



Post-Trans Human Techno Science as Help or Threat: An Overview with Emphasis on a Current Nanotechnology Application

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Abstract

Aim: The paper focuses on the progressive growth of a particular direction of science which, in the name of an alleged human and social progress, is imposing itself in a disputable way, progressively stifling people's freedom of choice. Never as in this time, technoscience has been trying to impose its highly questionable rules, to the detriment of human freedom and health. True science is currently often confused with a sort of scientism. The scientific medicine fights against unofficial medicines and is enjoying a credit comparable to a religion.

Methods: The paper analyzes the role of technoscience in the post-transhuman framework, with particular attention to nanotechnologies and to the unfortunate consequences emerging from its recent application in the field of gene sera in relation to Covid-19 pandemic.

Results: Technoscience and nanotechnological applications, closely related to it, can become dangerous tools for the future of humanity if their use is not properly controlled through truly scientific methods. An illuminating example of this is the use of experimental drugs, improperly called vaccines, from the past year throughout the world.

Conclusion: We cannot speak of true science and technoscience at the service of the individual if freedom and human dignity are not respected or overshadowed through social impositions without real scientific basis. Scientific discoveries and technological inventions are acceptable if they respect human dignity and aim at the common good and not at the advantage of an elite.

Keywords: Post-Transhumanism; Nanotechnology; Technoscience; Genic Drugs; Freedom; Human Being; Society; Education; Covid-19

Introduction

Techno science is changing our perception of reality, moving in a direction that points towards the unknown, with everything positive, but also negative, can happen.

Human reality possesses a fine and particular complexity, the understanding of which is still in the making. The body functions both as a transmitter and a receiver of information, and is able to insert the person within society. Today's thinkers wonder about the era we are living in,

full of contradictions, but also of the maximum expansion of technology as the human being's ability to change the surrounding environment. It is also the era that sees the deepest identity crisis. In this context, a line of research and technology is trying to transfer to the machine a part of the prerogatives that are traditionally and culturally human; it is a project that is still too vast for humanity, with a strong heated debate, especially on the ethical level. Nanotechnologies are at the heart of current scientific development, but their use must be carefully evaluated, as they can lead to harmful situations for environment, society and humans. The latest recent developments in the gene therapy used in the past two years are an illuminating example.

Medicine, Disease and Society

The embodiment is the continuous process of action of the social, political, economic, historical, cultural forces that influence and determine us and our body; the way in which the individual acts in a broad sense is influenced and in turn influences our body which becomes a social and cultural construction. The notion of embodiment defines the ways in which human beings live the experience of their own body within the world and produce a representation of it [1]. The disease causes in the human being a strong demand for meaning; the experience of malaise is not rooted solely in the individual experience of the disease, but is configured as a historical-cultural account of emotions, beliefs and choices developed by the subject to represent the event of the disease and its impact on personal biographical events. The experience of suffering generates forms of resistance, anguish, anger, fear, reaction. The discoveries in the genetic field, such as the mapping of the individual genome, entrust science with the task of repairing the damage of diseases and organic dysfunctions, increasing the thesis proposed by the transhumanists in favor of an evolution that is no longer natural but participatory, no longer suffered but controlled.

Precisely on this point the positions of scientists, technicians, philosophers, anthropologists and theologians clash with regard to the possibility and legitimacy of modifying the human biological nature in its essence [2].

Scientific medicine fights against unofficial medicines (seen as unscientific), intervenes in an increasing number of fields and enjoys a credit that almost equates it to a religion; health is occupying the place once reserved for salvation and medical faith fills the void related to man's disinterest in the great institutional religions. The unlimited progress, global health and the gradual elimination of all diseases are based on a hope that promises like the great religions do. The mythicizing idea of an unlimited progress in medicine and the utopia of a man without evils take power away from spiritual knowledge, giving to medicine an even more

religious character.

The medical discourse is presented as objective and devoid of any religious presupposition, and speaks of a state of complete physical, mental and social well-being, an idea of salvation common to all the great religions; it is the belief, translated into social behavior, that technological rationality is the norm to follow [3]. Modern technology is radically imposing in today's global society, proposing itself as the only valid thought and legitimizing the dominion of man over nature, within the current materialistic and consumerist system of "produce and destroy". The man's desire to explain the world in purely casual terms has led to the formulation of theories that have become rigid, mutually exclusive and often revealing themselves to be reductive.

Body as a Sum of Data, Cyborgs, Artificial Intelligence

With the industrial revolution we have witnessed a set of economic, social, scientific and religious changes, which have made perceive the figure of the automaton in its double meaning, that is a witness to human ingenuity and a threat to humanity. Already in the last years of the eighteenth century, a concern with machines appeared, perceived as demonic ideas capable of challenging the natural order of things. The automaton was seen as a potential threat, the image of our robotic version, a replica that inspires fear and anguish. Over time, the body has become an object of simulation, which becomes more and more knowable only if it is automated, that is by transforming it into a digitized body. The increasingly refined technology aims at its increasing manipulation, relating it to fields never considered to date. This is causing a deep change in the relationship between scientific progress and evolution of man in its natural order.

The term cyborg (cybernetic organism) was coined in 1960 in relation to astronautics studies. It was imagined a perfect hybrid, halfway between human and machine, between organic and artificial, which would serve for space exploration, but which would help in the knowledge of the deepest mysteries inherent in the mind-matter relationship [4]. From here began a whole process of study and debate on the question of whether man is an adequate biological form and on possible artificial interventions on the body with the relative manipulation of its parts and its biological processes. By replacing some parts of our body, the human nature is in fact altered, transforming the man into a "half man". This is one of the directions taken by research in the field of nanotechnology; Nano chips of artificial nerve cells are being created to replace natural ones and remotely controlled Nano robots of the order of cellular size, potentially useful for repairing damage in inner organs.

Another direction of work concerns the possibility of obtaining a holographic existence, that is a virtual life in which a person can develop and exist within a computer system without the need to reside in a body [5]. The attempt to replicate the model of the human mind in its entirety runs the risk of being deceptive; each mind is the unique result of a series of genetic, environmental, experiential factors, within a network of changing inter-individual relationships, in a historical and cultural context elaborated in a non-replicable series of interpretations. The reproduction of all this does not seem possible; a cyborg can achieve self-managed reactions to external stimuli or autonomous forms of learning, while still governed by standard algorithms set by the designer [6]. In recent years, multi-billion dollar companies, such as Tesla, have embraced the challenge of artificial intelligence; in 2021, Elon Musk presented a vehicle capable of camera-based autonomous driving, equipped with machine learning and a cybernetic brain. The US company Neural ink has undertaken the first tests on animals by implanting a chip in the brain so that it works as an interface to a computer through an Internet connection [7].

David Chalmers, director of NYU's Center for Mind, Brain and Consciousness, argues that artificial intelligence can match the human intelligence and even surpass it through advanced software capable of continuous improvement through a peculiar feature called "recursive self-improvement". Such intelligence would know no limits in learning and could soon reach a status capable of inventing, conceiving and discovering almost everything [8]. Alan Mathison Turing, considered one of the fathers of computer science and one of the greatest mathematicians of the 20th century, first spoke about a test, currently known as the "Turing Test", able to establish, through a series of questions, if a machine is equipped with smart behavior [9]. The test has been revised and reformulated several times over the years in the face of a problem with the definition of "intelligent machine". The core of the test consists in finding an algorithm capable of hiding in randomness. What Turing hypothesized is that the machine follows a combination not dictated by randomness in the strict sense, but uses a system that generates randomness in an algorithmic way.

The more it is possible to break down reality and quantify it, the more we understand that our inner world can be subjected to a similar operation; but man is not just a sum of data. The activity of thought is at the center of a series of interpretations based on different theoretical positions, relating to the internal development of a scientific language and to the cultural context in which they evolve. It arises the problem on how computers should be programmed; it is necessary to provide them with a language so that they are able to connect various information for forming abstractions and to include a controlled level of randomness

in the reasoning. However, it does not change the fact that computers have no knowledge about their work, they are not aware of their actions, they do not have a purpose if not set by the programmer; it is precisely in this that they differ sharply from human behavior.

In the minds of the designers, the cyborg, being a marriage between natural and artificial, between human and machine, is seen as a reality in an expanded biological time and could reach the human dream of immortality. The latter inevitably leads to the unresolved questions that human beings have always asked themselves: who we are, where we come from, where we go. The cyborg is considered as a point of arrival within the evolutionary path of the human species [10].

On The Concept of Posthuman and Transhuman

At the basis of the current of thought called posthumanism and transhumanism, we find the convergence of four technologies: nanotechnology, biotechnology, information technology and cognitive science. They have certainly led to a great acceleration of knowledge. The dream of immortality, as well as the projects for improvement, enhancement and modification come into play in the human biological reality and aim to permanently eliminate the barriers existing between man and machine. The posthuman is seen as overcoming the biological, neurological and psychological limits inherent in human beings as a result of the evolutionary process; in the definition of the concept of Trans human, the transition from the human to the post human condition is seen [11]. The supporters of post humanism are totally fascinated by the rhetoric of technological and scientific progress but they do not question adequately about the most evident anthropological crisis we are experiencing.

One of the best-known trans humanists, Raymond Kurzweil, speaks about "technological singularity", meaning with this term the ever more rapid affirmation of artificial intelligence and its fusion with the human one, actualized in 2045 [12]. The essential element to reach this stage of achieving singularity is technology; once a super-human intelligence has been produced, it will itself subsequently create more and more intelligent ones, which will gradually replace human beings. The trans humanists also identified some categories of possible opponents of their project:

- The theists, opposed as they would see denied the primacy of God.
- The ecologists, who would not accept this upheaval of the natural order of things.
- The humanists, who would affirm their solid anthropocentric vision of the world.

The Trans humanists instead propose the overcoming of biological limits by means of reason, technology and science.

Scientific View of the World and Religion

If we want to consider the scientific vision of the world, without however fully embracing the scientism, it is necessary to restore the connection of science with the sphere of the sacred and the religious. The search of a purpose and meaning for life in the universe leads to the recognition of the purpose of a life without end as relevant, and then religion becomes a symbolic reserve for humanity [13]. The idea that human beings may be able, through technoscience, to improve their biological and moral destiny, has a positive meaning; however, there is some debate about the successful outcome of this attempt. In order to advance in the direction of a global improvement for man, it is necessary to know who and what man is and what is good for him. The process of human improvement can be understood in the moral sphere, recognizing that the boundary towards which this process tends is the metaphysical and religious one [14-16].

The World of Nanotechnology

The current world energy needs require scientific and technological efforts for the development of Nano devices and Nano systems of crucial importance in many sectors [17]. Revolutions such as the "Industry 4.0 revolution" should hopefully lead to a general improvement in the conditions of man and the environment. This implies a correct use of science and technology, avoiding political interactions in favor of clienteles and power games. The ultimate goal should always remain the good of people and the overall improvement of daily life. It is therefore necessary to seriously reflect on the race to digitization and on the effects, even potentially negative, of this change which strongly involves the nanotechnology sector. Technology is neutral in its essence; the way people use it makes a difference, positively and negatively. Bio economy aims to improve the economy, the society and the environment. The process is not just about integrating biological knowledge into existing technology; the transition must also take place at the social level, stimulating awareness and dialogue, and further supporting innovation in social structures through more aware behaviors.

This transition process should see citizens as real protagonists of the social transformation that bio economy can produce. The artificial intelligence, linked to nanotechnologies, is one of the most promising technologies of our time; it could benefit the whole society, in all sectors, both in daily life and in the workplace, determining a great impact on the social and economic reality. But, together

with the 4th industrial revolution, it could lead to the loss of millions of jobs in a few years, involving the world's most developed economies. Alongside the undoubted advantages, there are a series of risks for humanity, closely linked to the use of artificial intelligence applications and to the use of robots, which could be responsible for humanitarian violations, crises of companies, industries and entire countries by the economic and financial point of view. In line with these aspects, a robotics should be elaborated, developing universally shared scientific, cultural and technical tools and knowledge for the well-being of people and to prevent their use against humans. With regard to nanotechnologies, for example, the production of nanoparticles is underway with an incomplete understanding of the mechanisms that regulate the synthesis processes. The synthesis of magnetic nanoparticles often requires the use of toxic reagents.

The development of nanotechnology must address the problem of its safety, connected to the potential dangers and risks for both man and environment. It should be acceptable only when the possible benefits outweigh the potential risks, or at least when it is possible to control them. Many used nanoparticles are composed of transition metals, carbon, silicon and metal oxide, which can cause serious problems following inhalation, ingestion, skin absorption and injection into the human body. Toxicity is determined by the characteristics of the materials and physiological factors. In addition to acute toxicity, long-term toxicity must be considered very carefully [18-21]. Nanoparticles have particular chemical-physical properties that make them exploitable in different fields of application, such as food, environment, biomedical applications. The use of nanotechnologies can bring interesting benefits for producers and consumers, such as the maintenance of sensory quality and safety [22].

Nanotechnology and Human Enhancement

There are many enigmatic issues, such as human enhancement and military applications, as they involve value judgments, which differ from person to person and from different orientations and approaches to life. The debate is open about how the new technical possibilities can harmonize with the different ethical traditions. People coming from different ethical traditions have a diversified approach to questions related to Nano medicine and technologies working at the Nanoscale, when applied to human empowerment. The debate is open on ethical, philosophical and theological perspectives of enhancement, in relation to nanotechnologies and converging technologies [23]. The idea that is gaining ground also concerns the near future of people with limb prostheses, paraplegics and suffering from brain or peripheral nervous system diseases,

who could participate more actively in social life thanks to the use of new nano-inclusive technologies. Nanomaterial's would constitute the most important part of these implants and prostheses, and will be used together with biotechnology, ICT and cognitive sciences.

Even more controversial is the will to empower children to remedy negative physical and mental characteristics or to incorporate desirable characteristics; these are ideas that can be assimilated to forms of eugenics. These developments in human enhancement narrow the distinction between humans and machines. The risks must be carefully assessed and no violation of human rights or autonomy is acceptable in the event of interference in human procreation and in mental and sensory perception. The insertion of artificial objects inside the human body without a well-founded medical reason is considered a threat to human dignity. The issues of transhumanism come into conflict with the values inherent in this perspective, if they succeed in denying the dignity of the human being [24,25].

A Very Dubious Current Use of Nanotechnology: The Gene Sera

2021 marked the official start of the Covid-19 vaccination campaign across Europe. Experimental drugs have been called "vaccines" by arbitrary decision of the WHO, although they have nothing to do with the pharmacological structure of real vaccines. No active pharmacovigilance was performed and the passive one is the least deficient; the data we have are therefore tragically approximated by defect, especially in Italy, where a sort of pseudoscience is explaining the adverse effects of this gene therapy as sudden and fatal illness. No emergency allows the use of mandatory experimental drugs that have had even a single case of mortality and/or a single case of irreversible disability. To date, the many side effects and deaths, which occurred in close temporal connection with the Covid-19 vaccination campaign, have been described as pure coincidence and without causal links. This is very surprising, as none of the classic vaccinations of the past have had as many side effects and deaths as currently with these inoculations. This is a very alarming phenomenon. Immunohistological methods have recently been developed with which spike proteins induced by these sera can be detected in tissues. This procedure is generally applicable to all observed damage in the organs and tissues of the body [26].

Therefore, legal issues should now appear in a new light, in particular regarding the responsibility of whoever is manufacturing these products. Doctors should demonstrate that this vaccination was not the cause of the detected damage, which is not possible in the light of this test method [27]. The inoculations can be linked to experimentation and insertion

of materials for the control of the person, deciding what we can do or not through decisions that are not ours. If gene sera become mandatory and our activities will be subordinated to a pass and then to a chip, the human freedom as we knew will be definitively compromised [28]. The 5G network, heavily enhanced during the lockdown, implies the powerful repeaters but also the interconnection of accommodation facilities such as the new street lamps. This technology leads to many doubts and concerns about the future of man; it is in fact able to interact with the connected devices and in a fraction of a second can process data and intervene on the devices. This leads to possible serious limitations of human freedom, as we have known it until the end of 2019 [29,30]. These mRNA sera appear to do profound and extensive immune suppression. They are structured very differently from live viruses and have the equivalent of a biological access key that allows them to proliferate throughout the organism. They persist in the tissues and generate a synthetic spike protein which is a toxin; this explains why the immune response to them is subject to serious and lasting collateral effects compared to traditional vaccines [31].

Looking at the experimental data on current vaccinations, it emerges that they are neither safe nor effective. Regarding the effectiveness of booster injections, recent observations from UKHSA surveillance data reported that natural antibody levels appear to be lower in people who become infected after 2 doses of vaccination [32]. The efficacy of the vaccine against infections for the fully vaccinated ones decreased with increasing time after vaccination [33]. The injections are interfering with the body's innate ability to produce antibodies against the virus after infection, creating conditions that make the disease more severe [34,35]. It is imperative that practitioners remain vigilant about the problems arising from these experimental substances, regardless of the pervasive propaganda that essentially says that all vaccines are safe and effective. Evidence shows that some vaccines can make a vaccinated person more vulnerable to disease rather than the contrary.

Covid-19 injections may be by far the most dangerous ever produced in the history of vaccinology. What if the Covid-19 genetic injections were actually causing disease and death? Something is killing many people who have already been vaccinated one or more times. Meanwhile unvaccinated people, according to data from millions of people around the world, are dying in far fewer numbers [29].

Growing evidence proves that Covid-19 injections are creating ailments and pathological conditions that can be debilitating within weeks and even fatal [36,37]. We recall that bio-terrorism involves the use of weapons today called "weapons of mass destruction" and which include, in addition to the biological ones, nuclear, radiological and

chemical weapons. Biological agents that can be transformed into weapons of mass destruction include bacteria, viruses and toxins, which are substances available on the market or directly in nature. It is not necessary for the final product to contain such a number of germs as to affect entire populations; with a sufficient quantity the victims become infected and the natural course of the disease will produce deleterious effects by itself. Among the possibilities of use, the route through the air is the most potentially lethal method of dissemination [29,38]. The debate is still open, but it seems increasingly clear that the actual efficacy of these vaccines is not leading to the desired benefits. Only time will tell us where the truth lies.

Conclusion

There is a great variety of views among thinkers about the new sciences and technology. The human enhancement, made possible by nanotechnologies and converging technologies, is acceptable as long as it promotes the freedom of the person, does not unfairly discriminate between individuals and stimulates normal social life and peace between people. The humanity's growth should take place from an ethical-moral perspective, improving the ability to live together in peace. This perspective can hardly be considered a driving force in the fury on the artificial and negatively invasive enhancement of the body and mind of man.

People should be free to choose their own life path regarding particular empowerment tools, whether they are acceptable or not. The increasingly advanced technologies in the bio-nanomedical field are leading to reconsider the fundamental notions of life and death and the transition between them under new perspectives. Western culture, traditionally anthropocentric, should dialogue with other cultures for a more balanced vision of the role of man in the world.

A robot is governed by the calculation of its programmer and therefore, unlike humans, it identifies with a servile-type mechanism; the imitation of man and his living intelligence on the basis of computational regimes alone seems an enterprise destined to fail. Since the dawn of philosophy, man has considered the spirit, soul, mind, culture as an emblem of his own humanity; this gives the exceptionality among creatures by virtue of a language, a mind and a thought. In the current "new economy", man has become a cost and must therefore be reduced to a minimum; evidence of this are the reduction of services, privatizations, subsistence allowances, the suffocation of small businesses, progressive taxation, and the ever-higher cost of living. The idea of obtaining a technologically modified human being is becoming increasingly popular, with inevitable repercussions on the duration of his biological life and on the re-examination of

the concepts of birth and death.

The idea of replicating the mental processes of the human being is certainly very ambitious and was also the basis of various discoveries in the scientific field; but thinking that thought can be contained within an artificial medium is a difficult idea to face and achieve, given the complexity and immensity of the human mind. Technoscience has an evident destructive potential and the related concerns are shared even by those who are far from a religious conception of the world. The transhumanist approach to reality may seem attractive, but it is also very disturbing and dangerous. Proponents of human empowerment consider the human body and mind, as they are traditionally known, to be insufficiently perfect, and therefore susceptible to improvement; this implies the incorporation of nano-, info-, bio- and neuro-technologies into the body of a healthy person. The applications of nanostructured material and nanosystems for neural implants raise deep doubts about individual freedom, in relation to the ability that a person has to make autonomous decisions. Scientific discoveries and technological inventions are acceptable if they respect human dignity and aim at the common good and not at the advantage of an elite. Various ethicists, philosophers, theologians, religious groups initiate debates on empowerment, nanotechnology and converging technologies. Ethical reviews are needed on the philosophical and theological implications of nanotechnology, increasing interactions with and between nature scientists, engineers and humanities scholars. The tragic consequences of what has been happening in the world since the beginning of experimental gene therapy in relation to Covid-19 must make us reflect a lot on the invasive use of new technologies. These so called vaccines are gene drugs based on a technology never used in therapy until now, that is nanotechnology, and sensitive to 5G electromagnetic radiation, due to the presence inside these drugs of graphene.

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