

# Transhumanism, techno-humanism and ethics

## Transhumanismo, tecnohumanismo y ética

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### Abstract

This article will describe and analyze, through a literature review, transhumanism, a complex current of thought whose project involves the fusion of the individual and the machine.

After a first brief analysis on the origins of transhumanism, the increasingly strong linkage of the anthropocentric and technocentric paradigms is investigated, to understand, through the figure of the cyborg, how the current progress of Information and Communication Technologies (ICT) and Artificial Intelligence (AI) insinuate a high level of penetration into the human. The ethical issues raised by hybridization processes today are analyzed. Special interest is also given to the exploration of the polarization between conservatives and progressives, with reference to their respective ways of interpreting the relationship between the subject and technology.

*Keywords:* transhumanism, anthropocentrism, technocentrism, cyborg and ICT.

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## 1. Ultrahuman, transhuman, transhumanism

The objective of this article is to describe and analyze, through a review of the literature, transhumanism, a complex current of thought whose project contemplates the fusion of the individual and the machine (1, p.57). In a way that the overcoming of the dependence of Homo sapiens on its biological base is configured (2, p.12) and the question of the biotechnological evolution of the species is brought back to the forefront (2, p.14).

After an initial brief analysis of the origins of transhumanism, the increasingly strong intertwining of the anthropocentric and technocentric paradigms will be observed, to understand, through the figure of the cyborg, how the current progress of ICT and AI hints at a high level of penetration of the human. Finally, we will reflect on the ethical issues raised by hybridization processes today. Special interest will be given to deepening the existing polarization between conservatives and progressives, with reference to their respective ways of interpreting the relationship between subject and technology.

Until the second half of the last century, technology was perceived as an instrument through which the morphophysiological deficiencies of our bodies could be supplied (3). Today, technology, especially digital technology, is conceived as a tool that presents the possibility of improving the physical and mental conditions of the human being, through a mutual process that is at the beginning of the evolution towards the biotechnological individual.

This, on the one hand, means that technology plays an important role in fields such as biology. For example, the link between biological cells and chips is investigated (4, p.92). On the other hand, technology goes beyond penetration to create biology, with chips that monitor the growth of proteins or cells (4, p.92).

This combination, which pushes the human being beyond his biological possibilities, is the thinking principle of transhumanism, whose positions were first conceptualized by Pierre Teilhard de

Chardin and the British biologist Julian Huxley between the 1930s and 1950s, and from which all thinking around the integration of the organic body and intelligent systems stems (5).

The former, an Enlightenment-inspired philosopher and paleontologist, in his book (6)<sup>1</sup> devotes a section to *La fine della specie*, in which he considers the evolution of the human being from a temporal perspective. The possibility “conferred on every man to ‘transhumanize himself’ (by removing obstacles and providing adequate means), reaching the end of himself” (6, p.371).

Is given by:

a radical change in the mechanism of evolution [...]. Under the collective effort of science, it feels that it is about to be able to control physiochemically within itself the game [...] of morphogenesis. So that, [...] the terrestrial evolution of life not only completely changes the dimensions of its own constructions, but also enters an ‘explosive’ phase, of a new kind (6, p.304-305).

In the author’s reflection, phylogeny, although it was believed to have already reached maturity “reveals itself [...] still in its embryonic state. Beyond the human we know, a deep, though still obscure, zone of the ultra-human now extends to our scientific knowledge” (6, p.454-455). The “formidable event” takes shape from the twentieth century onwards, the effect of an industrial leap in communications and populations:

This process, given the fundamental relationship between biological compression and the increase of consciousness [invention], results in irresistibly raising the reflex in us and around us. Under the action of the forces that compress it [...], the human substance begins to planetize, that is, to internalize and animate itself globally (6, p.454).

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<sup>1</sup> The monograph brings together essays written over a period of twenty years (ed. 1959). However, it was from the thirties when the author began his reflections on the evolution of the human species and the transhumanist thesis.

Teilhard de Chardin's transhumanism is the conquest of a *future*. As a species, the human being is subject to change, to something totally new in front of him (6, p.462).

Justifying faith in scientific knowledge as the engine of evolution, the French paleontologist can be described as the pioneer of transhuman theories, even before transhumanism gained prestige as a philosophical current.

However, the biological father of transhumanism, perhaps nobler than Teilhard de Chardin, is Huxley. If the French Jesuit was the inventor of terms such as *ultrahuman* and *transhuman*, the English biologist is the creator of the concept of transhumanism, from which the whole movement we know today originates (7, p.29).

Huxley, in the introductory chapter of the book *New Bottles for New Wines* (8), continues his philosophical reflection on transhumanism, which he had already begun a few years earlier, launching the idea of the name "such a broad philosophy, perhaps it could be called, not humanism, because that has certain unsatisfactory connotations, but transhumanism. It is the idea of humanity trying to overcome its limitations and reach a fullness" (9, p.139).

Later, in 1957, he writes:

up to now, human life has generally been as Hobbes described it: 'cruel, brutish and short.' The great majority of human beings [...] are unhappy, for one reason or another [...]. They have tried to lighten this burden with ideals and hopes. The problem is that the hopes have generally been unjustified and the ideals have generally proved inadequate to the surrounding reality (9, p.16).

For this reason, as Teilhard de Chardin has already pointed out, he also bases his observations on the power of science as a category of modernity. He states that only a vigorous scientific exploration of the possibilities and of the necessary techniques for its realization will make our hopes rational and our ideals adapt to the surrounding reality, demonstrating what is feasible (9, p.16).

For the English biologist,

We can already be convinced of the existence of these unexplored lands and that the present limitations and frustrations could be overcome. We are justified in believing that human life, as we know it, is but an unfortunate compromise, based on ignorance, which could be overcome and replaced by a condition based on knowledge and understanding [...] (9, p.16).

This is possible by exploring the following:

The possibilities of creating a more favorable social environment, just as we have done to a large extent with our physical environment. We will have to start from new premises [...], above all, that there are two complementary parts of our cosmic destiny [...] (9, p.16). The first part is represented by our obligations to ourselves and is manifested through the realization and enjoyment of our capacities (9, p.17). The second is represented by our obligations towards others and is carried out in community service in promoting the welfare of future generations, and in the advancement of our species in general (9, p.17).

In preaching the advent of imminent evolution, Theillard de Chardin and Huxley, along with another contemporary biologist, Jean Ronstand, a transhumanist with futurist overtones and advocate of self-replication point out that:

Man [he writes] could by his own means provoke a new organic, physical change in himself, with all the modifications that this would entail in his functions (10, p.127). The three propose a dialogue between what is organic and what is not, through an intervention [...] in which man recreates himself, improving his own evolutionary age and thus subverting the laws that have led him to his current condition. (1, p.62), [...] The characteristics of our species that we all share are inscribed and transmitted in our genetic code independently of our will, the new man produced by science would have no restrictions to automatically replicate his original characteristics (1, p.62).

Transhumanist discourses on the human capacity for self-improvement through technological and scientific discoveries go hand in hand with certain anthropocentric issues. The reevaluation of these issues arises precisely from the comparison with the transhuman paradigm, as we will see below.

## 2. The human and the technical

Against the theoretical and cultural backdrop of transhumanism, which consists of two main interconnected phenomena —anthropological change and the evolution of technoscience— we intend to promote a confrontation between anthropocentrism and technocentrism.

The basic hypothesis is the following: no paradigm shift is currently taking place, but rather we have entered a new phase by overriding the codes of natural evolution (1, p.61). This new vision, which is no longer human-centered since there is no opposition between the human and the artificial, can help create the conditions for addressing several issues arising in an AI dominated society, in which the idea of an anthropocentric paradigm remains paramount.

Although in their different aspects, transhumanists agree on a project of human enhancement, whose evolutionary scenarios open wide spaces for discussion on the relationship between nature and culture. Indeed, the human species has always sought to improve its living conditions, through the eradication of certain diseases, the extension of life expectancy and nanotechnologies or the use of prostheses (from *pacemakers* to artificial limb extensions), basing the constant challenges of biological nature on the innovations introduced by research, in the awareness of an evolution through science.

For transhumanists, scientific progress thus plays a decisive role in the destiny of humanity. In the desire to cope with organic deficiencies, unexpected pathological outbreaks, exacerbation of diseases or the occurrence of unfortunate events, biomedical research

foresees the possibility of improving the performance of our organism, optimizing the functioning of brain activity and prolonging, even doubling, the average life span, in a closer relationship of interdependence between the natural and the artificial (1, p.123-4).

This could bring with it many expectations and raise some questions, for example, about the possibility that man will be able to intervene artificially on his body and reduce indefinitely the degenerative process (1, p.123-124).

The possibility of a structural connection between the human and the artificial reveals how anthropocentric/technocentric paradigms are not exclusively contradictory. On the contrary, presenting the possibility of a mutual process breaks down the boundaries between what is biological and what is not, problematizing technology no longer as a prosthetic tool or alternative to human evolution, but as its natural foundation.

ICTS have led to a redefinition of the classical meaning of the human. The impact on the structure of society has been profound. It has transformed everyday activities and has increased confidence in science: (a) new models of knowledge production and circulation have found their affirmation in a virtual space; (b) social relations have escaped the morphology of geo-territorial boundaries; (c) the use of tablets and smartphones has registered the transition from a cognitive digitization to a cognitive mobility, where all information, not only media content, but also individual information) is available everywhere (11).

On other fronts such as medicine, pharmacology and biotechnology, the dialogue between the human and the digital has subverted the old controversies within the evolution of the species, with the overcoming of a centuries-old Aristotelian conception of man. In this sense, what has been configured for several years as the digital manipulation of body composition with the precise aim of modifying the perception of the natural datum as something passively experienced, shows instead how the body represents one of the mutant expressions of human culture (1, p.129-130).

Cultural-digital objects operate on the possible evolution of society: progress, resulting from the inventions of science, plays a role in the evolutionary typology of the human. Its emancipatory potential has allowed us to better understand our biological foundations and to improve them. It is the cyborg, in particular, that embodies the mediation between these two types of human evolution, the biological and the cultural, since it is the affirmation of a natural adaptation of the individual to the products of material culture. Individuals are cyborgs in their interaction with technologies: this complex and mutable hybrid calls into question certain assumptions about the oppositions between the organic/inorganic, the natural/artificial and the self/other (12). The cybernetic organism is thus the result of a long technology process, in which different instances underlying human *enhancement* converge (13, p.44).

These requirements, which guarantee new opportunities for the human species, will be analyzed in the following pages.

### **3. Technology and the cyborg. Creatures of the frontier**

Marshall McLuhan, in 1988, wrote that we are approaching a state of “technological simulation of consciousness, when the creative process of knowledge will be extended collectively and corporately to the whole of human society” (14, p.116).

This situation, then new, no longer represents an extraordinary experience. For several decades, ICT and the development of digitally controlled cognitive prostheses have been influencing both social relations, articulated in a virtual system of interdependencies, and intellectual capacities, as if changes were taking place in our genetic heritage (15).

The machination of the biological that finds substance in the cyborg (2, p.129) produces a continuity in the process of artificialization of the human. Unlike traditional machines, which are external to the body and easily identifiable, the integrated vision of today’s technology reveals interesting insights into the relationship between



the human and the artificial (16, p.19-20). It is both diffuse and invasive “on the one hand, it expands around the body, modifying or prolonging it, and on the other it insinuates itself into the body to interact in subtle and unusual ways, to enhance, modify or override faculties, or simply to obtain information through medical eidomatics” (16, p.20).

The new cyborg reality (17) anticipates a form of overcoming that leads to the ideal of human perfection envisioned by transhumanism (18, p.6). The idea is no longer to mimic biological functioning with artificial devices. The applications go beyond the recovery of natural functions to achieve artificial enhancement of the body, an idea typical of the transhumanist current of thought (18, p.15). In addition, this improvement of the human is imminent:

The cyborg is not a product that is thought today and awaits a possible realization in a near future. But is a process that has already begun and that sees its progressive realization, often unconscious through the technologization of society: today we are witnessing a process of cyborgization implemented by the progressive waves of technological innovation that converge towards the realization of the technological improvement of man (13, p.43).

Considering the arguments, a human and social reality is emerging as a product of AI and the science of nature, in which technoscience reflects an impulse towards the domination and transformation of the biological (19, p.20). The cybernetic organism that results from this metamorphosis:

It is a reality that, to be understood and deciphered in its entire valence, it must be understood and decomposed into the different components that shape it. In the first place, it can be understood as the technological epiphenomenon of that posthuman and transhuman anthropological vision that dissolves the characteristics of the human being into unlimited malleability: according to the ideas proposed by the followers of these movements, man is the one whose constitutive characteristic is non-compliance definition, in the sense that their biological identity is presented as a continuous becoming. Based on the

above, technology is considered the instrument to submit this malleability to the will. Secondly, the cyborg has been revealed as a metaphor, an image, which has allowed us to study the history of the human species from the point of view of its relationship with technology. The cybernetic organism reveals man's understanding of the technological phenomenon (13, p.44).

The symbiont, as defined by Giuseppe Longo (16) which is the union between the human being and technology, is the product of the latter, which modifies the way of being, revealing through reflection, the human capacity to govern intelligent systems. It follows that digital technology does not contribute exclusively to create the essence of contemporary man (16, p.44), but is regulated by the individual and is functional to his ends.

Allucquère Rosanne Stone (20) conceives the cyborg as a border creature between man and machine, but also as a cultural interstice, inhabiting the boundaries between death and life, temporality and eternity (20, p.178). For these reasons, the cyborg body is a bridge between the human and the transhuman.

Enriched instrumentally by technology, but whose presence in the organic body is nevertheless prevalent, the symbiont gives rise to indifferenciation: the human and ICT evolve by exchanging mutual influences: this leads to their symbiosis and then to singularity (4, p.100). We are witnessing a convergence of two different entities, which can be read as a "humanization" of the machine and a "machinization" of man (21). However, the cyber-organic evolution of the human being opens up complex ethical itineraries. In this paper, we will focus on two main orientations, which we will observe in clear contrast to each other.

#### **4. Some ethical issues**

To offer an ethical reading of the interaction between the human and the artificial, we observe, on the one hand, the bioconservatives

who conceive technology as something dehumanized; on the other hand, there are the transhumanists, who exalt technology as a possibility of improvement (4, p.94).

Expressed in this way, the ethical dimension is related to two questions, both of an ontological nature: What does it mean to be man? What is nature? What is the future of man and his body? What is the posthuman? (4, p.94).

For bioconservatives, the main concern is the enhancement practices achieved with the use of biotechnology. *L'enhancement* is perceived as a dehumanization and a threat to the morality of human action, with dangerous and irremediable implications (22).

Bioconservatives believe that the human condition should not be altered because genetic alteration poses a threat to the future of societies. A possible alternative to engineering the human species may be the strict control biotechnology by limiting its use (25).

Proponents of the Aristotelian approach to the species are accustomed distinguishing, in heuristic terms, between “human enhancement” and “bio-enhancement”. According to this distinction, within the first label are:

All the methods that man has used throughout history to improve. On the other hand, the field of bio-enhancement is restricted to the innovations that human beings have produced in recent years thanks to advances in the biomedical and biotechnological field and that, in most cases, have the characteristic before illustrated to act within organisms (22, p.29).

Let us now turn our attention to bio-improvement (23), which consists of improving the human being in different ways. By making him smarter, longer-lived, and immune to disease, genetically superior (or programmable) and by different means (technological prostheses, drugs, brain stimulation, genetic manipulation, etc.). Make it permanently and potentially inheritable (23).

The modern humanist perspective of bioconservatives evokes a synergy between the sacralization of life and the valorization of a traditionalist morality (24, p.54). In fact, the most debated question:

It refers to the impact that enhancement technologies could have on human authenticity, understood as the identification of the individual with his or her own fundamental capacities and characteristics that would be altered by interventions that do not meet medical needs (26, p.217).

According to the fundamentals of bioconservative logic, human enhancement technologies should only be used for therapeutic purposes, for purposes that do not go beyond the concept of healing, rather than being employed to perfect the functioning of human capacities already considered “in the range of normality” (26, p.216-17), to the point of bringing the human species to immortality. Despite this clarification, the boundary between what can be therapeutic and what can only be potentiating is porous: there is no condition of “standard normality” (22,23), from which to establish when an intervention is therapeutic, or when it can be assimilated to the potentiation of human capacities (28, p.120).

Furthermore, Ricci *et al.* (26), who share a progressive point of view, affirm that it is necessary to:

however [,] to consider updating as an inevitable phenomenon since change is inherent to nature and is the main reason for our evolution. In fact, these technologies could bring at the same time real improvements for the individual and, more generally, could contribute to the realization of a better world (28, p.217).

Therefore, the authors continue, from a bio legal perspective it is plausible to evaluate “the pros and cons [of enhancement technologies] through a case-by-case analysis, on the basis of a risk-benefit assessment, thus making a balance of interests” (28, p.217). For their part, the considerations of transhumanists, like those of the entire bio progressive current, refer to the reontologizing power of digital technology (27, p.176), which “operates a transformation [...] of who we are: man is a continuous becoming, especially in his interaction with technology” (4, p.94).

For transhumanists, therefore, the distinction between therapy and empowerment has no practical or normative significance (28, p.121). The two authors, in this sense, write that:

Transhumanists argue that we should seek to develop and make available human enhancement options in the same way and for the same reasons that we seek to develop and make available therapeutic medical treatment options: to protect and extend life, health, cognition, emotional well-being, and other states or attributes that individuals may desire to enhance their lives (28, p.121).

The transhuman project is based on the idea of *enhancement* of the contemporary individual, to the point of transcending its limits. Thus, in practice, it is a matter of “repairing” the organism when it malfunctions and, on the other hand, of “processing” it in such a way as to increase its performance capacity. In this context, both the victory over illness and death and the practices of empowerment express different modulations of the same mechanistic approach (29).

Transhumanist thinking is based on two conceptual dimensions that are antithetical to the positions of bioconservatives, who make transhumanism an anthropological/technological paradigm. In the theses of bio progressives, which include transhumanists, the following can be observed:

1. Human enhancement [...] could turn us into beings who may have a life expectancy with indefinite health, intellectual faculties far greater than those of any current human being, and perhaps entirely new sensibilities or modalities, as well as the ability to control their emotions (30, p.101).
2. The possibility of approaching a condition of life (the post-human condition) that goes far beyond the present human condition, making it almost inconceivable to our intelligence. “It is a matter, then, of developing [...] “a general central capacity that far exceeds the maximum attainable by any present

human being without recourse to new technological means” (30, p.219).

As for the question of life prolongation, which raises ethical questions concerning the loss of existential uniqueness or the meaninglessness of life itself because it lacks a prospect of death (30, pp.4-5), the debate in the literature is very broad. It involves a series of problems revolving around a progression of objections, such as overpopulation and the disproportionate growth of an increasingly aging population; the obligation to reorient social and health policies; generational asymmetry, caused by the increase in financial burdens to be borne by the productive population, among others (8,28,31,32).

Basically, as the conservatives put it, the opposition to a condition of perpetual longevity is based, among other things, also on the idea of the dignity surrounding life, which is endangered by the new posthuman projects. Let us now read together the quotation from Bostrom and Roache (28) which, although long, conveys attention to the transhumanists’ reflections on what we can consider as dignified in relation to human life, thus showing us how the concept of dignity is susceptible to a wide argumentative use:

Transhumanists can respond to these considerations in at least two ways. First, those who oppose radical life extension on the grounds that immortal or very long-lived life is not worthwhile may advocate abandoning research into life-extending technology and may even advocate preventing people from using it once it becomes available (28, p.124). The point of whether an extremely long life would be worth living, is obviously not relevant to the question of whether a life is worth saving, and the fact that there may be reasons to believe that a certain kind of life is not worth living does not in itself justify preventing those who wish to live such a life from doing so (28, p.124). So that there may be reasons to believe that an extremely long life would not be worth living, then, does not in itself justify preventing those who wish to radically prolong their lives from doing so, if the means of doing so and the resulting prolonged life do not significantly harm others (28, p.124).

## 5. Concluding remarks

What has emerged gives us a changing scenario. In reviewing the issues discussed so far, we would like to highlight some aspects that we consider central to understanding what has been said.

The theoretical and ethical core of transhumanism, the subject of the first part of the work, is embodied in the recognition of an alliance between human intelligence and artificial intelligence. The transhuman paradigm must be combined with the contamination of the human species with the otherness of machines. The idea of conscious evolution is at the heart of the transhumanist project. For the advocates of human self-directed evolution, the meaning and direction of the development process lie in the harmonization of nature and culture. Technoscience questions the traditional concept of the human, with the possibility of refined bio anthropological changes that in part are already taking place, and in part may take place in a near future.

In the second part of the paper, an attempt was made to describe and explain the process of acceptance and rejection of human progress, as posed in the terms of the current of transhumanism.

The alteration of bodily structures made possible by digital technologies has led to polarization. The openness to artificial otherness postulated by bioprogressive clashes with certain risks identified by bioconservatives. For the latter, the basic assumption is that the desire for enhancement goes against nature, and even poses an ontological contradiction of the human, with negative repercussions, among other things, on the stability of our societies.

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