Abstract: "Posthuman" has become an umbrella term to refer to a variety of different movements and schools of thought, including philosophical, cultural, and critical posthumanism; transhumanism (in its variations of extropianism, liberal and democratic transhumanism, among others); the feminist approach of new materialisms; the heterogeneous landscape of antihumanism, metahumanism, metahumanities, and posthumanities. Such a generic and all-inclusive use of the term has created methodological and theoretical confusion between experts and non-experts alike. This essay will explore the differences between these movements, focusing in particular on the areas of signification shared by posthumanism and transhumanism. In presenting these two independent, yet related philosophies, posthumanism may prove a more comprehensive standpoint to reflect upon possible futures.

Keywords: Posthumanism; transhumanism; antihumanism; metahumanism; new materialism; technology; future; posthuman; transhuman; Cyborg.
interests around similar topics. They share a common perception of the human as a non-fixed and mutable condition, but they generally do not share the same roots and perspectives. Moreover, within the transhumanist debate, the concept of posthumanism itself is interpreted in a specific transhumanist way, which causes further confusion in the general understanding of the posthuman: for some transhumanists, human beings may eventually transform themselves so radically as to become posthuman, a condition expected to follow the current transhuman era. Such a take on the posthuman should not be confused with the post-anthropocentric and post-dualistic approach of (philosophical, cultural, and critical) posthumanism. This essay clarifies some of the differences between these two independent, yet related movements, and suggests that posthumanism, in its radical onto-existential re-signification of the notion of the human, may offer a more comprehensive approach.

**Transhumanism**

The movement of transhumanism problematizes the current understanding of the human not necessarily through its past and present legacies, but through the possibilities inscribed within its possible biological and technological evolutions. Human enhancement is a crucial notion to the transhumanist reflection; the main keys to access such a goal are identified in science and technology, in all of their variables, as existing, emerging and speculative frames—from regenerative medicine to nanotechnology, radical life extension, mind uploading and cryonics, among other fields. Distinctive currents coexist in transhumanism, such as: libertarian transhumanism, democratic transhumanism, and extropianism. Science and technology are the main assets of interest for each of these positions, but with different emphases. Libertarian transhumanism advocates free market as the best guarantor of the right to human enhancement. Democratic transhumanism calls for an equal access to technological enhancements, which could otherwise be limited to certain socio-political classes and related to economic power, consequently encoding racial and sexual politics. The principles of extropianism have been delineated by its founder Max More as: perpetual progress, self-transformation, practical optimism, intelligent technology, open society (information and democracy), self-direction, and rational thinking. The emphasis on notions such as rationality, progress and optimism is in line with the fact that, philosophically, transhumanism roots itself in the Enlightenment, and so it does not expropriate rational humanism. By taking humanism further, transhumanism can be defined as "ultra-humanism." This theoretical location weakens the transhumanist reflection, as argued anon.

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6 James Hughes sees in the Transhumanist Declaration the moment when the legacy with the Enlightenment was explicitly affirmed: "With the Declaration transhumanists were embracing their continuity with the Enlightenment, with democracy and humanism" (CC 178). Similarly, Max More explains, "Like humanists, transhumanists favor reason, progress, and values centered on our well being rather than on an external religious authority. Transhumanists take humanism further by challenging human limits by means of science and technology combined with critical and creative thinking" (PE n.p.). [A considerable amount of transhumanist literature is published online, and so, like in this case, the specific page number of the references cannot be listed.]

In the West, the human has been historically posed in a hierarchical scale to the non-human realm. Such a symbolic structure, based on a human exceptionalism well depicted in the Great Chain of Being,\(^8\) has not only sustained the primacy of humans over non-human animals, but it has also (in)formed the human realm itself, with sexist, racist, classist, homophobic, and ethnocentric presumptions. In other words, not every human being has been considered as such: women, African-American descendents, gays and lesbians, differently-abled people, among others, have represented the margins to what would be considered human. For instance, in the case of chattel slavery, slaves were treated as personal property of an owner, to be bought and sold. And still, transhumanist reflections, in their "ultra-humanistic" endeavors, do not fully engage with a critical and historical account of the human, which is often presented in a generic and "fit-for-all" way.\(^9\)

Furthermore, the transhumanist perseverance in recognizing science and technology as the main assets of reformulation of the human runs the risk of technoreductionism: technology becomes a hierarchical project, based on rational thought, driven towards progression. Considering that a large number of the world's population is still occupied with mere survival, if the reflection on desirable futures was reduced to an overestimation of the technological kinship of the human revisited in its specific technical outcomes, such a preference would confine it to a classist and techno-centric movement.\(^10\)

For these reasons, although offering inspiring views on the ongoing interaction between the biological and the technological realm, transhumanism is rooted within traditions of thought which pose unredeemable restrictions to its perspectives. Its reliance on technology and science should be investigated from a broader angle; a less centralized and more integrated approach would deeply enrich the debate. In this sense, posthumanism may offer a more suitable point of departure.

**Posthumanist Technologies**

If posthumanism and transhumanism share a common interest in technology, the ways in which they reflect upon this notion is structurally different. The historical and ontological dimension of technology is a crucial issue, when it comes to a proper understanding of the posthuman agenda; yet, posthumanism does not turn technology into its main focus, which would reduce its own theoretical attempt to a form of essentialism and techno-reductionism. Technology is neither the "other" to be feared and to rebel against (in a sort of neo-luddite attitude), nor does it sustain the almost divine characteristics which some transhumanists attribute to it (for instance, by addressing technology as an external source which might guarantee humanity a place in post-biological futures). What transhumanism and posthumanism share is the notion of technogenesis.\(^11\) Technology is a trait of the human outfit. More than a functional tool for obtaining (energy; more sophisticated technology; or even immortality), technology arrives at the posthumanist debate through the mediation of feminism, in particular, through Donna Haraway's cyborg and her dismantling of strict dualisms and boundaries,\(^12\) such as the one between human and non-screen. Yet for millions more, virtuality is not even a cloud on the horizon of their everyday worlds. Within a global context, the experience of virtuality becomes more exotic by several orders of magnitude. It is a useful corrective to remember that 70 percent of the world's population has never made a telephone call.\(^9\)

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\(^8\) Rooted in Plato, Aristotle, and the Old Testament, the Great Chain of Being depicted a hierarchical structure of all matter and life (even in its hypothetical forms, such as angels and demons), starting from God. This model, with contextual differences and specificities continued in its Christian interpretation through the Middle Ages, the Renaissance, until the eighteenth century. One classic study on this subject is by Arthur O. Lovejoy, *The Great Chain of Being: A Study of the History of an Idea*, Cambridge, MA: Harvard University Press, 1936.


\(^10\) See N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*, Chicago, IL: University of Chicago Press 1999, p. 20: "The thirty million Americans who are plugged into the Internet increasingly engage in virtual experiences enacting a division between the material body that exits on one side of the screen and the computer simulacra that seem to create a space inside the screen. Yet for millions more, virtuality is not even a cloud on the horizon of their everyday worlds. Within a global context, the experience of virtuality becomes more exotic by several orders of magnitude. It is a useful corrective to remember that 70 percent of the world's population has never made a telephone call."


human animals, biological organisms and machines, the physical and the nonphysical realm; and ultimately, the boundary between technology and the self.

The non-separateness between the human and the techno realm shall be investigated not only as an anthropological and paleontological issue, but also as an ontological one. Technology, within a posthumanist frame, can be gleaned through the work of Martin Heidegger, specifically in his essay "The Question Concerning Technology," where he stated: "Technology is therefore no mere means. Technology is a way of revealing." Posthumanism investigates technology precisely as a mode of revealing, thus re-accessing its ontological significance in a contemporary setting where technology has been mostly reduced to its technical endeavors. Additional relevant aspects to be mentioned in relation to posthumanism, are the technologies of the self, as defined by Michel Foucault.

The technologies of the self dismantle the separation self/others through a relational ontology, playing a substantial role in the process of existential revealing, and opening the debate to posthuman ethics and applied philosophy. Posthumanism is a praxis. The ways the futures are being conceived and imagined are not disconnected from their actual enactments: in the posthuman post-dualistic approach, the "what" is the "how." For instance, posthumanism takes into account space migration but, in its post-modern and post-colonial roots, cannot support space colonization, a concept which is often found in transhumanist literature. This is a good example how transhumanism and posthumanism may approach the same subject from different standpoints and theoretical legacies.

**Posthumanism**

Although the roots of posthumanism can be already traced in the first wave of postmodernism, the posthuman turn was fully enacted by feminist theorists in the Nineties, within the field of literary criticism—what will later be defined as critical posthumanism. Simultaneously, cultural studies also embraced it, producing a specific take which has been referred to as cultural posthumanism. By the end of the 1990s (critical and cultural) posthumanism developed into a more philosophically focused inquiry (now referred to as philosophical posthumanism), in a comprehensive attempt to re-access each field of philosophical investigation through a newly gained awareness of the limits of previous anthropocentric and humanistic assumptions. Posthumanism is often defined as a post-humanism and a post-anthropocentrism: it is "post" to the concept of the human and to the historical occurrence of humanism, both based, as we have previously seen, on hierarchical social constructs and human-centric assumptions. Speciesism has turned into an integral aspect of the posthuman critical approach. The posthuman overcoming of human primacy, though, is not to be replaced with other types of primacies (such as the one of the machines). Posthumanism can be seen as a post-exclusivism: an empirical philosophy of mediation which offers a reconciliation of existence in its broadest significations. Posthumanism does not employ any frontal dualism or antithesis, demystifying any ontological polarization through the postmodern practice of deconstruction.

Not obsessed with proving the originality of its

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16 Michel Foucault introduced this notion in his later work. Shortly before his passing in 1984, he mentioned the idea of working on a book on the technologies of the self. In 1988, his essay "Technologies of the Self," was published post-mortem based on his seminar at the University of Vermont in 1982: *Technologies of the Self: A Seminar with Michel Foucault*, eds. Luther H. Martin, Huck Gutman, and Patrick H. Hutton, Amherst, MA: University of Massachusetts Press, 1988, pp. 16-49.


own proposal, posthumanism can also be seen as a post-exceptionalism. It implies an assimilation of the "dissolution of the new," which Gianni Vattimo identified as a specific trait of the postmodern.\textsuperscript{20} In order to postulate the "new," the centre of the discourse has to be located, so that the question "New to what?" shall be answered. But the novelty of human thought is relative and situated: what is considered new in one society might be common knowledge in another.\textsuperscript{21} Moreover, hegemonic perspectives do not explicitly acknowledge all the resistant standpoints which coexist within each specific cultural-historical paradigm, thus failing to recognize the discontinuities embedded in any discursive formation. What Posthumanism puts at stake is not only the identity of the traditional centre of Western discourse—which has already been radically deconstructed by its own peripheries (feminist, critical race, queer, and postcolonial theorists, to name a few). Posthumanism is a post-centralizing, in the sense that it recognizes not one but many specific centers of interest; it dismisses the centrality of the centre in its singular form, both in its hegemonic as in its resistant modes.\textsuperscript{22} Posthumanism might recognize centers of interests; its centers, though, are mutable, nomadic, ephemeral. Its perspectives have to be pluralistic, multilayered, and as comprehensive and inclusive as possible.

As posthumanism attracts more attention and becomes mainstream, new challenges arise. For example, some thinkers are currently looking to embrace the "exotic" difference, such as the robot, the biotechnological chimeras, the alien, without having to deal with the differences embedded within the human realm, thus avoiding the studies developed from the human "margins," such as feminism or critical race studies.\textsuperscript{23} But posthumanism does not stand on a hierarchical system: there are no higher and lower degrees of alterity, when formulating a posthuman standpoint, so that the non-human differences are as compelling as the human ones. Posthumanism is a philosophy which provides a suitable way of departure to think in relational and multi-layered ways, expanding the focus to the non-human realm in post-dualistic, post-hierarchical modes, thus allowing one to envision post-human futures which will radically stretch the boundaries of human imagination.

**New Materialisms**

New materialisms is another specific movement within the posthumanist theoretical scenario.\textsuperscript{24} Diana Coole and Samantha Frost point out: "the renewed critical materialisms are not synonymous with a revival of Marxism,"\textsuperscript{25} but, more literary, they re-inscribe matter as a process of materialization, in the feminist critical debate. Already traceable in the mid to late Nineties in the emphasis given to the body by corporeal feminism,\textsuperscript{26} such a rediscovered feminist interest became more extensively matter-oriented by the first decade of the twenty-first century. New materialisms philosophically arose as a reaction to the representationalist and constructivist radicalizations of late postmodernity, which somehow lost track of the material realm. Such a loss postulated an inner dualism between what was


\textsuperscript{21} In every civilization, while new information is achieved, other information is lost, so that the lost information, once retrieved, becomes new again. Psychoanalyst Immanuel Velikovsky actually defined the human species as that species which constantly loses memory of its own origins. See his *Mankind in Amnesia*, New York: Doubleday, 1982. Furthermore, consider the parallels between Western scientific discoveries and traditional Eastern spiritual knowledge drawn, for instance, by physicist Fritjof Capra in his influential work *The Tao of Physics: An Exploration of the Parallels between Modern Physics and Eastern Mysticism*, Boston, MA: Shambhala, 1975.


perceived as manipulated by the act of observing and describing, as pursued by the observers, and an external reality, that would thus become unapproachable.\textsuperscript{27} Even though the roots of new materialisms can be traced in postmodernism, new materialisms point out that the postmodern rejection of the dualism nature/culture resulted in a clear preference for its nurtral aspects. Such a preference produced a multiplication of genealogical accounts investigating the constructivist implications of any natural presumptions,\textsuperscript{28} in what can be seen as a wave of radical constructivist feminist literature related to the major influence of Judith Butler’s groundbreaking works.\textsuperscript{29} This literature exhibited an unbalanced result: if culture did not need to be bracketed, most certainly nature did. In an ironic tone, Karen Barad, one of the main theorists of new materialisms, implicitly referring to Butler’s book \textit{Bodies that Matter},\textsuperscript{30} has stated: "Language matters. Discourse matters. Culture matters. There is an important sense in which the only thing that does not seem to matter anymore is matter."\textsuperscript{31} New materialisms pose no division between language and matter: biology is culturally mediated as much as culture is materialistically constructed. New materialisms perceive matter as an ongoing process of materialization, elegantly reconciling science and critical theories: quantum physics with a post-structuralist and postmodern sensitivity. Matter is not viewed in any way as something static, fixed, or passive, waiting to be molded by some external force; rather, it is emphasized as "a process of materialization" (BM 9). Such a process, which is dynamic, shifting, inherently entangled, diffractional, and performative, does not hold any primacy over the materialization, nor can the materialization be reduced to its processual terms.

\textbf{Antihumanism, Metahumanism, Metahumanities, and Posthumanities}

There are significant differences within the posthuman scenario, each leading to a specialized forum of discourse. If modern rationality, progress and free will are at the core of the transhumanist debate, a radical critique of these same presuppositions is the kernel of antihumanism,\textsuperscript{32} a philosophical position which shares with posthumanism its roots in postmodernity, but differs in other aspects.\textsuperscript{33} The deconstruction of the notion of the human is central to antihumanism: this is one of its main points in common with posthumanism. However, a major distinction between the two movements is already embedded in their morphologies, specifically in their denotation of "post-" and "anti-." Antihumanism fully acknowledges the consequences of the "death of Man," as already asserted by some post-structuralist theorists, in particular by Michel Foucault.\textsuperscript{34} In contrast, posthumanism does not rely on any symbolic death: such an assumption would be based on the dualism dead/alive, while any strict form of dualism has been already challenged by posthumanism, in its post-dualistic

\textsuperscript{27} One of the proponents of this type of radical constructivism was philosopher Ernst Von Glasersfeld, who elaborated on his theory of knowing, among other texts, in \textit{Radical Constructivism: A way of Knowing and Learning}, New York: Routledge Falmer, 1995.


\textsuperscript{29} See Veronica Vasterling, "Butler’s Sophisticated Constructivism: A Critical Assessment," \textit{Hypatia} 14/3 (August 1999), pp. 17-38, here p. 17: "During the last decade, a new paradigm has emerged in feminist theory: radical constructivism, Judith Butler’s work is most closely linked to the new paradigm. On the basis of a creative appropriation of poststructuralist and psychoanalytical theory, Butler elaborates a new perspective on sex, gender and sexuality. A well-known expression of this new perspective is Butler’s thesis, in Bodies that Matter (1993) that not only gender but also the materiality of the (sexed) body is discursively constructed."

\textsuperscript{30} Judith Butler, \textit{Bodies that Matter: On the Discursive Limits of Sex}, New York: Routledge, 1993. [Henceforth cited as BM]


\textsuperscript{32} It is important to note that Antihumanism is not a homogeneous movement. On this aspect. see Béatrice Han-Pile, "The 'Death of Man': Foucault and Anti-Humanism," in \textit{Foucault and Philosophy}, eds. Timothy O’Leary and Christopher Falzon, Malden, MA: Wiley-Blackwell, 2010.

\textsuperscript{33} Here, I will mostly focus on the philosophical current developed out of the Nietzschean-Foucauldian legacies. For an account on the antihumanist perspective rooted in Marxism and developed by philosophers such as Louis Althusser and György Lukács see Tony Davies, \textit{Humanism}, New York, NY: Routledge 1997, pp. 57-69.

process-ontological perspective. Posthumanism, after all, is aware of the fact that hierarchical humanistic presumptions cannot be easily dismissed or erased. In this respect, it is more in tune with Derrida’s deconstructive approach rather than with Foucault’s death of Man.\textsuperscript{35}

To complete a presentation of the posthuman scenario, metahumanism is a recent approach closely related to a Deleuzian legacy;\textsuperscript{36} it emphasizes the body as a locus for amorphic re-significations, extended in kinetic relations as a body-network. It should not be confused with metahumanity, a term which appeared in the 1980s within comics narratives and role-playing games,\textsuperscript{37} referring to superheros and mutants, and it has since been employed specifically in the context of cultural studies. Lastly, the notion of posthumanities has been welcomed in academia to emphasize an internal shift (from the humanities to the posthumanities), extending the study of the human condition to the posthuman; furthermore, it may also refer to future generations of beings evolutionarily related to the human species.

\section*{Conclusion}

The posthuman discourse is an ongoing process of different standpoints and movements, which has flourished as a result of the contemporary attempt to redefine the human condition. Posthumanism, transhumanism, new materialisms, antihumanism, metahumanism, metahumanity and posthumanities offer significant ways to rethink possible existential outcomes. This essay clarifies some of the differences between these movements, and emphasizes the similarities and discrepancies between transhumanism and posthumanism, two areas of reflection that are often confused with each other. Transhumanism offers a very rich debate on the impact of technological and scientific developments in the evolution of the human species; and still, it holds a humanistic and human-centric perspective which weakens its standpoint: it is a "Humanity Plus" movement, whose aim is to "elevate the human condition."\textsuperscript{38} On the contrary, speciesism has become an integral part of the posthumanist approach, formulated on a post-anthropocentric and post-humanistic episteme based on decentralized and non-hierarchical modes. Although posthumanism investigates the realms of science and technology, it does not recognize them as its main axes of reflection, nor does it limit itself to their technical endeavors, but it expands its reflection to the technologies of existence.

Posthumanism (here understood as critical, cultural, and philosophical posthumanism, as well as new materialisms) seems appropriate to investigate the geological time of the anthropocene. As the anthropocene marks the extent of the impact of human activities on a planetary level, the posthuman focuses on de-centering the human from the primary focus of the discourse. In tune with antihumanism, posthumanism stresses the urgency for humans to become aware of pertaining to an ecosystem which, when damaged, negatively affects the human condition as well. In such a framework, the human is not approached as an autonomous agent, but is located within an extensive system of relations. Humans are perceived as material nodes of becoming; such becomings operate as technologies of existence. The way humans inhabit this planet, what they eat, how they behave, what relations they entertain, creates the network of who and what they are: it is not a disembodied network, but (also) a material one, whose agency exceeds the political, social, and biological human realms, as new materialist thinkers sharply point out. In this expanded horizon, it becomes clear that any types of essentialism, reductionism, or intrinsic biases are limiting factors in approaching such multidimensional networks. Posthumanism keeps a critical and deconstructive standpoint informed by the acknowledgement of the past, while setting a comprehensive and generative perspective to sustain and nurture alternatives for the present and for the futures. Within the current philosophical environment, posthumanism offers a unique balance between agency, memory, and imagination, aiming to achieve harmonic legacies in the evolving ecology of interconnected existence.\textsuperscript{39}


\footnotesize{\textsuperscript{37} The term "metahuman" was specifically utilized in the comics series released by publisher DC Comics (New York).}

\footnotesize{\textsuperscript{38} The Humanity+ website (http://humanityplus.org), which is currently the transhumanist main online platform states: "Humanity+ is dedicated to elevating the human condition. We aim to deeply influence a new generation of thinkers who dare to envision humanity's next steps."

\textsuperscript{39} Special thanks to Helmut Wautischer and Ellen Delahunty Roby for comments on earlier drafts of this essay.

http://www.existenz.us
Social Foundations Mid Term Review Article 1. "Posthumanism, transhumanism, antihumanism, metahumanism, and new materialisms: differences and relations" a. Transhumanism — To enhance human beings through science and technology (goal is human enhancement) — H+ — transhumanism(s) because there are many dimensions of the transhuman — Libertarian transhumanism: supports free market — Democratic transhumanism: equal access — All transhumanists support human enhancement —. Roots of transhumanism can be found in the Enlightenment b. Posthumanism — Post-anthropocentrism — Criticizes the no Keywords: Posthumanism; transhumanism; antihumanism; metahumanism; new materialism; technology; future; posthuman; transhuman; Cyborg. This article is distributed under the terms of the Creative Commons Attribution, Non-Commercial, No Derivatives license, which permits non-commercial use, distribution, and reproduction of this article in any medium, provided the author and the original source are cited and the article is not modified without permission of the author. Introduction extropianism, liberal and democratic transhumanism, among other currents), new materialisms (a specific In contemp