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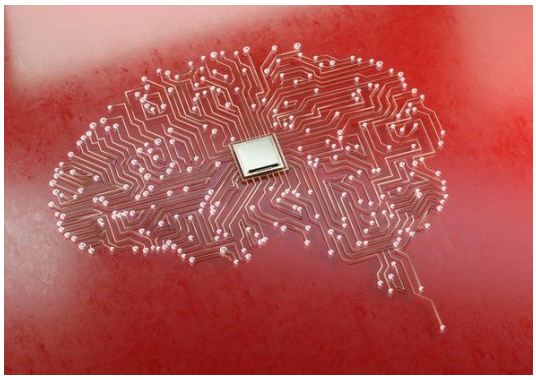
The Rise of Neurotechnology Calls for a Parallel Focus on Neurorights

Chile is leading the way with a bill that offers protections against abuses and inequities that could arise from technologies that augment human capacities

By Nayef Al-Rodhan on May 27, 2021



Credit: Andriy Onufriyenko *Getty Images*

In Chile, the National Commission for Scientific and Technological Research has begun to debate a "neurorights" bill to be written into the country's constitution. The world, and most importantly the OECD, UNESCO and the United Nations, should be watching closely.

The Chilean bill sets out to protect the right to personal identity, free will, mental privacy, equitable access to technologies that augment human capacities, and the right to protection against bias and discrimination. The landmark bill would be the first of its kind to pioneer a regulatory framework which protects human rights from the manipulation of brain activity.

The relatively nascent concept of neurorights follows a number of recent medical innovations, most notably brain-computer interface technology (BCI), which has the potential to revolutionize the field of neuroscience. BCI-based therapy may be useful for poststroke motor rehabilitation and may be a potential method for the accurate detection and treatment of neurological diseases such as Alzheimer's. Advocates claim there is therefore a moral imperative to use the technology, given the benefits it could bring; others worry about its ethical, moral and societal consequences.

Many (mistakenly) see this process as being potentially undermined by premature governance restrictions, or accuse any mention of brake mechanisms as an exaggerated reaction to an unlikely science-fiction scenario.

However, if there is to be any doubt as to why regulatory frameworks need to be put in place, we must examine, not only the speed of progression and normalization of disruptive technologies, but also the promotional half-truths that surround these new technological advancements.

In a similar manner to the evolution of external, noninvasive artificial intelligence, we need to find ways to navigate the complex regulatory dynamics around privacy, liability authenticity, fairness and autonomy that exist on a human, economic, societal and geopolitical level. This needs to be done while allowing room for the science to evolve, and while mitigating incorrect or implausible expectations about what potential therapies might achieve.

Though we are making great progress in the health care sector, we must recognize that innovative milestones will be translated across the board and enter into commercialized consumer markets for the purposes of video games and self-health monitoring. This will generate enormous amounts of valuable data (some accurate, some erroneous), which will be in the hands of the companies that own this technology, such as Neuralink and Kernel, which would benefit from this access in much the way Google has through its DeepMind program.

This prospect raises concerning questions about the huge amounts of data that will be churned out by electroencephalograms or invasive devices, and collected by the corporations behind them.

Issues around safeguarding, accessibility and corporate monopolies run parallel with the concerns some institutions have raised around tech giants and AI. Neurotechnology also brings to the fore the added layer of epigenetic consequences, neuropsychiatric complications, and biohacking.

This is why the concept of ethical innovations is so important. As outlined by the Neurorights Initiative set up by Colombia University, ethical guidelines should prompt researchers and practitioners to recognize personal accountability for the societal impacts of their innovations. Some have gone so far as to advocate for a set of principles on the permissible uses and misuses of neurotechnology, followed by the drafting of a user bill of rights.

However, technological frameworks, while much discussed, have proved mostly ineffectual when put into practice, even in the established fields of AI and data, which already shape millions of lives.

This is why Chile's debate is a landmark one, not just in its own jurisdiction but for the world.

As new strides are made in the sector, and we face a situation where we experience an added dimension of involuntary data exposed and manipulated through novel methods, we must look at the evidence and experience already afforded to us through the Fourth Industrial Revolution and protect our most fundamental human autonomy and civil liberties.

The science of the field remains primitive at present but has the potential to be more harmful than useful, especially if science continues to be mixed with inaccurate sweeping claims. Before safe use can be advocated, we need to lower false and unrealistic expectations about potential therapies.

The regulatory debate is ongoing, but the rapid advent of disruptive technologies has meant that plenty of data have already been accessed, with privacy lost and human behavior exploited. Let us not make the same mistakes with this new, albeit young, type of intrusive and manipulative technology.

This is an opinion and analysis article.

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