

Topic: Neural implants for input/output

BCI: Brain-Computer Interface

Sources:

- <https://pubs.acs.org/doi/full/10.1021/cn500256e>
 - negative side effects of inserting neural implants
- <https://onlinelibrary.wiley.com/doi/full/10.1002/adma.202005786>
 - Current issues with neural implants and how to potentially fix them
- <https://www.sciencedirect.com/science/article/pii/S0747563218301377>
 - Ethics on neural implants – enhancing human cognitive functions
- <https://www.nature.com/articles/s41598-024-58535-4>
 - Negative effects of neural implants (privacy, humanization, dependence)
- <https://www.jstor.org/stable/23630726>
 - Potential to drastically enhance brain functionality
 - Direct enhancement of memory
 - Targeted attacks to neural devices (the hijacking of pacemakers/other medical devices already exists)
 - Track record of internet use shows that people are willing to exploit technology when given the opportunity to do so
 - Instead of money, social media or others, human lives are at risk in the case of an attack to a neural implant; much more pressing threat compared to other types of technological attacks
- <https://www.jstor.org/stable/44159152>
 - Prosthetic limb applications
 - Introduction of neural implants will change technology's effect on personality: When a tool functions so well that it becomes part of our lives, we tend to perceive that tool as part of our identity
 - Fundamental shifts to identity: neural implant controlled prosthetics may no longer need to be permanently attached to the body. At such point, would the person consider the limb to be their own?
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8083990/>
 - The goal of Neuralink is to create a BMI to restore sensory and motor function in persons with neurological disabilities
- https://www.researchgate.net/publication/344443659_The_Hybridization_of_the_Human_with_Brain_Implants_The_Neuralink_Project
 - A symbiosis with Artificial Intelligence
- [Setting the record straight on the chances of seizure freedom after two medications fail // International League Against Epilepsy \(ilae.org\)](https://www.researchgate.net/publication/344443659_The_Hybridization_of_the_Human_with_Brain_Implants_The_Neuralink_Project)
 - Only 31% of epilepsy patients are able to be freed from seizures from treatment
- <https://www.sciencedirect.com/science/article/abs/pii/S1053811912011743?via%3Dihub>
 - transcranial direct current stimulation could be used to enhance vigilance in neurologically unimpaired participants.