

"Navigating Legal and Ethical Frontiers: The Intersection of Neuralink Technology, Personal Data Protection, and Criminal Liability"

Dr.Sailesh Kumar, Dr Saranya S Kumar, Dr Rijin Mohan

Abstract

This paper delves into the legal implications of Neuralink technology, particularly concerning personal data protection, criminal liability, and ethical considerations. Neuralink, developed by Elon Musk, offers a groundbreaking approach to interfacing with the human brain, raising significant concerns regarding privacy, consent, and potential misuse. Through an examination of relevant laws, including the Indian Penal Code and data protection regulations, this paper explores the challenges posed by Neuralink and proposes measures to address them. Additionally, ethical considerations regarding free will, consent, and the impact on consciousness are discussed. The paper concludes by emphasizing the need for robust legal frameworks to regulate emerging technologies like Neuralink, ensuring the protection of individual rights and fostering societal harmony.

Keywords: Neuralink, personal data protection, criminal liability, ethics, consent, privacy, Indian Penal Code, data protection regulations.

Introduction

Neuralink, with the aid of artificial intelligence, interferes with the brain through a chip implanted into the human brain. Now it is of great importance to consider the human brain becoming exposed to control and interference through Neuralink technology in the scope of criminal law. Primarily, the security problems to which this device may lead should be found, and the measures to prevent them should be determined. Once an interference to the brain is at stake, the authorized person and/or institutions, and circumstances where the interference is allowed must be explicitly determined. Additionally, even if the circumstances where the interference is allowed have already been determined, it should also be designated the limits for the interference and the circumstances for failure to abide by the rules. Also, it is important to obtain prior consent by the person who is to be exposed to brain interference; and delineate the limits for the interference even in cases where the consent has been duly obtained. It's been known that Neuralink has had difficulty obtaining certain legal permissions. Long-term effects of neuralink brain implant can make changes in cognition, mood, or personality.

Now it is relevant to examine, apart from the above, whether an act committed by a person with "telepathy", a coin size device that carries a processor that can communicate with the

brain and the outside world, is liable to be punished as per the provisions of Indian Penal Code and the other laws pertaining thereto.

NEURALINK

What is Neuralink developed by Elon Musk?

The first product of Neuralink, telepathy, enables control of your computer or phone just by thinking. In Neuralink, a small electronic device is surgically implanted into the skull that connects the brain using ultra-thin wires. This device would then connect to an external digital device using Bluetooth or any wireless device using Brain Computer Interface. One of the most significant benefits of BCI is, it helps to treat neurological disorders like Parkinson's disease, Alzheimer's, and even paralysis. The implanted chip could potentially restore motor functions and further help to manage symptoms of this debilitating condition and help to connect to artificial limbs for better motor control by directly interacting with the nervous system.²

Experiments have shown that by using BCI, a human being can by just thinking, was able to write text on a computer. Brain-computer interface commonly called sensorimotor BCI, in which electrodes are placed in or around the brain that can record brain signal changes and interpret them to mean something, then use that meaning to control a robotic limb, a cursor on the screen. The electrodes can also deliver electricity to the brain and create artificial sensations. Usually, sensory-motor BCI is used for spinal cord injuries, ALS (amyotrophic lateral sclerosis), or stroke. We appreciate its seamless integration between humans and computers, enhancing our ability to communicate, control devices, and access information directly through thought. BCI in the long run can augment brain functions by improving memory and learning speed. In the future, it can download skills and information directly to the brain expanding the boundaries of human cognitive skills. A device that is the size of a coin is surgically implanted in the skull with ultra-thin wires going into the brain developing a BCI. The disk in the device registers brain activity and sends it over to an external device such as a computer or smartphone using Bluetooth. Planting the chip in the part of the brain that controls motor function would also enable us to overcome neurological disorders.³

It is worth noting that Elon Musk succeeded in implanting NEURALINK and activating telepathy in a patient who completely recovered and can control a computer mouse using his thoughts.

Legal Implications In Lieu Of Neuralink

In light of the foregoing research, an evaluation may be made in terms of violation of private life, recording personal data, acquisition, dissemination of personal data, or deliverance thereof to third parties who can manipulate the situation badly. Primarily, the possibility of interfering with the human brain and the physical environment has been a great blessing,

thanks to technological advancements that led to the development of a device that can be implanted in human brains, however, what many may not realize is the potential violation of private life which questions the legal protection of an individual, thereby leading to the intrusion into the private arenas of one's life which in no circumstances would he or she have not wished to be known. The crime for violation of private life imposes a penalty for the actions through which people figure out or record as being intruding into each other's private life areas that no one else is likely to become aware of. Indeed, this device highly interferes with the personal area; and even if the person has given consent to that, the crime is likely to be committed, and it is difficult to delineate it.

Apart from that, the crime of recording personal data arises when any information belonging to a person who is or can be identified, and of a personal data nature, has been illegally recorded. Similarly, the crime of acquiring personal data may also be at stake when personal data has come under the control of the perpetrator. Neuralink records the data to which it has access and which it monitors within a certain sector through the chip implanted into the person's brain. Considering that the data accessible via this chip are unlimited or not yet fully known, the recorded data are likely to be classified as personal data. Therefore, it is considered that Neuralink technology, by recording the data, may lead to the commission of crimes related to the recording and acquisition of personal data.¹

Another question to be noted pertains to whether the interference with the human brain and its functioning through Neuralink would negate the person's free will or encourage the person to engage in actions contrary to their free will. At this point, the delineation of the person's free will becomes uncertain, making it difficult to evaluate deliberation and negligence in a person's actions. Within the framework of liability for fault, it is considered that Neuralink, the company that has developed the artificial intelligence implementation in question and offered it for sale, as well as the seller companies from which end consumers/users have purchased this device, may be held liable for the concrete outcomes of the actions.

Another legal field that may be affected by technology such as Neuralink is undoubtedly the law on the protection of personal data. This is because data collected with a device implantable into the brain will continuously and incrementally increase, and the collected data may contain private data requiring protection and which are highly confidential. The lack of classification of data acquired by brain-machine interfaces in the General Data Protection Regulation ("GDPR") as the global legislation and the Code no. 6698 on Protection of Personal Data as the legislation in effect in Turkey brings about debates regarding whether the said data fall within the scope of the relevant legislation. In this article, it will be

presumed that the said data fall within the scope of the relevant legislation, and considerations on the relationship between the collection of the said data and explicit consent - which is among the top principles in terms of the law on the protection of personal data - will be given.

Regarding the Indian Penal Code, mens rea is an essential element for establishing the commission of an offense. Mens rea refers to a mental condition in which a person intentionally breaks the law, denoting the intention to commit the illegal act. If a person implanted with telepathy is committing an offense by the instigation of another person who controls the device remotely, who will be held responsible for the commission of the offense? Here we have to discuss the terms vicarious liability and abetment.

In Section 34 of the IPC, common intention is defined along with Section 149 of IPC, stating that when a criminal act is done by several persons in furtherance of the common intention of all, each of such persons is liable for that act in the same manner as if it were done by him alone. As per Section 107 of the Act, abetment engages with one or more other persons in any conspiracy for the doing of that thing, if an act or illegal omission takes place in pursuance of that conspiracy and in order to the doing of that thing. The three types of abetment are: 1. Abetment by instigation - instigating a person to commit an offense. 2. Abetment by conspiring - conspiring with one or more persons to commit an offense. 3. Abetment by aid - intentionally helping a person by any act or illegal omission to commit a crime.

Here, there is a potential for taking action against individuals who instigate others to commit crimes. Since telepathy implanted in a person is bidirectional and can be operated based on instructions transmitted to the brain through a communication system linked via the internet, Bluetooth, Wi-Fi, etc. Therefore, there is a risk that malicious individuals could manipulate innocent or unaware individuals to carry out their malevolent intentions. In such cases, individuals with telepathy may become offenders and may be liable to be punished according to existing laws. This has to be broadly examined.

Section 84 of the IPC clearly embodies a fundamental maxim of criminal jurisprudence, stating that an act does not constitute guilt unless done with a guilty intention called “mens rea.” Hence, Section 84 IPC does not fasten culpability on persons with mental illness because they may lack rational thinking or the necessary guilty intent.

The insanity defense is primarily used in criminal prosecutions, based on the assumption that at the time of the crime, the defendant was suffering from severe mental illness and therefore, was incapable of appreciating the nature of the crime and differentiating right from wrong

behavior, making them not legally accountable for the crime. Insanity defense is a legal concept, not a clinical one, meaning that just suffering from a mental disorder is not sufficient to prove insanity. The defendant has the burden of proving the defense of insanity by a “preponderance of the evidence” which is similar to a civil case. It is hard to determine legal insanity, and even harder to successfully defend it in court.

Changes to consciousness can cause changes to perception, thinking, understanding, and interpretations of the world. Changes in consciousness can sometimes be a sign of medical conditions or even an immediate medical emergency.

Another point to be noted concerning consent to data collection concerns the validity of the person’s consent if the device is used for remedies for illnesses which are likely to affect free will, such as Alzheimer’s. As GDPR and KVKK require explicit consent except for the derogations set out, one may argue that before any data collection, prior explicit consent by such persons is also needed. However, debates may arise as to whether in illnesses capable of affecting the brain, the clarification to the person has been genuinely understood or the existence or soundness of the person’s will at the time of consent. At this point, it may be suggested that, as it is obligatory for the protection of life and bodily integrity of the person who may not give his explicit consent to data collection due to material impossibility or whose consent is declared invalid, obtaining explicit consent would not be necessary. However, in such a case, the element for “obligation for the protection of life and bodily integrity” will be in dispute.

CONCLUSION

In conclusion, in view of laws pertaining to the protection of personal data and criminology, we must examine whether any exemptions or additions to our statutes are necessary to foster social engineering for better health and to protect fundamental rights and freedoms, maintaining peace and harmony in society. In light of the explanations above and considering technological developments, it has become imperative for states to enact regulations that accommodate requirements and are suitable for developing technologies.

Practicing artificial intelligence implementations needs a legal framework where the balance between rights and freedoms and the benefits provided through technology is regarded. To justify these technologies, they should be practiced relying on law and proportionality.

Reference:-

1. Bizzotto, S., Dou, Y., Ganz, J., Doan, R. N., Kwon, M., Bohrson, C. L.,

- ... & Walsh, C. A. (2021). Landmarks of human embryonic development inscribed in somatic mutations. *Science*, 371(6535), 1249-1253.
2. Doshi, P. K., Arumugham, S. S., Bhide, A., Vaishya, S., Desai, A., Singh, O. P., ... & Reddy, Y. J. (2019). Indian guidelines on neurosurgical interventions in psychiatric disorders. *Indian Journal of Psychiatry*, 61(1), 13-21.
3. Musk E, Neuralink - An Integrated Brain-Machine Interface Platform With Thousands of Channels, J Med Internet Res 2019;21(10):e16194; URL: <https://www.jmir.org/2019/10/e16194>

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