More understands transhumanism in two different senses. Firstly, as *Trans-humanism* that emphasises the roots of this movement in enlightenment humanism and its ideas. Secondly, as *Transhuman-ism*, which shows how it seeks to transcend *H*.

One of the significant differences between transhumanists and plain humanists is that the former group emphasises how we are limited in our capacities. It is here where we can see how they are leaning on A2. By understanding *H* as a particular individual kind, it becomes definable. In this manner, we can then say that *H* has capacities that can be limited. *H* being an independent individual, implies to transhumanists that its autonomy has limits. However, if we genuinely value A1, shouldn't we do something about these limits? What further differentiates transhumanism from humanism is that they see *H* as untenable in the face of enhancement. NBIC technologies open up for us the possibility of enhancing *H*. This means that they threaten the continued existence of *H*.

Enhancement is one of the core ideas of transhumanism. The best definition of enhancement that aligns with the transhumanist ideals is put forth by Savulescu et al. (2011). They define it in terms of our welfare: "Any change in the biology or psychology of a person which increases the chances of leading a good life in the relevant set of circumstances" (Savulescu et al., 2011, p. 16). Savulescu et al., in their examples, concentrate on what impact cognitive enhancement would have on a person's well-being. They specifically write about the improvement of our instrumental rationality. They define it as "the capacity to reliably identify means to one's ends and projects." (Savulescu et al., 2011, p. 10). With better cognitive abilities, we would be able to make better choices; we would be more able to avoid pain and plot out our course in life. This definition of enhancement is very general, and transhumanists do not understand it as a flaw. In actuality, it is so by design because it is meant to describe both the changes, we might undergo thanks to NBIC technologies and a more common means of improving the human condition.

In bioethics, transhumanists take the stance that there is no difference between enhancement and therapy. Lee (2019) makes this point very clear:

Have you ever taken vitamins, antibiotics, vaccinations, or (for women) birth control pills? Yes indeed, everyone is using science and technology to enhance or alter our body chemistry in order to stay healthy and be more in control of our lives. We are all transhumanists to varying degrees. (p.5)

Some transhumanists go even beyond medical procedures. Sandberg (2013) likens enhancement to cosmetics, clothes and tattoos. We often use them to change our form to be more presentable or to better reflect to ourselves and others how we want to be perceived. More radical enhancements are only a mere extension of our past practices. For transhumanists, enhancement naturally stems from the A1 that we typically ascribe to humans. For them, the only difference between types of enhancement lies in degrees; some are more radical than others. In a later section, I argue how this idea of enhancement makes it problematic for transhumanists to hold their position.

As we accumulate these enhancements, we will eventually become what they call posthumans. Bostrom (2005a) states that the primary value of transhumanism is to explore what he calls the posthuman realm. He argues that we can defend the idea that there exist states of being beyond our own. For example, we can recognise that a dog has different sensory modalities from us; thus experiences the world differently from what we do. We could say that its mode of being is different. In a different article, Bostrom (2013) defines how precisely he understands modes of being: "By a mode of being I mean a set of capacities and other general parameters of life." (p.29). Posthuman modes of being are then defined by having much greater capacities when compared with the *H*. This means the human space of being makes up only a fraction of the total space. He adds that, in this total space, there could be states that we would judge as incredibly valuable.

Transhumanists tend to describe this potential value in terms of our capacities. As stated by Bostrom, if we could inhabit these states, we would have increased capacities compared to now. Other

transhumanists also characterise the category of the posthuman in such a manner. More (2013a) understands being posthuman as transcending our limits: "Becoming posthuman means exceeding the limitations that define the less desirable aspects of the 'human condition.'... [Posthumans] would have vastly greater physical capability and freedom of form." (p.4). The transhumanist FAQ goes on to make the same point, discussing posthumans as: "possible future beings whose basic capacities so radically exceed those of present humans" (Various, 2003, para. 12). However, posthumans do not have to be strictly based on current humans. The FAQ states that the posthuman could also be used to describe AIs or enhanced uploads.<sup>4</sup> Lastly, this idea is most radically put forward by Young (2006) in his transhumanist manifesto, where he describes the posthuman as Homo Cyberneticus, and in his mind, it is defined by the fact that it will be "the steersman of its own destiny" (Young, 2006; emphasis added). It will be able to transcend the limits of its nature.

From their ideas, I would extrapolate that what they understand as valuable is that these new enhancements will increase our A1. As I argued above, many of the capacities that transhumanists mention are ultimately tied to A1; therefore, they can be, to an extent, reduced to it. What makes the posthuman modes of being valuable is that they could afford us a greater degree of A1. That means that the value of A1 serves as a measure by which we can judge these states. Bostrom (2013) makes sure to point out that certain posthuman modes of being would actually reduce our degree of A1. Not all possible posthuman states are necessarily positive. Human beings could be altered in such a way as to be more docile or more easily controlled. Bostrom and other transhumanists are well aware of the possible existence of these more subpar states, and they agree that we need to take the necessary precautions to avoid them. Even though there is this risk, they argue that the potential positives are worth pursuing in spite of them.

It is clear that transhumanists accept HS and its conception of the human as an *H*. To them, humans are separate and definable beings. This is made clear by their methodology, where they often describe human beings in terms of capacities. In so doing, they follow in the footsteps of humanists. Man, for them, is a being with capacities that are identifiable but also improvable. Unlike humanists, transhumanists emphasise the fact that we are limited beings. Enhancement is justified because it could improve A1 and allow us to have a greater measure of self-governance. What leads them to this conclusion is their humanist belief. However, they aim not only to protect our autonomy but also to improve it. We can then understand the posthuman as a better *H*. I classify their conception of the posthuman as *H+*. Their transhumanist argument (TA) I understand as follows:

- (1T) There exists being *H* that is autonomous and therefore valuable.
  - (2T) This stance implies that *H* is a limited being.
  - (3T) Because *H* is limited, it is not as autonomous as it otherwise could be.
  - (4T) Theoretically, there could be better *H+* beings.
  - (5T) New technological enhancements make it possible to change *H*.
  - (6T) By taking the right steps, the enhancement will be beneficial.<sup>5</sup>
  - (7T) If we technologically enhance *H*, we will transform it into *H+*.
- CT: We should enhance *H*, which will lead to *H+*.

*H+* in the transhumanist theory could be understood as an ideal humanistic subject. Transhumanists understand *H+* as a separate being from *H*. It is a being that has power over its form. That gives *H+* the capability to govern itself in ways that *H* could not. Although posthuman states with

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<sup>4</sup> This term in the transhumanist discourse refers to the so-called WBE (Whole Brain Emulation) which is a theoretical procedure that would allow "uploading" of the brain to the computer. For an overview, see Bostrom & Sandberg (2008).

<sup>5</sup> As a side note, the argument of the bioconservatives would be very similar to the transhumanist one. Because they also accept the HS. The only difference between them lies in the fact that they see enhancement negatively. See Fukayama (2002) and Kass (2008, 2003, 1997).

a lesser amount of autonomy might exist, they argue that they can be avoided. Transhumanists themselves are dedicated to pursuing better posthuman states, and they advocate for increasing human autonomy through enhancement. However, when it comes to providing guidance on avoiding these undesirable states, they do not offer much. At most, they argue that only by engaging with enhancement technologies, only by mastering them, we can avoid the less than ideal posthuman states (More 2013b). Ironically, I think that Wolfe (2010, xv; emphasis added) characterises transhumanism the best when he calls it the *intensification of humanism*. While humanism mainly concerns itself with identifying and taking care of man, transhumanism seeks to extend the reach of the individual to intensify his boundaries with the environment. This is so because of the relationship between A1 and A2.

### 3. Posthumanism and man as an embodied being

Whereas transhumanism can be identified as having a positive relationship with humanism, the same cannot be said about posthumanism. According to Ferrando (2019), posthumanism can

on the one hand, ... be seen as a 'post-humanism,' that is, a radical critique of humanism and anthropocentrism; on the other hand, in its significations as a 'posthuman-ism,' it recognises those aspects which are constitutively human, and nevertheless, beyond the constitutive limits of the human in the strict sense of the term. (p.3)

Posthumanism as a critique can be closely connected to postmodernism and anti-humanism. But the critique of *H* is only half of the whole story. The other is attempting to provide an alternative conception of the human by attempting its reconstitution. Posthumanism must be understood as a post-anthropocentric movement that seeks to decentre our conception of man through the postmodern critique of the categories that support it.<sup>6</sup> Posthumanists see humanism as harmful because of its ontological implications.

The concepts of the autonomous subject or the universality of the human being are inherently tied to what they call humanistic dualism. This dualism and its danger are best described by Ferrando (2019), who states that "dualism has been employed as a rigid way to define identity, based on a closed notion of the self and actualised in symbolic dichotomies." (p.54). The only way we could have ever been able to identify and separate the *H* was by excluding anything deemed the *other*. This exclusion rarely leads to anything beneficial because, as Braidotti (2013) puts it: "Central to this universalistic posture and its binary logic is the notion of 'difference' as pejoration. Subjectivity is equated with consciousness, universal rationality, and self-regulating ethical behaviour, whereas Otherness is defined as its negative and specular counterpart." (p.15). Braidotti demonstrates how she understands autonomy in both senses as responsible for the exclusion of the other. By understanding *H* as autonomous, we have to exclude the *other*. However, it was not only a mere exclusion of the *other* but rather its ontological reduction into the inhuman or less-than-human. Understood in this way, humanism, in the eyes of posthumanists, breeds anthropocentrism, where those that are understood as inferior face persecution because only those seen as rational and autonomous are truly valuable.

It is the humanistic dualism that posthumanists seek to attack in their critique. One way in which they do so is by showing how the humanist dichotomies do not stand. Here is where posthumanists find the most common ground with anti-humanists. The *H* did not in any way reflect anything like intrinsic human nature, and instead, it was, according to Braidotti (2013), found to be "a historically and culturally specific discursive formation." (p.24). The ideal man was shown to be a white European male, therefore not reflecting anything universal about the human race. However, posthumanism should not be seen as identical to anti-humanism. While anti-humanism provides a path toward the posthuman, posthumanism is also attempting to move beyond it. Posthumanism should instead be seen as an alternative to both humanism and anti-humanism (Braidotti, 2013).

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<sup>6</sup> It should be noted that three types of posthumanism can be identified: critical posthumanism, cultural posthumanism, and philosophical posthumanism. Posthumanism first came about within the critical idiom, specifically in postmodern literary theory, where Hassan (1977, 1987) developed it. Soon it also spread to cultural criticism, where it was represented by authors such as Haraway (2016a, 2016b), Hayles (1999) and Badmington (2003, 2004). This eventually gave birth to a fully developed posthumanist philosophy, with works such as Pepperell (2003), Braidotti (2006, 2013) and Ferrando (2019).

One of the major departures of posthumanism can be found in their interest in the effects of new technologies on our conception of what is human. Unlike transhumanists that conceptualise NBIC technologies as an opportunity to increase our autonomy in general, posthumanists identify the opposite development. Pepperell (2003) points out how advances in AI are pressuring the idea of rationality being exclusively human. In this manner, the boundary between the human and the machine is blurring. This severely undermines A2 of *H*. Haraway (2016a; emphasis added), in her *Cyborg Manifesto*, succinctly puts it as follows: "Our machines are disturbingly lively, and we ourselves frighteningly inert." (p. 11). Haraway takes the stance that we all might, in reality, be *cyborgs* – beings that are closely intertwined with the world and other beings. For her, it identifies an even more expansive way in which technological development is slowly undermining the humanist subject. With the progress of technology, we are becoming increasingly more dependent on it. By being dependent on it, we create a close *coupling* with it. The humanist subject and its boundaries are being undermined and slowly violated. By becoming more dependent on technology, over time A1 is being diminished, and this also affects A2.

With the humanist subject being broken apart, we are on the path toward the posthuman. Where *H* was once understood as autonomous, the posthuman cannot be seen as such. Instead, for posthumanists, it signifies the radical departure from such a view. Since humanists identify man's autonomy by recognising his rationality,<sup>7</sup> many posthumanists take the route of showing how our cognition is deeply embedded within the world. The embodiment serves as a way in which we can depart from humanist thinking. Embodiment, for posthumanists, stems from the fact that we are living beings; as Ferrando (2019) states: "Life, and more in general, existence is embodied." (p.115). The first posthumanist to engage with the concept of embodiment was Pepperell (2003). What he intended to do by showing the mind as embodied was to attack the traditional separation between the body and the mind. By showing that the mind is embodied, it means that it is continuous with the world. If we are so embedded, then we can no longer talk about the clear and definable *H*, and instead, we can use the human as only a mere approximation; the human becomes a "*fuzzy edged' entity*" (Pepperell, 2003, p. 20; emphasis added). We can no longer clearly identify what is and what is not human, and therefore we can no longer fix the extent of it.

Pepperell displays a typical posthumanist strategy of problematising autonomy. By showing how embodiment muddles the extent of *H*, he is putting A2 into doubt. If A2 is shown to be problematic in this way, A1 is also questionable. If there is no clear-cut individual, it is difficult to say that something is self-governing. Posthumanists generally exploit the relationship between A1 and A2. By showing that one does not hold, they diminish the other as well. We saw that Haraway (2016a) was attempting something similar in her examination of our relationship with technology. Similarly, Ferrando (2019) emphasises the plural notion of the human instead of individual *H*. There is no universal *H* that can be recognised; therefore, there is no individual *H*, and we can contend with only the particularity of humans. The posthuman relies on recognising this fact. Embodiment is then the concept most commonly used for this tactic. Because it most clearly puts forward the image of our situatedness. To be embodied is to be embedded in the environment and, therefore, not clearly individual. The fact that we are so embedded then should make us question both A1 and A2. For this reason, the embodiment is commonly presented by posthumanists as being mutually exclusive with autonomy.

Posthumanism is in many ways the opposite of transhumanism. To them, new technologies of enhancement, and the new beings that might come as a result, reveal that we were not as autonomous as we thought. From a moral standpoint, the most striking difference of posthumanists from transhumanists is their rejection of autonomy as valuable. They see autonomy as criteria that can lead to dangerous individualism and anthropocentrism, where only certain groups have an increased measure of autonomy. Instead, they argue that if we want to take care of the future posthuman beings, we have to reject autonomy as the ultimate measure, to achieve better cooperation between disparate groups. Instead of concentrating on the individual's autonomy, we have to engage with all of the diverse perspectives that the new posthuman paradigm offers us. They see this as the only way to

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<sup>7</sup> Humanists typically associate the uniqueness of man with intellectual capacity of some kind, the specifics can differ. For example, Norman (2004) bases his account on consciousness, della Mirandola (1956) speaks about intellectual capacities in general and Lamont (1997) mentions reason explicitly.

ensure that posthuman beings will be well treated and that our future posthuman states will be more beneficial. I understand their position as being against HS. Their new conception of man goes hand in hand with this account. We are not separate beings, and neither are we genuinely autonomous. By thinking in this way, posthumanists steer us away from humanistic dualism and its anthropocentrism. The human is no longer unique in any way; instead, it is only a part of the greater whole. For that reason, I deem their notion of the posthuman as  $H\sim$ , which signifies the posthuman condition, where we can no longer be sure about the extent of the human; we can only understand it as an approximation. I understand their posthumanist argument (PA) for this notion as follows:

(1P) Humanists hold that: "There exists being  $H$  that is autonomous and therefore valuable."

(2P) This stance gives value only to those deemed autonomous.

(3P) The uniqueness of  $H$  can be questioned; other beings could also be seen as autonomous.

(4P) Autonomy should not be seen as the ultimate value.

(5P) All beings are embodied.

(6P) The embodied being is necessarily connected with the world, and therefore it is not autonomous.

CP:  $H$  is only fiction. Man is a being  $H\sim$ , which is not autonomous.

We can see that, similarly to transhumanists; posthumanists build PA on HS. The difference is that, unlike transhumanists, they do not assert this stance. Instead, they only hold the claim that it is the humanist position. Whereas the transhumanist  $H+$  was used to describe new beings that will arise out of  $H$ , the  $H\sim$  is understood differently by posthumanists. While it can signify new beings that will come about, it can also describe an attitude or a stance. For posthumanists, we can already become  $H\sim$ . All we have to do is to change our stance toward the human.

#### 4. The posthuman and problems of terms

Now we can see the difference between how transhumanists and posthumanists view the posthuman. Transhumanists accept HS and see NBIC technologies as an opportunity to increase our autonomy. Because transhumanists build the posthuman based on  $H$ , they mainly concentrate on arguing how our autonomy could be improved. The eventual result of the enhancement of  $H$  will be  $H+$ . On the other hand, posthumanists reject HS and  $H$  and instead argue that we should replace  $H$  with a new conception of the human. By deconstructing  $H$ , they show that the human is, in actuality, not autonomous but instead has to be understood as an embodied being. So we can only talk about the human as  $H\sim$ , whose extent is ultimately unknown to us. The question now is, could either  $H+$  or  $H\sim$  be sufficient to replace  $H$ ?

One thing that makes this comparison complicated is the fact that transhumanists and posthumanists imagine different processes of becoming posthuman. Transhumanists claim that nobody is yet an  $H+$ . A person has to first undergo a series of enhancements. Meanwhile, for posthumanists,  $H\sim$  does not have to be related to our physical makeup at all. Instead,  $H\sim$  is rather used to describe a state of or an attitude toward the human. According to posthumanists, we can already become  $H\sim$  now by accepting the PA. Nevertheless, my stance is such that neither notion of the posthuman is good enough to replace  $H$ , because neither can adequately describe the transition from  $H$  to the given posthuman type. Both PA and TA are based on key terms, the meaning of which can be questioned. So I will judge both of these arguments along these lines. TA hinges on how we understand enhancement. If it transpires that it does not have the form that transhumanists desire, then the entire concept of  $H+$  would be put into jeopardy. PA holds that embodiment and autonomy are mutually exclusive. However, posthumanists are not exactly clear as to how we should conceptualise embodiment. I will argue that we can judge their concept of embodiment by engaging with their notion of life.



#### **4.1. *H+* and its relation to enhancement**

TA is mainly an ethical argument. It does not merely seek to establish that posthuman beings can exist but rather that we should take steps to become posthuman ourselves. When the concept of enhancement is questioned in bioethical debates, it is often the premise (6T) that is attacked. For TA to hold, enhancement has to be defended as beneficial. Specifically, it has to be shown to enhance our autonomy; otherwise, it would lack the necessary ethical force to convince us—this strategy bioconservatives like Kass (1997, 2003, 2008) and Fukuyama (2002) use. Bioconservatives are surprisingly similar to transhumanists in that they also base their position on the HS. Both Fukuyama and Kass question whether enhancement would ultimately lead to an increase in our autonomy. For example, Fukuyama is willing to admit that, in some limited cases, the autonomy of some persons would be increased; however, it would be a net loss for the rest of us. The bioconservatives' argument thus seems to be that the posthuman signifies a loss of autonomy.<sup>8</sup>

In this paper, I am not interested in the ethical ambitions of TA. Instead, I want to concentrate my attention on whether we can become posthuman through enhancement and whether such an idea makes sense. I would question how transhumanists understand the term *enhancement* itself. Firstly, we have to take a look at how we typically use the term *enhancement*. Now "enhancement" is a value-laden term.<sup>9</sup> When we decide to enhance something, our goal is to make it better in specific ways. I cannot help seeing something strange about the transhumanist line of reasoning. *Prima facie*, there is something wrong with the statement that we can transform an object into a different object by enhancing it. Why is this so? When we are enhancing something, like a tool, our goal usually is not to transform it into something else. On the contrary, we seek to perfect it, to make it a better version of itself. That does not mean that I cannot accidentally create something new while enhancing something. When I decide to improve the flavour of my coffee, I may create a brand new kind of beverage by accident. That, however, was not my goal. Unless we accept some form of Platonism, there probably does not exist a perfect tool for every situation. However, there might be a better tool for some circumstances. What that means is that we can enhance some objects to have specific qualities to solve the given problem. Also, what we judge as an improvement is bound to be relative in many situations, and often there will also be trade-offs to consider. If I like my coffee sweet, and you like your coffee bitter, we will judge different actions as enhancements to our drink. Let us briefly consider a specific example.

Ships have been with us for a long time. We can trace a long history of improvements of ships. Compare the ancient Greek trireme with the modern aircraft carrier. The difference between the two could not be starker. The trireme is built out of wood, can carry a couple of hundred men, and it moves through the water thanks to oars and sails. Meanwhile, an aircraft carrier can carry not only men but also numerous fighter jets, helicopters, and other aircraft, it is made out of metal, and a nuclear reactor powers its propulsion system. Despite the differences between these two kinds of vessels, we still identify both of them as ships. I would argue that this is because we hold certain features of ships as being valuable. For example, we could be calling both ships because they are naval vessels of a specific size (making them different from boats), and both are capable of carrying out their function of moving across bodies of water. When we improve ships, we aim to increase this capacity. I believe that this example teaches us several things about enhancement. First, it is tied to certain properties of said objects. In the case of the enhancement of ships, the identifying property may be their capacity to carry people and cargo across bodies of water. Secondly, specific properties are irrelevant to enhancement. So with ships, it does not matter what they are made of or what is their mode of propulsion, as long as they can do the given job. What really matters is the property that we understand as valuable. This does not mean that artefacts cannot be replaced by different objects when it comes to the same job.

Compare the example of ships to the rivalry between horses and cars. Cars replaced horses as one of the primary land vehicles. Was it, however, as a result of enhancement? Can we say that cars are improved horses? I do not think so. Cars did not arise out of the enhancement of horses, although they share the capacity to serve as land vehicles. What allowed cars to supersede horses as the primary

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<sup>8</sup> For the sake of completeness, we could say that bioconservatives understand the posthuman as *H-* – as beings that have significantly less autonomy than current *H* beings.

<sup>9</sup> See Buchanan (2009).

land vehicle was that horses could not do the same task better. Horses simply could not be improved further or just as easily as cars. That means that there are limits to the enhancement of particular objects. Some are more open to it than others. Further, I believe that enhancement is tied to a perspective. When my horse is not as fast as I would like, I can take several steps to improve his speed. Give him better food, buy him better horseshoes, and maybe even take more drastic measures such as genetically engineering my horse to improve his performance. Within this perspective, I find it unproblematic to call this process enhancement. The moment I start to wonder whether something other than a horse would serve better, I am no longer within the realm of enhancement.

When we turn to human beings, the natural question becomes: what are the valuable features that identify human beings? That can bring into this a discussion a variety of issues related to the definition of the human.<sup>10</sup> In this case, however, the burden of proof lies with the transhumanists. They have to provide a criterion for identifying humans as targets for enhancement. As I have shown, transhumanists are driven by humanist ethics. That means they understand human beings as *H*. Therefore, one of the core values that identify them is their autonomy. This is the only identifying trait of both *H* and *H+*. They believe that we should improve the human condition by increasing the amount of human autonomy. However, the result of this enhancement of *H* supposedly will be *H+*. The transhumanist argumentation from the point of view that I presented seems paradoxical. It seems as if transhumanists are arguing that we will develop cars by enhancing horses. Instead of improving human lives, they are arguing for the creation of new beings that could live human lives better. Further, if humans are identified by their autonomy, then the result of human enhancement should simply be better humans and not different beings. This case is analogous to the horse example from earlier; by improving the speed of my horse, I made him into a better horse in my eyes. I did not produce a new creature by doing, although that might happen by accident. On one side, transhumanists assert the same values as humanists do, but on the other, they argue for the replacement of mankind. In essence, transhumanists are humanists that argue for human extinction. I identify two different sources of this problematic paradox.

The first cause of this paradox can be traced to how transhumanists understand enhancement. As I established in the second section, transhumanists hold the position that there is no difference between enhancement and therapy. However, if this is so, how can transhumanists claim that we will become *H+* by enhancement? They label any form of medical procedure as a step toward the *H+* by holding this stance. That severely muddles the entire concept altogether. Think about it, if radical technological enhancements are no different from taking aspirin, why aren't we *H+* already? We can extend this even further when we look at it from a historical perspective. Take our current standard of living and compare it with the status of our predecessors 200 years ago. Compared to them, we might as well be *H+* because we have already undergone a series of enhancements.

The problem is that, with this stance, transhumanists put themselves on a slippery slope. The impression that I get from transhumanists is that they imagine the transformation to be additive. That the individual enhancements will, down the line, add up to us becoming *H+*. But how does this apply to the traditional forms of enhancement? Let us return to the example of taking aspirin tablets. What if I take not one aspirin tablet, but two? Is that radical enough? What if I take them daily? Will I gradually become *H+*? Of course, I will probably not. However, if enhancements can add up, why should it not also apply to this case? Where exactly lies the threshold? I fully understand why transhumanists claim that there is no difference between enhancement and therapy. I have no problem with this stance on its own. We can, however, notice a similar trend across the entire transhumanist argumentation. It can be seen in Yudkowsky's (2007) insistence on transhumanism not being different from humanism, or in Sandberg's (2013) argument. Transhumanists tend to underplay how different their proposed methods are from the established practices. The problem is that they want us to see enhancement both as mundane, so we are more willing to accept it, and to imagine its consequences as being extraordinary. They cannot hold both these positions simultaneously because it undermines their conception of the *H+*. Either we have continually enhanced ourselves, or their proposed new enhancements are indeed something new. If they want to hold that we will become *H+*, they can choose only the latter option.

The second source is the clash between the two different senses of autonomy. Transhumanists inherit the dual conception of autonomy from humanists. However, for transhumanists, it comes with

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<sup>10</sup> See Kronfeldner (2018).

a serious issue. Humanists were able to put forward things such as education as an improvement of the human condition without any problems. Transhumanists, on the other hand, have to contend with NBIC technologies and their potential. Cognitive enhancement, for example, could have far-reaching consequences for understanding one's identity. It is here where self-governing and individuating autonomy come into conflict. If we give a person a considerably greater degree of self-governance, it paradoxically gives the person the power to change their status as an individual. Now, transhumanists could hypothetically choose to discard A2 in favour of A1 to solve this issue. But they cannot do this because self-governance does not make sense without an individual agent that governs itself.

Therefore, transhumanists have to juggle both senses of autonomy. An additional reason is that, without the notion of A2, they can no longer hold the (2T) premise, which states that *H* is a limited being. To say that *H* is a limited being requires understanding *H* as an individual that has clear-cut boundaries. Without an individual, we do not have an entity to define as limited. That forces transhumanists to hold on to the A2. That, in turn, affects how they conceptualise the transition from *H* to *H+*. They have to conceptualise enhancement as the transition from being one kind of individual to a different kind. Sometimes transhumanists add a category of transhumans to have a transitional identity between the human and the posthuman (Bostrom, 2005a). This claim further proves my point. Transhumanists cannot conceptualise a more gradual scale of the human and the posthuman, and therefore have to imagine the transition as a step-by-step process. Their humanist roots force them to be rigid in this way. Ironically, that leads them to conceptualise the enhancement of our self-governance as the elimination of the limited *H*.

Because of these two problems, their understanding of enhancement becomes warped. Rather than understanding it as a process of improving and perfecting a given being or object into a better version of itself, they have to conceptualise it as a transformation process. That, however, is not how we commonly understand and practise enhancement. Something within transhumanist theory must give, either they are improving human autonomy and thus they should drop the posthuman rhetoric, or they seek to replace humans with posthuman beings, and therefore they should no longer talk about the enhancement. The fundamental problem that I have with the transhumanist understanding of the posthuman is its lack of ontological grounding. It is this lack that leads them to conceptualise enhancement as transformation. I would argue that this fact stems from their motivations. Transhumanists mostly argue about why we should become posthuman, but they only briefly outline what makes something posthuman. They offer only autonomy as its identifying trait, which makes *H+* too similar to *H*. Without a proper conception of the posthuman, I do not see how transhumanists can argue for their conclusion.

#### **4.2. *H*~, embodiment, and life**

With PA, I am most interested in the (6P) premise that holds that to be embodied means not to be autonomous in either sense. PA hinges on a claim that embodiment and autonomy are mutually exclusive. As embodied beings, we cannot be independent individuals and therefore, we cannot be seen as self-governing. However, I do not see how the concept of embodiment would in itself be exclusive to being autonomous. On the contrary, some would argue that the body gives us tools to realise our autonomy. For example, enactivists hold this stance (Varela et al., 2016; Barandiaran, 2017). Posthumanists typically argue that embodiment results in us being embedded in the world. Nevertheless, to say that something is embedded is still not enough to show that it is not autonomous. To hold that premise, they need to have a specific conception of embodiment.

Sadly, posthumanists do not provide us with any definition of what they mean precisely by *embodiment*. We can, however, extrapolate their notion of embodiment from how they understand life. Now there are many different theories of life.<sup>11</sup> Posthumanists themselves engage with the theory of life as *autopoiesis* (from Greek *auto* = self; *poiesis* = creation, production) (Maturana & Varela, 1980, 1987; Razeto-Barry, 2012). That can also serve as a basis for embodiment (Villalobos & Razeto-Barry, 2019). According to this theory, every living system creates its environment through the domain of interactions that are made possible by its *autopoietic* organisation. Maturana and Varela (1980, 1986)

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<sup>11</sup> For an overview, see Cornish-Bowden & Cárdenas (2020).

saw the ability of biological systems to self-regulate and self-organise as their defining feature. Regardless of the material available, the given system is able to perpetuate its organisation.

Posthumanists engage with *autopoiesis* in two different ways. Some appreciate its account of life and incorporate it into their theories. For example, Braidotti (2006) is positive about the *autopoiesis* account because it can help us to understand humans, non-human animals, or machines as self-organising systems. In her words, we have to come "to terms with the generative power of non-human and non-organic entities." (Braidotti, 2006, p. 126). Wolfe also sees the potential of *autopoiesis* to relocate the notion of the human. Wolfe (1995, 2010) aims to no longer ground the human in any objectivity; thus, *autopoiesis* which has subjectivity built-in, is a suitable alternative. In his eyes, the *autopoiesis* account can avoid the pitfalls of representationalism and the human/non-human dichotomy.

Others reject it for preserving too much of humanist autonomy. Hayles (1999) engages with this concept to prove that our cognition is strongly physical. While she appreciates how Maturana and Varela (1980, 1987) formulate the *autopoietic* systems as embedded in their respective environments. Hayles does not totally accept *autopoiesis*. These systems are ultimately self-making and, therefore, still autonomous in some manner. Haraway (2016b) rejects *autopoiesis* entirely. In her own words, "Nothing makes itself; *nothing is really autopoietic or self-organising*" (Haraway, 2016b, p. 58; emphasis added). Instead, Haraway takes the basic ideas of this theory and formulates a new notion. Out of *autopoiesis*, she conceptualises *sympoiesis* (from Greek *sún* = together; *poiesis* = creation, production). The relation of *sympoiesis* to *autopoiesis* is such that "sympoiesis enfolds autopoiesis and generatively unfurls and extends it." (Haraway, 2016b, p. 58). Her stance is that there are no individuals, no units or beings.<sup>12</sup> She proposes that we should use the term *holoents* as a replacement for such general terms. We then have to be understood as *holobionts*,<sup>13</sup> which she defines as: "symbiotic assemblages... which are more like knots of diverse intra-active relating in dynamic complex systems" (Haraway, 2016b, p. 60). Haraway emphasises that we are symbiotic beings that are closely interwoven with other living beings. She describes our state of being as *becoming-with*. In her mind, the only way we can organise ourselves is through complex games with other living beings.

So, we can see that posthumanists have two choices for describing embodiment. They can choose to understand it as *autopoietic* or *sympoietic*. However, I would argue that PA is incoherent, no matter which they choose. That is because neither option can explain how we could have understood ourselves as *H*. Ferrando (2019) provides us with the best posthumanist theory of how we could have conceptualised the human as an *H*. In her mind, we were not always *H*. There was once a time when we did not understand ourselves as such. She argues that we should not understand *H* as a notion but rather as a verb: to humanise. In her view, we should regard the human as a humanising process. She likens this process to how gender is viewed within the feminist theory. Feminists view gender as purely performative and continually reinforced. Such reinforcement must be understood as a social process; no one can become a woman in private (de Beauvoir, 2009; Butler, 1999). This idea should be applied to the humanising process. We become *H* by participating in a given set of cultural experiences, traditions, and socialisation. Those who did not or could not participate in these activities were then classified as inhuman or nonhuman.

*Homo Sapiens* itself was never truly any species or substance. It was more akin to the process that produced a recognition of *H*. Ferrando (2019; emphasis added) goes on to state that we have to understand the humanising process as "an embodied process; moreover, the embodiment of such doing is strictly human (*nonhuman animals or machines have had no direct agential access to such redefinition, yet*)" (p.74). So, the humanising process is closely tied to our status as embodied beings. Here, the choice between *autopoiesis* and *sympoiesis* becomes very relevant. Now the logical question would be, which one does Ferrando choose? The problem is that she does not give a clear answer. On the one hand, she accepts Haraway's criticism of *autopoiesis* and states that "in this study, we will not rely on autopoiesis as the ultimate way to define life." (Ferrando, 2019, p. 141). On the other hand, she is willing to accept its cognitive account because it allows us to differentiate between minds through

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<sup>12</sup> Haraway ultimately rejects even the posthuman. Because even it attempts to describe something individual. That could make some question whether her *sympoietic* account is still relevant to the examination of the posthuman. I would argue that her account actually represents the logical conclusion of the *H~* as a concept. So, although she may reject the posthuman as such, she is providing a new conception of the human that aligns with PA.

<sup>13</sup> She borrows this term from Margulis (1991, 1998).

their organisation—different species process reality differently than we do. I would interpret her position as that biologically we are *sympoietic* and psychically *autopoietic*. Now, this would align with her statements about the humanising process for one particular reason.

She understands this process as concerning human agents. As she states in the part that I have emphasised, other agents do not have access to this process as agents. However, what does it mean that they do not have access as agents? The only way that I can interpret this statement is that it states that they do not have the autonomy to do so, while human agents do. Ferrando is forced to invoke A1, to formulate her concept of the humanising process. Because she claims that *H* did not describe any species or substance, it would align with her stance. What would allow human agents to participate in the humanising process would be their autonomy. It is here where the problem is revealed. I have stated that PA requires embodiment and autonomy to be mutually exclusive. However, Ferrando's account of the humanising process needs to understand human agents as autonomous enough to participate in it.

If the humanising process is an embodied process that requires autonomy to function, then embodiment and autonomy cannot be mutually exclusive. It is this fact that invalidates PA. Posthumanists can present their narrative of *H* being a social construct only if they accept human agents as autonomous. Otherwise, their account makes no sense. So, a posthumanist account of the humanistic *H* and its creation presupposes autonomy. On this account, it does not matter whether posthumanists choose to understand embodiment as *sympoietic* or *autopoietic*. If they choose the former, they cannot explain how humanist dualism was established in the first place. This is due to our state of being as *becoming-with*. We can only become something in relation to something else, not on our own. Therefore, we would not be able to exclude the *other*. If they choose the latter, they face the problem that *autopoiesis* still affords human beings some measure of autonomy and therefore does not entirely prevent humanistic dualism from arising again. That leads me to characterise posthumanism as an unsuccessful escape from autonomy.

## **5. Conclusion - Beyond autonomy**

From the arguments that I have presented, it should be clear that both approaches to the posthuman fail to adequately describe the transition from *H* to the given posthuman state. Also, both conceptions of the posthuman suffer from deficiencies. If we look at transhumanism and *H+*, we can see that they wrestle, on the one hand, with the two sides of autonomy that get into conflict within their position and, on the other hand, fall prey to a terminological confusion about what we should understand as an enhancement. In my mind, their problems arise from their closely held humanist beliefs. Their *H+* seems to be portrayed as simply better human beings rather than brand new ones. This problem is inherently tied to the terminological issues related to enhancement. Since transhumanists are mostly activists first and philosophers second, they tend to underplay the weirder possibilities that the idea of posthuman beings can present. Their arguments mainly concentrate on how technological enhancement could improve human life, but what other stranger lifeforms this process could create is mostly underplayed unless they are brought up as examples of what we need to avoid. With this being the goal of their movement, I cannot help but see the introduction of the posthuman as counter-intuitive. If transhumanists dropped the posthuman rhetoric, it would improve TA on the whole.

For one, they would avoid issues with the two senses of autonomy. Instead of dealing with conflicts between identity/individuality and self-governance, they could simply claim that they are improving the inherent autonomy of human beings. They could hold that they are merely creating better human beings and not something different. It bears to mention that transhumanists have noticed the problems with the notion of the posthuman. For example, Bostrom (2013) hopes that one day someone will come up with a better name for the concept, and I would argue that a better formulation of what exactly transhumanists want to achieve is needed. Otherwise, their talk about the posthuman seems to be nothing more than mere rhetoric.

The same cannot be said about posthumanists who, unlike transhumanists, seem to take the ontological status of the posthuman seriously. For this fact alone, I would commend posthumanists for their diligence in cataloguing the myriad of forms that the posthuman could take. But I think their problems might arrive from the opposite end of the spectrum compared to transhumanists. Their critical approach to humanism jeopardises their concept of *H~*. By trying to disprove the concept of *H*,

they ultimately undermine  $H\sim$ . They end up struggling with eliminating autonomy from their own account. As we saw, Ferrando (2019), in her account of how we became  $H$ , fails to explain how the same status was not afforded to other beings without invoking the autonomy that she seeks to eliminate. Similar woes are identified by other posthumanists, who experience similar struggles and are also aware of this at varying levels. For example, Braidotti (2013) mentions how she finds it difficult to dispense with the positive aspects of humanism, such as individualism and self-determination, although they both can harm if taken to the extreme.

Some even go as far as to include this struggle with eliminating humanism into their theories. Badmington (2003) remarks on how difficult it is to take down humanism because it can find new ways to sprout again soon after. For that reason, he argues that posthumanism has to look distinctively for the posthuman within humanism. It has to work through humanism itself. That, however, makes me wonder whether  $H$  is genuinely only a social construct as posthumanists claim. It makes me think that Braidotti (2013; emphasis added) is wrong to say that  $H$  is merely "a historically and culturally specific discursive formation." (p.24). If they struggle so much to eliminate humanist concepts from their argumentation, maybe there is something more to humanist theories than is apparent to them. I think that this problem is most readily visible when we examine Haraway's (2016b) theory of *sympoiesis*. If we were indeed so closely tied to and interacting with other *holoents* in the world, how were we able to conceptualise ourselves as  $H$  in the first place? Any influence that we would try to assert on other beings, such as trying to exclude them ontologically, would come with a reaction. After all, according to Haraway, we can partake in the process of becoming only *with* someone else. So, for me, at least, it becomes difficult to imagine how an idea of human exceptionalism could get off the ground at all. Unless us being  $H$  resulted from *sympoiesis*, out of cooperation with other beings and not only their exclusion. Although it is their goal to show that man was never autonomous, they still must cling to autonomy to make their case in the first place. Without it, PA and the concept of  $H\sim$  do not make any sense at all.

For these reasons, both PA and TA fail in their goals. PA fails to eliminate autonomy, and TA fails to explain enhancement. That leaves the concepts of  $H+$  and  $H\sim$  too incoherent to replace  $H$ . That naturally leads to the question of what we should do with the category of the posthuman. While I argue that the conceptions that transhumanists and posthumanists offer do not stand up to scrutiny, I think that the term *posthuman* could still be put to good use. While most posthumanists hold the position that I described, there are exceptions. A notable one is the work of Roden (2015). While he identifies himself as a posthumanist, he differentiates himself from the rest. He characterises his stance as *speculative posthumanism*. According to him, all kinds of posthumanism are "opposed to some form of human-centered worldview" (Roden, 2015, p. 20-21). Roden still identifies himself as a posthumanist, because he opposes humanist anthropocentrism. However, it is here where the similarities end. His aim is not to provide "a normative claim about how the world ought to be but a metaphysical claim about what it could contain" (Roden, 2015, p. 9; emphasis added). While I do not accept Roden's theory wholesale, I agree with his overall approach. My stance is that we sorely lack impartial ontological explorations of what would make something posthuman. There is an ever-growing need to explore the posthuman, because soon, we will have to contend with it. Both conceptions of the posthuman that transhumanists and posthumanists offer are coloured by their respective agendas. This obscures the view of how posthuman beings will conduct themselves.

This problem is all the more pressing because while TA and PA fail, many of their points still stand. Transhumanists are correct to question whether we can remain  $H$  in the face of incoming NBIC technologies. Posthumanist critique can still be applied to the  $H$ . While they failed to eliminate autonomy, they can still show that other beings can also be autonomous. This point is crucial in my eyes. It is undeniable that posthuman beings will also be autonomous. What does that mean for  $H$ ? I believe that we will not be able to identify the human by its autonomy strictly. New technologies do not mark a radical change in the state of our autonomy, as transhumanists and posthumanists argue. Instead, they point to the need to reinterpret what autonomy entails. What does it mean to be autonomous? This question will be pivotal in defining our future relationship with posthuman beings.

I believe that looking over older ideas is needed. Both transhumanists and posthumanists have discarded some of the older perspectives on this topic too readily. For example, Julian Huxley is one of the people that I cannot help but constantly return to in my thought. Huxley was the first to use the term *transhumanism*, and he had a very different understanding of it. In his theory, transhumanism posed as a new belief for the modern age. Whereas people had previously put their faith in gods,

Huxley (1927) dreamt of the day that people would come to believe in themselves. Thus, to him, transhumanism signified the belief in the human capability of change. I think it is best to quote Huxley (1957a; emphasis added) himself to adequately describe this ability:

The human species can, if it wishes, transcend itself —not just sporadically, an individual here in one way, an individual there is 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. (p.17)

I would argue that this stance still has merits, even when we contend with NBIC technologies. One of the major factors influencing Huxley's view was his work in evolutionary biology. Huxley (1957b, 1961) understood himself as an evolutionary humanist. One of the things that he was attempting was to place man into the evolutionary context, and he viewed the entirety of nature as an evolutionary process. However, to Huxley, humans are unique because we came to develop the next stage of evolution. By what he called "psychosocial evolution", we became capable of transcending ourselves through other than biological means (Huxley, 1957c; emphasis added).

It is important to mention that this account still suffered from some humanistic anthropocentrism that posthumanists point out.<sup>14</sup> However, I would argue that Huxley also deviated substantially from the humanist tradition. Huxley identified man not as an individual but rather as a process. The human was unique because it could take a new direction when compared to everything else. He still asserted that humans were autonomous beings but in a different way. From the fact that we are autonomous beings, he derived that we can transcend ourselves. But it was no longer just this autonomy that made human beings unique and valuable. Instead, it was how we used our autonomy to evolve differently. The identifying factor for Huxley was not our mere autonomy but what we used it for, or precisely how we used it. This situation is similar to how often the man is identified as a social animal, but it is also clear that we are not the only social creatures on earth. Does that mean that we are no longer social beings? No, we just have to understand that there are many different forms of sociality. We are social in a different way from ants, for example. The same will have to be recognised when it comes down to our autonomy.

Autonomy itself is ultimately based on our normativity. It is not that we merely decide to act, but that we seek to choose the correct and proper course of action. The idea that humans are unique because we are normative beings can be traced through Sellars (1948, 1949, 1954, 1969, 1997) to Wittgenstein (1953, 1956, 1969) all the way back to Kant (1998). Normativity is also an important factor in personal identity, as was shown by research in experimental philosophy (Prinz & Nichols, 2017; Strohminger & Nichols, 2014; Strohminger, 2018). I believe that the emergence of posthuman beings will somewhat challenge the status of human beings as the only normative species. However, it will not challenge the uniqueness of our normativity. Posthumans might be just as normative as humans are, but what they will see as the correct course of action might differ. Roden (2015) comes to a similar point, where the difference in the functional autonomy of posthuman beings will create disparate posthuman values. That means that a difference in values will characterise our possible coexistence with the posthuman. We cannot tell how significant this difference will be until we meet these new posthuman beings. However, we can turn within ourselves and attempt to understand our own values as best we can. Because these values dictate how we use our autonomy, they may show the way forward and help us to realise what truly makes something human.

## **6. Acknowledgements**

This paper received funding from the Philosophical Faculty, University of Hradec Králové, by the Specific Research Grant "Humanism, Transhumanism, Posthumanism." Further, I would like to thank Preston John Stovall and the anonymous reviewer for their comments, which helped improve this paper.

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<sup>14</sup> Ferrando (2020, p. 30) specifically points out the anthropocentrism in Huxley's work.

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