

Neuro-rights and Transhumanism: Upcoming Legal Challenges

The nowadays prevailing technological progress is forcing countries to acknowledge new rights related to the use of devices in people's minds and bodies.

The impact of technology in contemporary society is an undeniable fact. New tools and devices are increasingly being developed to help people carry out activities that were previously performed in a rudimentary manner; in fact, some technology is already being applied directly on people's brains. This leads to analyze to what extent the intrusion of third parties in people's minds, through this technology developed by major companies, should be legally allowed.

In view of the foregoing, several countries already aim to issue regulations to protect the rights to mental health and freedom of thought. Chile has been one of the first countries to undertake this: on October 25, 2021, it passed an amendment of its Constitution determining that physical and mental integrity, as well as brain activity and the information derived from it, shall prevail over rights that may emanate from technological or scientific developments, respectively¹.

A recent case of these technological innovations is the European startup called CryoMind, which offers the possibility of storing memories and certain information from people's brains in computers, expecting that in a near future, it will be possible to create a digital version of human minds. Notwithstanding the foregoing, several experts in neurobiology and artificial intelligence are skeptical about the project's feasibility.

The aforementioned allows realizing that projects are already set to enter into the human mind in order to extract information; therefore, the Chilean regulation represents a first big step in the recognition of problems arising as a result of technological advances applied at a neuronal level, as well as of the relevance of implementing legislation to protect these rights. However, it is important to point out that this debate is not as new as it may seem, since in 2014, the Supreme Court of the United States had already pronounced on this new reality, in a metaphorical way, when ruling in the case *Riley v. California*, where it established that privacy of cell phones was comparable to the inherent privacy of the human anatomy itself², considering that the law would have to consequently adjust to the integration of technology into functioning human beings.

I. NEURO-RIGHTS

The outlined debate has led to the recognition of a new type of legal assets to be protected, identified as "neuro-rights". In this regard, the platform called NeuroRights Initiative, has defined these rights as a new international legal framework of human rights, specifically aimed at protecting the brain and its activity, from advances in neurotechnology that could represent invasive or harmful acts to people's integrity, and especially to their free cognitive-intellectual development.

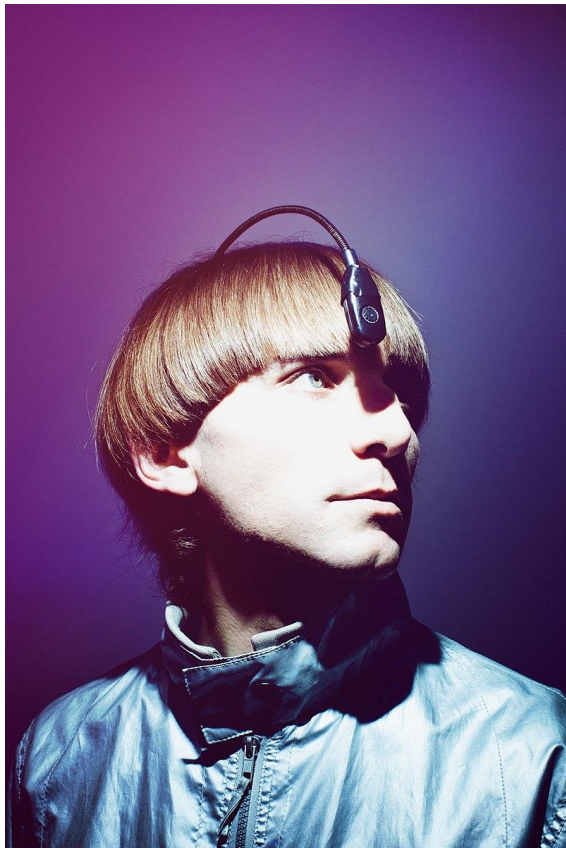
¹ In this regard, the Chilean draft constitutional norm states the following: "scientific and technological development will be at the service of people and will be carried out with respect for life and physical and psychological integrity. The law shall regulate the requirements, conditions and restrictions for its use on people, and shall especially protect brain activity, as well as the information derived from it".

² *Riley v. California*, 573 U.S. 373. The Supreme Court of the United States of America (2014). Available for consulting in the following link: https://www.supremecourt.gov/opinions/13pdf/13-132_8l9c.pdf.

A clear example of the legal challenges this emerging industry signals is the so-called Brain-Machine Interfaces (BMIs). Through BMIs, a direct communication pathway is established between the human brain and an external computer system, such as any automated prosthesis (e.g. a robotic arm or leg). The brain's motor cortex, which is designed to detect the neural signals associated with movement, is connected to a machine that decodes an algorithm which allows the robotic arm to move. A solution that, if developed on a large scale, could represent an excellent opportunity for accessibility and mobility for millions of people with disabilities around the world.

The aforementioned evidences that the use of these new and highly complex tools may imply the risk of manipulation of the way of thinking, decision making and even the way of seeing reality, thus we must become aware of the magnitude of this industry to adequately regulate it, to efficiently safeguard the human rights involved through the recognition of new ways of protection of fundamental rights, such as the right of self-determination, freedom of thought, and privacy, among others.

II. TRANSHUMANISM



Neil Harbisson | CC Dan Wilton - <http://installationmag.com/>
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lives with an antenna in his head to “hear” colors³.

The increasingly accelerated advance of technology has not stopped at the need to carry out studies to assess the impact of the use of technological devices connected to the human brain; they have evolved into a faster but possibly riskier way: integrating human beings with machines; this idea has been termed as “**transhumanism**”. According to this trend, machines are allowed to integrate with humans, mainly with the intended aim of making people's lives transcend their bodies, even to completely transform human beings, through the incorporation of technological tools.

Today, there are people who have technological devices integrated into their bodies. Some examples are the following: Kevin Warwick, who connected the nerves of his arm to a robotic hand, assembling his nervous system to one of his wife's hands; at the moment she moved that hand, he felt the impulses of it and they could communicate in Morse code. This unification of man and machine has even led courts in other jurisdictions to rule on the topic, the most famous example is Neil Harbisson's case, who was recognized by the British authorities as the first “cyborg” on the planet, due to his organic integration with technological devices, since he

³ Jeffries, Stuart. “Neil Harbisson: the world's first cyborg artist”. The Guardian, May 2014. Available at the following link: <https://www.theguardian.com/artanddesign/2014/may/06/neil-harbisson-worlds-first-cyborg-artist>



There are another examples such as the case of Moon Ribas, the cyborg woman who detects earthquakes by wearing a seismic sensor on her feet; or Chris Dancy, known for having eleven sensors implanted in his body that allow him to monitor his vital signs twenty-four hours a day⁴.

These types of cases have raised new challenges to the law, and given voice to non-human entities, through the defense of freedom to self-design, as well as the development of new senses and organs derived from technology and the right to mix the human body with machines. It has gone so far, that even one person installed a toothbrush motor in his pubis, which turned his virile organ into a vibrator⁵. This device was named Lovetron 9000 by its author Rich Lee, which is a small device that is designed to provide stimulation to the pleasure centers of his partner, and to enhance the sexual experience.

The magnitude of the transhumanism industry is so important, that it is estimated that, by 2028, this industry will move a total of 66,700 million dollars (1,334,000 million Mexican pesos approx.), according to the Global Biohacking Market Index. Thus, it is relevant that lawyers, philosophers and anthropologists, with the support of technical experts in the field, identify the effects, both positive and negative, in order to design ad hoc regulation for this industry, which is constantly growing at a global level.

III. CONCLUSIONS

The use of technological tools at a neuronal level, regardless of their purpose, is a reality that is gaining ground as it is perceived as a potential market with high profits. However, it implies great regulatory challenges and is undoubtedly facing serious implications in terms of human rights. Although the use of this technology is not harmful by its very nature, its incorrect utilization can be harmful, implying violations to essential human rights, such as physical and mental integrity, freedom of thought, and even life itself.

To limit the scope that this industry may have in the legal sphere of individuals, it is essential to develop critical thinking, in order to achieve an appropriate regulation that allows this market to arise and develop, without putting human dignity at risk.

It is expected that soon an important number of countries in the world will be regulating how to protect people's way of thinking and acting, as well as their freedom to integrate with machines; thus, neuro-rights and transhumanism, will be the new frontiers that law will face.

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⁴ De Asís, Rafael. "Cyborg's Ethical Challenges". Universidad Complutense de Madrid, Marzo 2019. Available at the following link: <https://e-revistas.uc3m.es/index.php/UNIV/article/view/4834/3306>.

⁵ Manuel Sánchez, Carlos. "Transhumans: The next step to evolution is now here". ABC Magazine, February 2022. Available at the following link: <https://www.abc.es/xlsemanal/ciencia/transhumanismo-robots-cuerpo-maquina-tecnologia-integracion.html>.

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