

New Technology Calls for Regulation and Legal Protection of Consumers' Brains

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For now, one's innermost thoughts are considered to be private, inaccessible, and as such, they remain unregulated. Emerging neurotechnology is looking to change that by utilizing brain scans and brain wave analysis for all kinds of products. For example, Neuralink, a surgically implanted brain chip which aims to read signals from a paralyzed patient's brain and transmit them to a computer, enables a patient to control a computer with just their thoughts. There also exist products that record brain data non-invasively, such as the Muse headband, and use them for various purposes, like improving your meditation in real-time. Researchers are also looking into AI-powered brain decoders which could translate our mental signals without invasive surgery. Even the largest consumer companies such as Meta and Apple are looking to get into this space, with the companies developing wristbands and AirPods that could scan and process brain activity for integration onto their existing technology and platforms.

The problem is that, like the advent of consumer DNA sequencing and analysis, there is little regulation, and experts fear that companies with popular neurotechnology will be able to misuse consumer data, leading to negative consequences for consumers. It is conceivable that these companies, including Apple and Meta, could build databases with tens of millions of brain scans that have the capacity to detect diseases of the brain or other private information. The reason consumers and experts are worried is because without proper regulation, databases like these could be misused and sold to other companies who could harness the mass brain data for nefarious purposes.

Neuroscientists like Rafael Yuste, at Columbia University, are worried about the advent of neurotechnology and have already suggested important regulations that might preempt misuse of brain data. 12 years ago, Yuste conducted experiments where he could make mice believe images were real, not by showing them the images but by stimulating the correct neurons in their brains with lasers. This worried Yuste because to him, it showed that the natural conclusion of these technologies is not just the invasion of mental privacy, but the potential for mind control.

Yuste gathered 30 experts in Columbia Morningside campus in 2017 to discuss the implications of this kind of neurotechnology, and the 'Morningside Group' as they later became known, developed the neurotechnological bill of rights. This bill of rights, containing five major policy recommendations, goes through important guidelines to reduce what neuroscientists and experts worry are the most abusable parts of neurotechnology. The recommendations are:

- 1) Mental privacy: You should have the right to seclude your brain data so that it's not stored or sold without your consent.
- 2) Personal identity: You should have the right to be protected from alterations to your sense of self that you did not authorize.
- 3) Free will: You should retain ultimate control over your decision-making, without unknown manipulation from neurotechnology.
- 4) Fair access to mental augmentation: When it comes to mental enhancement, everyone should enjoy equality of access, so that neurotechnology doesn't only benefit the rich.
- 5) Protection from bias: Neurotechnology algorithms should be designed in ways that do not perpetuate biases against particular groups.

While policy recommendations like Yuste's bill of rights are important for understanding the potential abuse of neurotechnology, experts and legislators are looking for palatable

regulations that can be enshrined into law as soon as possible and have found some success. For one, states have begun to submit and pass legislation regarding neural data. The Colorado House passed legislation this month that would amend the state's privacy law to include the privacy of neural data. Additionally, Minnesota's legislature is considering a standalone bill that would protect mental privacy and penalize violating companies.

A larger goal for experts and regulators is expanding the statewide push to a federal and international level, to protect people's privacy rights before neural technology takes over the market. Chile has been a leader in these efforts, enshrining a right to mental privacy and right to free will in its national constitution. Mexico, Brazil, and Uruguay are also considering similar approaches. Furthermore, even the United Nations has been discussing neural technology, indicating that it may try to approach the issue in a way similar to the way it dealt with nuclear energy.

Across the American legal landscape and across the globe, experts and regulators ultimately want to incorporate neural technology regulations into the human rights regulations we already have, and do not envision the need for new rights to be necessary for regulating the new tech. Due to the rapidly changing technological landscape, however, this means that legislators will have to predict the most salient consequences of technological advances and try to protect people's privacy before it becomes a problem. For now, approaches to regulation are not uniform, and it remains to be seen what approach is most successful.

For more information, see the full article [here](#).