ETHICAL AND LEGAL QUESTIONS FOR IMPLANTABLE BODY CHIPS

Ayşe Yaşar ÜMÜTLÜ*

Orcid ID: https://orcid.org/0000-0001-9500-5338

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Abstract

The inevitable changes in the world caused new discussions of the ethical and legal issues on implanting computer chips in the human body. As it is known that, at the beginning of the technology, body chips were used for health purposes, but it is not just limited to it anymore. This technology will facilitate constant access to information about every citizen when and where it is needed. Then it could be a sort of threat to security and citizenship. Therefore the ethical and legal debates and discourses have focused on medical and scientific responsibilities, anxieties about the questions of privacy and autonomy. Because democratic and liberal law systems deny especially excessive governmental control on individuals. Policy decisions about chip implantation should not be regulated before it's carefully discussed. This article serves two purposes: One is the consideration of body and mind problem of our century on the issue of body chips and the second is to foresight what are the treats and ethical problems could become about the issue when the governmental and executive systems are considered.

Keywords: Ethical and Legal Questions, Body Chips, Philosophy of Law.

Introduction

* Dr. Ayşe Yaşar Ümütlu, Vocational School of Justice, Necmettin Erbakan. She received her B.A. in public administration from Anadolu University and her M.A. in philosophy and public law from Konya Necmettin Erbakan University, Turkey. She completed her PhD with the dissertation titled, “Comparison of Herbert Spencer’s and Ibn Haldun’s Understanding of Law and Authority” in the Yıldırım Beyazıt University, Ankara. Her research investigates into philosophical and ethical traditions flourished in Western and Islamic civilizations, especially on the subjects of justice and liberty. She teaches Philosophy and Sociology of Law, Introduction to Law, Law of Human Rights lectures in the Department of Justice at Necmettin Erbakan University, Konya. ayumutlu.ajanda@gmail.com
One of the biggest and oldest challenges in the history of philosophy was "the body and soul problem" or dualism. (Howard, 2017) Philosophers from Avicenna to Descartes struggled with this great subject. But modern and contemporary science and technology provided a new aspect of this issue. This new phase started to be seriously discussed because biotechnology and its implementations would change humans' nature inevitably. In the 20th century, the word soul is replaced by the mind, brain, and consciousness. Now we should deal with more complicated questions such as; are we still human beings with materials implanted to our mind or body? or is this a sort of creating "cyborgs" (cybernetic organism)? And do we like to be identified by the implantable body microchips and highly controlled? The central concern is, whether such interventions would be ethically and legally acceptable? Furthermore, related the international law "body integrity" is one of the human rights, can it remain so?

Indeed this is a reality of our century and not a science fiction story anymore. Genome editing technologies and human reproduction are available today (Nuffield Council on Bioethics, 2018). The studies and researches on the subject have been intensified in the last decade. The following quotation tells the story:

*The Human Brain Project was originally conceived by the neuroscientist Henry Markram, who famously outlined his vision to build a brain in a supercomputer back in 2009. This idea rapidly gained momentum and in 2013, Markram became director of an EU flagship project aiming to "integrate research data from neuroscience and medicine to understand the human brain by simulation".* (Sanjeevan, 2015)

Artificial implants have been applied at least three million people worldwide by private software developers and it's planned to make chips implanted more people for different purposes step by step by the states as well. Today, implantable computer chips are acting as sensors or actuators (International Consortium of Investigate Journalists, 2018). Yet, "people will be able to buy new memories and delete unwanted ones in the near future as experts believe they are close to bio hacking the body's most powerful tool, according to a leading technology entrepreneur"(Sean, 2017). Therefore this paper aims to reshape a discussion of the questions, especially whether we need better ethics and legal regulations on this reality. We may be prepared for recognizing and to arrive at some opinions, let us emphasize various troubles, difficulties, and complications, respectively. We have the facts, already became at first, the developments of technologies to one another are paralleled the threats of computer
science within our century; and the kindred claims are enforced in kindred ways. What would be the alternative of demanding justice at the hands of the technology?

**Technological Developments and Possible Conditions**

The implantable microchips are providing some advances and opportunities to humanity. But it also contains some dangerous results, such as producing a kind of agent of a large data source. Professor Gershenfeld asserts that "in 10 years, computers will be everywhere; in 20 years, embedded by bioengineers in our bodies...With this project, which researchers expect to alter human nature itself" (McGee and Maguire, 2019). Experts claim that chips inserted in brains will give us extraordinary faculties within years. But we should wonder what it means actually "extraordinary faculties"? Therefore technology has given us various powers with which we can manipulate not only the physical world but also our ethical, political, and legal worlds. All these stages have been unveiling a need for a new kind of consciousness in the global world.

**The Users and the Stages of Chip Implements**

According to the experts, the earliest adopters became those with a disability, who have to use particular powerful prosthetic devices. Then coming stage would be from therapy to social, economic and political purposes and especially, this point requires ethical evaluation as imperative. Thus this situation forces communities to decide new principals and norms, and then to enact domestic and international legislations. It is estimated by the researches that one of the first groups of non-disabled "volunteers" will probably be the professional military. That means these devices would produce new weapons, information, and communications that could be lifesaving or life-threatening. The third group of users will probably be those involved in intensive information businesses, which will use these devices to develop an expanded information transfer capability (Berolt, 2018).

Naturally, first and general usage of the chips through biotechnology began to be asked by people. But most of the questions generally bound by its' utilities and opportunities about biotechnology, and these questions are;

"Are the implants safe for human use?"

*How are the implants installed?*
Can I have the implant placed somewhere other than my mind or hand?

Does the implant procedure hurt?

Can you see the implant under the skin?

Is it easy to remove the implant?

What can I store on the implant data-wise?

Can I use my induction hob with the implant?

Will the implant set of security alarms?

What are the MRI scanner complications?

How long aftercare and healing?

Will the implant procedure leave a scar?

Can I clone my work id pass to my implant?

Can I make contactless payments?

Can I install multiple implants in the same hand?

Where can I come to have my implant procedure?"(Bioteq, 2019)

Ethical and Legal Concerns

As it is seen, most of the examinations are related only to concerns about health problems they may experience after the implementation. Some of the interrogations are concerned for more technological opportunities. Yet, ethical and legal questions have to be asked for the future of human nature and civilizations. Such a concern need to answer the following questions:

Are the issues of manufacturing and scientific responsibility properly controlled as formally? Has the concerns on the psychological impacts of enhancing human nature predicted? What are the risks of possible usage in children? Would the issues of safety and informed consent legally support? Do available laws of the liberal legal system confirm biotechnology when the
privacy and autonomy issues concerned? What kind of threats could be faced if it's used for military purposes?

Unfortunately we can't predict all impacts of its power and authority of future technology. Nevertheless, the potential for harm must be considered.

When security and safety are concerned, the most obvious and basic complications involve the potential societal impact and individuality. The costs and benefits of these implants require an evaluation and more consideration of long-term risks. The responsibilities of manufacturing and implanting surgery need unavoidable legal regulations. For instance, users or citizens should receive significant warranties and the punishing executions have to be predicted if the human rights violated by the consequences. Apart from practical problems, ethical and legal concerns must include whether there will be a competitive market in such systems or applied only by the state institutions? (Leenes, Plamerini, Koops, Bertolini, Salvini, Lucivero, 2017).

Another controversial issue of this technology is its implementation as therapy. Although using the technology to remediate retardation or to improve memory faculties for the neurological health care plans is encouraging but needs more caution on the psychological impact of enhancing human nature, too. Since the conception of man and sense of identity have some boundaries between self and community. And these boundaries due to technological changes possible to make considerably diminished. It can create isolated individuals and chaotic societies because of the diversity of information might overwhelm humanity and change our future in a negative direction (Andy, 2016; Barnett, 2017).

Through chips, changing human thoughts and feelings might be rendered the cognitive impacts. Cybernetics may one day provide complexity as a brain capacity and the nature of personal identity and the traditional mind-body problem. Changing the brain and its forces could change our psychological state and our understanding of what it means to be human (Powell, 2018).

Moreover, knowledge is still accepted as power and adults do not only need this power but also parents are motivated to provide their children with the best, as well. This can cause unlimited danger for children's physical and psychological health because it is unclear whether these chip implementations would be helpful for education and done safely. Entry criteria of universities and similar programs would all be affected. The new disparities were
generated by such implementations. There is no plausible need to invest in chips if the gap between people is to be widened not only between individuals and genders but between rich and poor nations as well (Tuomi, 2018). Thus recognizing the new functions of the body or brain chips, we shall be prepared for the structures by which they are carried on.

The aspects of the problem related to body chips are inequality, body integrity, health anxieties such both physical and psychological, ethical norms, issues of legal regulation, etc. But the most frightening effect of this technology is the possibility that we would facilitate totalitarian controls of the human being. Controlling and monitoring citizens by using such technology provide governments more power. Additionally, for the future with these technologies, we can create a world like no place for individuality and free societies. Moreover, in the military, creating soldiers with faster reflexes and higher capacities would encourage the governments for new wars, too.

**Concluding Remarks**

As mentioned briefly in the paper, we have just new issues related to mind and body problems that concern human nature. Policy decisions and legal regulations should arise immediately before the mentioned technology threatens all communities of the global world. High concerns of the experts involve that who will control the technology and what will be programmed? On protecting privacy issues, the control, and security of communication, there are obligations to be saved as data of security information. Otherwise maybe prioritizing autonomy, liberty or privacy cannot be considered human rights anymore.

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