Transhumanism, Vulnerability and Human Dignity

Transhumanismo, vulnerabilidad y dignidad humana

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doi: http://dx.doi.org/10.18543/djhr-4-2019pp39-58

Fecha de recepción: 22.05.2019
Fecha de aceptación: 10.09.2019

Abstract: The transhumanist movement is much more than a simple utopia, a new school of thought or a fashionable ideology; as a matter of fact, it is a scientific and philosophical project that is already underway, and defends the use of the most advanced emerging new technologies —from biogenetics to computing, from nanotechnology to cognitive sciences, to robotics and Artificial Intelligence— with the clear goal to exponentially increase the physical, cognitive, sensory, moral and emotional capabilities of human beings. Transhumanism entails a change in the anthropocentric paradigm defended by humanism, and aims to break through the limits of nature, which until recently we deemed insurmountable, in order to create a new species that is more evolved than the *Homo sapiens*: the *Homo excelsior*, a posthuman species which is superior to ours, composed by exceptionally gifted beings that have been genetically selected, designed and improved and which —according to the transhumanist imaginary— will dominate the posthuman future and will be happier, more virtuous, long-lived and intelligent than us.

In this article, we propose technological humanism as an intermediate formula in the doctrinal debate between bioprogressive and bioconservative legal philosophers, so as to make possible the development of scientific research and the advancement of new technologies, although without ever having to sacrifice dignity and liberty, which are inherent qualities of the human being (who has to be viewed, in Kantian terms, as an end in itself).

Keywords: Transhumanism, human dignity, artificial intelligence, robotics, biogenetics, Legal Philosophy.

Resumen: El movimiento transhumanista es mucho más que una mera utopía, una nueva corriente de pensamiento o una ideología de moda; en realidad, se trata de un proyecto científico-filosófico que ya está en marcha y que defiende el uso de las nuevas tecnologías emergentes más avanzadas —desde la biogenética, la informática, la nanotecnología y las ciencias cognitivas hasta la robótica y la Inteligencia Artificial— con el firme propósito de aumentar exponencialmente las capacidades físicas, cognitivas, sensoriales, morales y emocionales de los seres humanos. El transhumanismo supone un cambio en el paradigma antropocéntrico defendido por el humanismo, y pretende desbordar los límites de la naturaleza que hasta hace poco considerábamos insuperables para crear una nueva especie más evolucionada que la del *Homo sapiens*: el *Homo excelsior*, una especie posthumana superior a la nuestra, formada por seres superdotados que han sido seleccionados, diseñados y mejorados genéticamente que —de acuerdo con el imaginario transhumanista— dominarán el futuro posthumano y serán más felices, virtuosos, longevos e inteligentes que nosotros.

En el presente artículo se propone el humanismo tecnológico como fórmula intermedia en el debate doctrinal entre iusfilósofos bioprogresistas y bioconservadores, de tal forma que sea posible el desarrollo de la investigación científica y el avance de las nuevas tecnologías, aunque nunca a costa del sacrificio de la dignidad y la libertad, que son cualidades inherentes al ser humano (que debe ser concebido, en términos kantianos, como un fin en sí mismo).

Palabras clave: Transhumanismo, dignidad humana, inteligencia artificial, robótica, biotecnología, Filosofía del Derecho.

Cómo citar este artículo / Citation: Llano, Fernando H. 2019. "Transhumanism, Vulnerability and Human Dignity". *Deusto Journal of Human Rights,* no. 4: 39-58. http://dx.doi.org/18543/djhr-4-2019pp39-58

1. **Transhumanist revolution and Metamorphosis of the World**

The image of the classical world we have known so far (*imago mundi*) has shrunk from the beginning of the 21st century. As Ulrich Beck pointed out in his last book, posthumously published, excessive faith in the development of applied techno-sciences is one of the major threats to what he calls the *risk society*. This revival of scientificism in the Third Millennium has aroused a certain deterministic technological optimism and an absolute trust in both the redeeming power of Techno-Science and the idea of unlimited progress. The research conducted by the "the new crusaders of the technological faith in progress" aims at combatting, with technological and moral weapons, the potential global risks faced by contemporary global society –climate change and its related natural disasters, the digital revolution, the emergence of medical genetics, and extreme social and economic inequalities at a global level, among others. Nevertheless, far from being an ally to humankind, this *emancipatory catastrophism* breeds a feeling of false relief in the global population, since we are released from the responsibility of facing global risks and taking measures, even though this catharsis comes at the expense of concealing the true dimension of the process of *metamorphosis of the world* in which humankind and the planet are immersed at all levels. Thus, Beck warns us, a gulf has opened up:

> The classical world-view of the modern faith in progress still guides action –the belief in the redemptive power of techno-science, the idea of limitless progress, the inexhaustibility of natural resources, the belief in infinite economic growth and the political supremacy of the nation-state. The theory of risk society has confronted this belief with its theoretical fragility and inadequacy in view of the scenarios of catastrophic potentials and uncertainties currently unfolding, which are precisely the results of the triumphs of progress. (Beck 2016, 62-63)

Regarding this metamorphosis of the world, one of the spheres in which the paradigm shift faced by society and the revolutionary impact in terms of side effects may be observed is precisely the space where techno-sciences, biotechnology and genetics applied to engineering and medicine converge. This is the very realm of techno-scientific experimentation where the so-called emerging technologies known as "NBIC" (acronym for the fields of Nanotechnology, Biotechnology, Information technology and Cognitive science), artificial intelligence and robotics, meet. This neo-technological field is experiencing the

stunningly fast development of revolutionary techniques, such as genome editing techniques (e.g. CRISPR/Cas), preimplantation genetic diagnosis (also known as embryo screening, an innovative technique of assisted reproduction that leaves the door open for eugenics according to many critics) and the application of artificial intelligence, cybernetics and bionics in medicine or high-performance sports.

In this new biotechnological and digital era, the humanist paradigm, which considers the individual as an end in itself and defends the sacred character of the human condition and the dignity of people as moral subjects (whose liberty is inviolable and inalienable), is being gradually replaced by a posthumanist paradigm which, in its most utilitarian version, proposes overcoming our natural limits by artificial means in search of the organic and intellectual perfection of the human species, going as far as to situate the omnipotent *homo excelsior* above the fallible *homo patiens* and even above the imperfect *homo sapiens* (Ballesteros 2007, 35). This very idea that the human being is perfectible, shared by some classic philosophers raging from Rousseau, Hegel, Schopenhauer, to Unamuno, Heidegger and Ortega y Gasset, stands as the grounding principle of the transhumanist movement. In one of the first works to quote the term, entitled "Transhumanism: Toward a Futurist Philosophy", its author, English philosopher, Max More defines transhumanism as a compound of philosophies that somehow continue classical humanism but that also tries to overcome it in several aspects so as to lead us to a posthuman condition:

> The growth of humanism over the decades has begun this job, but now it is time to utilize the more inclusive and mimetically attractive option of transhumanism (…) It goes beyond humanism by peering into the future in order to better understand our possibilities. As we move forward through time, our understanding of our immense potentials will evolve; there can be no final, ultimate, correct philosophy of life. Dogma has no place within transhumanism, it must be flexible and ready to move on, reconfiguring into higher forms, new versions of transhumanism and one day, posthumanism. (More 1990, 10)

Therefore, transhumanism is conceived by its founder not only as a cultural and intellectual movement, but also as a study field and, fundamentally, as a philosophy of life. In a recent publication, More refers to the principles and goals that lead transhumanist philosophy as an evolutive system of thought that transcends the limits of humanism regarding both its means and its goals:

Deusto Journal of Human Rights
ISSN: 2530-4275 • ISSN-e: 2603-6002, No. 4/2019, p. 39-58
doi: http://dx.doi.org/10.18543/djhr-4-2019pp39-58 • http://revista-derechoshumanos.deusto.es

> Humanism tends to rely exclusively on educational and cultural refinement to improve human nature whereas transhumanists want to apply technology to overcome limits imposed by our biological and genetic heritage. Transhumanists regard human nature not as an end in itself, not as perfect, and not as having any claim on our allegiance. Rather, it is just one point along an evolutionary pathway and we can learn to reshape our own nature in ways we deem desiderable and valuable. By thoughtfully, carefully and yet boldly applying technology to ourselves, we can become something no longer accurately described as human –we can become posthuman. (More 2013, 4)

Even if it may seem sheer fiction, the posthuman condition alluded to by More points, in reality, to a fact that might credibly occur in the future: the possibility to turn human beings into a bio-improved species. Genetic evolution would render transhumans highly gifted, eternally young, infallible, practically perfect and immortal. In this hypothetical future *brave new world* dominated by technoscience, built upon the pillars of the posthumanist revolution, singular, vulnerable and imperfect humans would live alongside generic, infallible and perfect posthumans, as well as with cyborgs, men fused with machines. This would undoubtedly be a twilight for the human species, demoted to a situation of prostration and servitude due to their physical and intellectual inferiority before the other two species —transhumans and robot— men.

Even though fiction has not yet been superseded by reality, many scholars have warned us against the potential risk of segregation that the human race might have to face, as depicted in Aldous Huxley's famous novel in which a dystopian society is presented as torn into two groups; seemingly happy and perfect human beings –in fact, transhumans that have been artificially harvested by means of reproductive technology, genetically selected and designed, on the one hand; and savages that live confined in a reservation and reproduce randomly according to natural law, on the other. I shall further address below the ethical and legal scholarly debate that has polarised bioconservationists and bioprogressives over biological transhumanism and cybernetic posthumanism over the last few years.

I shall now look into the relationship between man and technology in the postmodern era by commenting both upon those scholars who defend the validity of the humanist legacy of the Enlightenment and on those who favour posthumanism spurred on by their anthropo-technical optimism.

2. *Homo ex machina.* Nature, man, technology and technological humanism's project

Since the conference of Peter Sloterdijk entitled "Rules for the Human Zoo: a response to the *Letter on Humanism*" (1999), in which, following Nietzsche's Zarathustra and Heidegger's posthumanism, the German philosopher declared the end of the modern humanism that had tamed men and its substitution by an anthropocentric policy (Sloterdijk 2009, 22-24), the debate on the future of the technological society and the role humanism should play in it seems to be resumed. In this general context, one may wonder if we have entered a posthumanist era or if we are rather facing a revival of the modern project of the Enlightenment, rooted in universalist ideals and, according to its advocates, still incomplete and pending implementation. In this sense, Habermas poses this question:

> Should we try to hold on to the intentions of Enlightenment, feeble as they may be, or should we declare the entire Project of modernity a lost cause? (…) I think that instead of giving up modernity and its project as a lost cause, we should learn from the mistakes of those extravagant programs which have tried to negate modernity. (Habermas 1981, 9-11)

Following this critical vision of the technologically advanced society in which mistrusting the scientific and technical future seems to have become a dogma, members of the Frankfurt School, particularly, Herbert Marcuse, have taken and *apocalyptic*[1] stance before the perverse effects technical progress might drag us into (Pérez Luño 2004, 103-107 and 2012, 85). As an alternative to this technicist drift, Marcuse proposes a series of social, political and cultural changes that may contribute to liberate technology (not intrinsically harmful by itself to the individual or society) from any form of authoritarianism aiming at using (or abusing) technology as a method of control.

Paradoxically, the liberating force of technology, derived from the instrumentalization of things, ends up shackling this very liberation, that is to say, instrumentalizing men. Therefore, Marcuse defends that,

[1] This apocalyptic attitude towards technological progress finds its counterargument in the position held by the so-called *integrated* scholars, that is, those who consider it normal to have all areas of our public and private life marked by the omnipresence of technology and are even pleased with it. Both basic attitudes towards the technological society and mass culture were defined for the first time in a book by Umberto Ecco (1965), the original Italian title of which *Apocalittici e integrati* coined these terms.

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ISSN: 2530-4275 • ISSN-e: 2603-6002, No. 4/2019, p. 39-58
doi: http://dx.doi.org/10.18543/djhr-4-2019pp39-58 • http://revista-derechoshumanos.deusto.es

in order to avoid technological rationality from legitimizing control and, which is worse, encouraging rationally totalitarian societies, it is necessary to establish some sort of mediation between nature, men and technology. Following this reasoning deployed by Marcuse, Habermas has stressed the need to find a meeting point between technical-scientific progress and what he calls "the social world of life". In other words, Marcuse and Habermas seem to endorse a more human vision of technology, being a valid alternative to both technological determinism and neo-scientificism since both contain instruments of control and oppression that would precisely hamper everyday life in big industrial societies (Habermas 1968, 118).

It has promptly been affirmed that thinkers affiliated to the Frankfurt School perceived that, along with the temporal character of the Being, the technological issue —particularly the relationship between men and technology— was the defining element in the debate on modernity to the point of having determined its discourse throughout the 20th century (Navajas 2007). And yet, not only representatives of this School (that might also include Theodor W. Adorno and indirectly Walter Benjamin) but philosophers of the 1914 generation in general such as Oswald Spengler, Martin Heidegger and José Ortega y Gasset have deemed it relevant to question the social validity of contemporary technology and its place within culture broadly considered (Atencia-Páez 2003: 62). In reality, that was the theoretical background of the 1951 Darmstadt Seminar, prompted by the confrontation of two different interpretations of humanism and technology: on the one hand, Heidegger's ontological vision, according to which modern technology would have gone so far that "only a God can save us (*Nur noch in Gott kann uns retten*)" (Heidegger 1989, 71); and on the other hand, Ortega's anthropological perspective; considering technology and men to be essentially so intertwined that "man starts when technology starts" (Ortega y Gasset 1939, 574).

The present-day man faces a technological world to which he needs to adapt but at the same time, it is a world he must try and transform into something more human. The current issue is not, as it was the case until well into the 20th century, to know how man can control nature. Nowadays, the main novelty (or "the theme of our time" to express it in Orteguian terms) is the fact that we are aware that technology not only transforms nature but it also transforms society and not always for better. In effect, many types of "over-nature" are part of our daily circumstances (means of transport, power grids, ITCs, etc.) so this gives us an impression of being dependent on technology even bigger than our notion of control over nature. These

mixed feelings the technological world provokes in the individual (since we deem it both partly indispensable and partly despicable) are intensified in the information society. In this regard, some scholars have sustained that in the technological era, men should interact with this artificial "over-nature" they created with their intelligence and which is a *consecutio* of the actions of *homo cogitans*, but without having to yield to a neo-Orwellian apocalyptic and anti-technological stance or to the neo-Utopian chimera represented today by "sorcerer's apprentices of Negropontism" who take advantage of the Western culture's crisis caused by the demise of values and ideals defended by Enlightenment's humanism (Frosini 1986, 154-155; Sartori 1997, 232-235).

Among the most original ideas of Ortega y Gasset regarding technology, there are two particularly relevant today: the notion of "over-nature" and the idea of artificial (or superfluous) need. Both ideas in fact serve the purpose of enabling the entrenchment of naturally maladjusted men within the technological society and all in all they express their trust in the compatibility of new technologies with both the cultural legacy of humanism and the project of modernity. Precisely, this utopian image of a future computerized society, finally free from the controlling power of the automatized state, illustrates the concept of "computer-based utopia", coined by Yoneji Masuda (1980) in his book: *The Information Society as Post-Industrial Society*. Masuda, who unlike Ortega believes in a peaceful symbiosis between man and nature, shares with the Spanish philosopher the dynamic ideal of technological humanism (which he calls "biological synergism"). This ideal searches the construction of a terrestrial, physical and non-celestial synergic society, a space of global information prevailing over national conflicts, interests and differences that will progressively be deeply rooted in people's minds (Masuda 1980, 89).

The postulates of technological humanism from Ortega y Gasset to Masuda have the appeal of incorporating defining traits of the present age and the future of liberties in the technological society. Regarding this liberal and humanist take on technology, embodied in technological over-nature, according to Ortega and in a computer-based utopia according to Masuda, Pérez Luño has stressed the relevance of this theoretical approach, since "beyond the possibilities of the technological realization of its predictions regarding the future of advanced societies", it offers a study frame for the current significance of third-generation human rights and provides us with reasons to reflect upon legal and political issues encompassed by the label of "teledemocracy" (Pérez Luño 2012, 45).

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3. **The limits of Transhumanism: a debate between Bioconversatives and Bioprogressives**

Hans Jonas (1984), known for his influential *The Imperative of Responsibility*, is one the 20th century philosophers who has put more focus on the search for an Ethics for technological civilization. In this work, the author claims that human survival depends upon our efforts to look after our planet and its future. This appeal to an Ethics of responsibility in order to save the future of the human life leads him to formulate an original supreme moral principle expressed in four manners. Firstly, with a positive formulation: "Act so that the effects of your action are compatible with the permanence of genuine human life". Secondly, in a negative fashion: "Act so that the effects of your action are not destructive of the future possibility of such life". Thirdly, in a simplified way: "Do not compromise the conditions for an indefinite continuation of humanity on earth"; and lastly, in a concluding manner: "In your present choices, include the future wholeness of Man among the objects of your will" (Jonas 1984, 11).

In his relationship with *techne*, the man of the digital era has finally managed to control the natural elements and circumstances to which he used to be subjected. Jonas indicated that *homo faber* has triumphed over *homer sapiens*, since the barrier between the artificial and the natural has also disappeared. This new phase for humankind requires, according to the German philosopher, an Ethics of prevision and responsibility adjusted to the new types and dimensions of the actions of *homo faber* in the technological age. Paradoxically, this culmination of man's power over nature by means of technology may turn against him and pose a challenge to the very survival of the human condition. The Ethics of responsibility enables man to face, as a moral subject living in this new technological society, three paradigmatic situations in the context of Biomedical Sciences and Technology applied to men: extension of life span, even close to achieving immortality, behaviour control by means of technology, and genetic manipulation enabling bio-improvement and genetic design of the humans (or rather transhumans) of the future (Jonas 1984, 17-22).

The new capacities for action of *homo faber* in the digital and new technological Age require new ethical rules and even a new Ethics that would occupy the space left by Religion. Yet, Jonas warns us, the filling of this ethical vacuum cannot be conducted exclusively on an unlimited belief in scientific progress if it is at the expense of human dignity (Jonas 1984, 24-27). In effect, human freedom is born out of necessity. The scientificist utopia (or dystopia) will not bring either liberty or

dignity but will lose them forever. Therefore, human dignity comes only from reality itself as well as of necessity.

Before those who, following Nietzsche, declare the abolition of men and their substitution by supermen (*Übermenschen*), the search for the "last man", capable of generating his own aristocratic system of values that represents an alternative to that of traditional religions fostering a morality of slaves and a gregarious spirit among men fearing God and the State (Nietzsche 2005, 9-21, 44, 52), Hans Jones agrees with C.S. Lewis on warning about the danger of a future formation of "men without chests", denaturalized and detached from the values of Humanism. In *The Abolition of Man* (1943) C.S. Lewis tries to unravel the false meaning of a supposed "Man´s conquest of Nature", an expression usually used to describe the progress of applied sciences. There is a certitude that "Man has Nature whacked." Nevertheless, Lewis argues, we should ask ourselves "In what sense is Man possessor of increasing power over Nature?" (Lewis 2002). According to Lewis, what we call the Man's power over Nature reveals in reality itself as a power exercised by some men over other men using Nature as an instrument.

> In order to understand fully what Man's power over Nature, and therefore the power of some men over other men, really means, we must picture the race extended in time from the date of its emergence to that of its extinction. Each generation exercises power over its successors: and each, in so far as it modifies the environment bequeathed to it and rebels against tradition, resists and limits the power of its predecessors. This modifies the picture which is sometimes painted of a progressive emancipation from tradition and a progressive control of natural processes resulting in a continual increase of human power. In reality, of course, if any one age really attains, by eugenics and scientific education, the power to make its descendants what it pleases, all men who live after it are the patients of that power. They are weaker, not stronger: for though we may have put wonderful machines in their hands we have pre-ordained how they are to use them. And if, as is almost certain, the age which had thus attained maximum power over posterity were also the age most emancipated from tradition, it would be engaged in reducing the power of its predecessors almost as drastically as that of its successors. And we must also remember that, quite apart from this, the later a generation comes (the nearer it lives to that date at which the species becomes extinct), the less power it will have in the forward direction, because its subjects will be so few. There is therefore no question of a power vested in the race as a whole steadily growing as long as the race survives. The last men, far from

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ISSN: 2530-4275 • ISSN-e: 2603-6002, No. 4/2019, p. 39-58
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> being the heirs of power, will be of all men most subject to the dead hand of the great planners and conditioners and will themselves exercise least power upon the future. (Lewis 2002)

Homo faber's conquest of nature, by means of mastering technology, represents, in the words of Luc Ferry, an "*antinomie des biotechnologies*" (clash of biotechnologies) between bioconservatives (advocates of a balance between biomedical improvements and the foundations or morals, liberty and human dignity) and bioprogressives (supporters of taking advantage of the irreversible technological progress taking place due to the development of artificial intelligence in order to boost research on human enhancement and bring it in line with the unstoppable transhumanist revolution) (Ferry 2017, 73-78).

3.1. *Bioprogressive approaches*

Regarding the "*antinomie des biotechnologies*" that confronts bioconservatives and bioprogressives, one of the least radical positions, within the doctrine favouring scientific human enhancement, is represented by American philosopher Allen Buchanan. His starting premise is that the notion of human nature is semantically undetermined and unstable, so it is to be employed carefully, especially in the fields of biomedicine and genetic engineering (Buchanan 2011a, 16). If human nature is not fixed (this author points out) and we accept bioenhancement by means of a radical genetic intervention, then we must simply accept the notion that moral progress in its traditional and familiar sense is no longer applicable. In this regard, Buchanan defends that we can no longer assume that, in the future, there will be only one replacement to what has been considered human nature, and he even dares to prophesize that, sometime in the future, different groups of human beings might follow diverging evolutionary paths, using genetic engineering. Should that ever happen, there will be different groups of beings, each of them with their own "nature", being related only by one common ancestor (the human race), just as now there are different animal species that evolved from our common ancestors by random mutation and natural selection. Buchanan concludes it is probable that even future members of the United Nations may feel increasingly more uncomfortable with not so paradigmatic expressions or titles such as "the Universal Declaration of Human Rights" (Buchanan 2000, 94). Finally, mainly responding

to Michael Sandel's criticism (see below), he warns about, the pursuit of biomedical enhancements is not the pursuit of perfection; it is the pursuit of improvement:

> To desire to enhance certain human capacities in order to increase human well-being or to preserve the well-being we now enjoy is not the same as desiring to achieve total mastery. A proper appreciation of the given is compatible with the pursuit of improvement and may require enhancement, if enhancement is needed to preserve what is valuable in the given. (Buchanan 2011b, 2)

Within the bioprogressives, though taking a more radical stance than Buchanan, we find the posthumanist approach of Noah Harari (2015), presented in his *Homo Deus. A Brief History of Tomorrow*. This piece develops a new philosophy called "Dataism", which according to Harari, "declares that the universe consists of data flows, and the value of any phenomenon or entity is determined by its contribution to data processing" (Hariri 2017, 428).

This Israeli historian considers that the whole human species is but one single data processing system and that every human being functions like a chip (Hariri 2017, 440). For the followers of this school of thought, the most interesting emerging religion would be Dataism, which worships neither gods nor men; but venerates data. In the last chapter of his book, entitled "The Data Religion" Harari reveals that the supreme value of this new religion is data flow and that human beings are but skilful tools serving this flow to create an Internet-of-All-Things that would eventually connect all the things in the universe. In this Dataist future, imagined by Harari, *homo sapiens* would be obsolete and liberal humanism (the life project of which is based upon singularity, free will and the conscience of each individual) would lose its meaning. This unsurmountable wall of antagonism that, according to Harari's catastrophist prophesy, allegedly stands between the precepts of the Dataist religion and the tenets of liberal humanism, has recently been disproved by Nick Bostrom, one the greatest specialists in artificial superintelligence, transhumanism and impact of futurist technology.

> The cumulative probability of posthumanity, like that of extinction, increases monotonically over time. By contrast to extinction scenarios, however, there is a possibility that a civilization that has attained a posthuman condition will later revert to a human condition. (Bostrom 2007, 26)

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In this pessimistic diagnosis on the future of humanity, Harari's theory is based on the conviction that the reign of *homo sapiens is* coming to an end (Harari 2014). He considers that men have entered a new posthuman age in which the great human projects of the 20th century (defeating hunger, plagues and wars) have made way to the new projects of the 21st century (attaining immortality, happiness and divinity) in order to supposedly serve all humankind. Nevertheless, Harari points that since all these new posthumanist projects aim at overcoming the natural rule and not at preserving it, they may lead to the creation of a new superhuman caste that abandons its liberal roots and treats normal humans no better that 19th century Europeans treated Africans during colonialism. In this regard, Harari asks:

> If scientific discoveries and technological developments split humankind into a mass of useless humans and a small elite of upgraded superhumans, or if authority shifts altogether away from human beings into the hands of highly intelligent algorithms, then liberalism will collapse. What new religions or ideologies might fill the resulting vacuum and guide the subsequent evolution of our godlike descendants? (Harari 2017, 382)

His answer is clear: the substitution of liberal humanism (which he considers as another religion), with a new religion, Dataism. Harari deems the sacralization of biotechnology and mathematic algorithms to be, besides the new faith dogma of the most extreme transhumanism, some sort of last train that *homo sapiens* may take to adapt to progress and evolve into a new species (*homo deus*) should he not want to overtly face extinction (Harari 2017, 298-304). This claudication of the human spirit before the virtual universe of algorithms may only be understood if humanity is regarded with such a restrictively utilitarian vision as the one defended by this scholar. As stated above, Harari (2017, 313) does not only question free will and considers it a human invention, he also denies the singularity of the individual as a moral subject, relativizes human dignity and the importance of will, and poses a false disjunctive between two supposedly irreconcilable elements we would need to singly choose: intelligence and conscience. His criticism stands as an overall challenge to the entire edifice of liberal humanism, a doctrine considered exhausted, lacking an adapted narrative for the technological revolution and unable to give sense to the posthumanist universe (Harari 2017, 249). This author's ignorance of the humanist tradition (the origin of which he locates in Modernity, overpassing the bi-millenary legacy of the classical world), explains his consideration of

this tradition as a religion substituting the great monotheistic religions, thus neglecting its emancipatory goal and sacralization of human dignity. Ultimately, Harari's posthumanist and Dataist theses contradict the Enlightenment's conception of the human being as "an end by itself" (Kant 1968, 87-132).

Like other contemporary utilitarian philosophers, Yuval Harari's love of animals is directly proportional to his disengagement from the member of his own species (humankind). In this regard, one of the most paradigmatic cases of desacralization of the human life is represented by utilitarian philosopher Peter Singer. In a joint research with Helga Kuhse on the moral status of the embryo, the Australian philosopher defends that not all *homo sapiens* are persons (including human embryos in that category) which results in human experimentation that destructs the zygote or human embryo (lacking a nervous system or brain), being as legitimate as that implementable on embryos of other non-human species, such as primates, dogs, guinea pigs, rats or mice. Here, the application of the Kantian ethical principle that impedes treating a person as a means, lacks any sense since it only targets rational and autonomous beings (Singer 2002). What is more, Singer thinks that all animals are equal and thus the last remaining form of discrimination consists precisely of not extending the principle of equality and the recognition of the rights we have as humans, to the rest of the animals. In effect, this scholar considers that establishing rationality or intelligence instead of sensibility to pain or joy as a selective criterion to justify the recognition of these rights just to certain animals (human beings) and not to others is as arbitrary and disgraceful as choosing any other, excluding purely racial criterion (Singer 2016, 530-534).

3.2. *Bioconservative approaches*

The last section summarised the positions of three popular bioprogressive scholars whose theories represent the three paradigms of the dangers of technological progress alluded to by Gabriel Marcel: the risk of *hybris* and mythification of technology, the destruction of nature, and dehumanization of the world (Fernández Ruiz-Gálvez 2007, 93-104). This philosophical criticism of posthumanism, which is also compatible with acknowledging the value of technology itself, finds continuation in three contemporary scholars who defend scientific research and the progress of biotechnologies but only if the legal and ethical limits of human dignity are respected.

Deusto Journal of Human Rights
ISSN: 2530-4275 • ISSN-e: 2603-6002, No. 4/2019, p. 39-58
doi: http://dx.doi.org/10.18543/djhr-4-2019pp39-58 • http://revista-derechoshumanos.deusto.es

Before the apostles of the Dataist faith, who promise a bright future of technological progress, health and happiness, Francis Fukuyama has warned about the risk of making a reality of the scientific dystopia described in *A Brave New World*, where eternal youth and physical and intellectual perfection are offered under the banner of freedom. In this universe of technological algorithms, the human being would live along other species, artificially evolved by means of genetic engineering, or with cyborgs, all of whom prevailing over the *homo sapiens*. In this regard, Fukuyama states:

> We do not have to regard ourselves as slaves to inevitable technological progress when that progress does not serve to human ends. True freedom means the freedom of political communities to protect the values they hold most dear, and it is that freedom that we need to exercise with regard to the biotechnology revolution today. (Fukuyama 2002, 218)

This scholar considers that the defence of equal rights for animals advocated by Singer can only be conceived from a position of total denigration of the human specificity and by sacrificing the idea of the very Darwinian and utilitarian notion of human dignity endorsed by the Australian philosopher himself. In this regard, Fukuyama reminds us of the last political movement that rejected the premise of universal human dignity defended by Kant in the Enlightenment era: Nazism, a movement that implemented eugenic and racist policies with terrible consequences for humanity. This explains why still today, three generations later, humanists regard the transhumanist movement with distrust and fear (Fukuyama 2002, 154-155).

With respect to eugenics, Michael Sandel notices that, in the age of bioenhancement and genetic engineering, the so-called "liberal eugenics" or new eugenics has achieved notable prestige within Anglo-American philosophical-political circles, notably figures like Allen Buchanan (2000, 27-60; 156-191; 304-345), John Rawls, Ronald Dworkin (2000, 452) or Robert Nozick, who even proposed a "genetic supermarket" enabling parents to shop for genetically designed kids on demand: "This supermarket system has the great virtue that it involves no centralized decision fixing the future human type(s)" (Nozick 1974, 315).

Though Sandel admits that liberal or positive eugenics is less dangerous than old or negative eugenics, he also underscores the fact that it is less idealist. In this sense, even if it is true that negative eugenics ultimately deviated from the ideal and enabled despicable

scientists and politicians to commit atrocities and abuses against human beings, the truth is that the eugenics movement started in the 20th century with the aspiration of improving humanity and promoting social collective welfare. Liberal eugenics, on the other hand, does not have collective ambitions, neither is it a movement of social reform. It is rather an infallible method for privileged parents to choose the type of children they wish to have and provide them with physical and intellectual advantages that grant success in a competitive society. Nevertheless, Sandel points out that whether genetic selection associated with eugenics is implemented by a totalitarian regime or whether it is freely chosen by individuals does not change the substance of the matter. This is so because in all cases, the human being, the born-to-be child particularly, is "cosified", is turned into a commodity; an object created according to the will of their parents (Sandel 2007, 78).

Sandel's response from the therapeutical medical model, objecting against the "improvement" model endorsed by transhumanism, aims at avoiding the substitution of natural randomness by selection and artificial genetic design. Lastly, this type of criticism tries to save us from a slippery slope dragging us to some sort of Brave New World, while we try to make the best of the latest biomedical innovations (Sandel 2005, 120). In effect, Sandel considers that contingency and randomness and the mystery of being (in the case of believers), are precisely what we leave behind in order to enjoy the advantages promised by transhumanism. The stubborn will of controlling everything that characterizes this Promethean man blow up the three main values that enable human coexistence: "If the genetic revolution erodes our appreciation for the gifted character of human powers and achievements, it will transform three key features of our moral landscape –humility, responsibility and solidarity (Sandel 2007, 86).

Much has been written on randomness, contingency and free will of human beings from Ancient times to these days. Genetic engineering and its uses for human enhancement have been a recurring topic throughout the 20th century, both in literature (Aldous Huxley, George Orwell) and in science (since Theodore Avery, Colin MacLeod and Maclyn McCarty isolated DNA in 1944 up to the publication in 2003 of the first complete sequencing of a human being as part of the Human Genome Project), as well as in philosophy (Francis Fukuyama and Jürgen Habermas).

Precisely this last scholar, German thinker Jürgen Habermas (2003) (disciple of Max Horkheimer and Theodor Adorno, two of the greatest exponents of the Frankfurt School) published a book at the

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beginning in this century entitled: *The Future of Human Nature*. Here, he addresses the following dilemma regarding the challenge posed by genetic engineering:

> Do we want to treat the categorically new possibility of intervening in the human genome as an increase in freedom that requires normative *regulation* or rather as self-empowerment for transformations that depend simply on our preferences and do not require any *self-limitation*? Even if this fundamental question is decided in favor of the first alternative, one can dispute the boundaries of a negative eugenics that would aim at overcoming unmistakable evils. (Habermas 2003, 24-25)

The question, formulated by Habermas, refers to the decoding of the human genome and the paradigm shift, taking place in the secular thought of European modernity, which has traditionally shared with religious viewpoints, the notion that fecundation is a contingent and *unavailable* natural process the consequences of which are an unpredictable combination of two different chromosomic sequences. According to the ethical paradigm generally accepted in Europe until recently, the organic starting conditions of a human embryo are to be subtracted from genetic intervention and intentional programming decided by other people (including their parents).

Certainly, as stated as the beginning of this chapter, there has been a change of paradigm as a result of decoding the human genetic map at the beginning of the 20th century, opening new paths not only for scientific research on diseases considered so far incurable but also for genetic design of our children. This has raised many ethical and scientific controversies between advocates and detractors of genetic engineering, which casts doubts on the spontaneous self-realization and moral freedom of people who did not provide their previous consent.

Concluding remarks: technological humanism and the metaphor of the ontological Centaurus

There is a middle way between those advovating a "back to nature" philosophy, in the fashion of the neo-rousseaunian discourse of current anarco-primitivists (Zerzan 2005) and those defending the benefits of biogenetics within the most radical transhumanism; the technological humanism, best represented by José Ortega y Gasset. According to the Spanish philosopher, technology is not just something

we use to obtain certain goals, but it is what makes us what we are since the beginning of our species. From an Orteguian perspective, it could be said that the human being is an ontological Centaurus, who is conformed technologically. Without technology, man is not completely human. Conceiving a pre-technology man would be to misread the history of man and that of his vital condition. That is why Ortega claims that man is to be considered an "ontological Centaurus"; technology would be a part of his essence up to the point it could be said that this scholar considers a natural human being is such an impossible entity as an artificial human.

Again from an Orteguian perspective, the fundamental issue regarding the progress of biogenetics and the rest of modern technologies that attempt to improve the human being is not whether it is legitimate or not to take the path of technological self-transformation. After all, this is the path we have walked and that has made us the species we are. The question is, from and ethical and legal point of view, if this path must be travelled until its very end or, if rather, as Antonio Diéguez suggests, this path has "forks that take us through different sceneries, some more pleasant than others" (Diéguez 2017, 176).

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