



## Integrating Mental Privacy within Data Protection Laws: Addressing the Complexities of Neurotechnology and the Interdependence of Human Rights

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## OPEN PEER COMMENTARIES



# Integrating Mental Privacy within Data Protection Laws: Addressing the Complexities of Neurotechnology and the Interdependence of Human Rights

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Susser and Cabrera (2024) assess the role of bespoke neuro-privacy regulations including the creation of a novel right to mental privacy. They argue that focusing on what distinguishes mental privacy from other types of data privacy could weaken efforts to enforce a more robust mental privacy regime. Thus, in arguing against neuro-exceptionalism, Susser and Cabrera prefer an approach that protects neuro-privacy under the big tent of information privacy.

We agree in part. Historically, new technologies have often introduced new challenges to existing rights, but

they mostly don't necessitate tailored sets of rights (Zúñiga-Fajuri et al., 2021). In most cases, new risks ought to be simply characterized as novel threats to pre-existing rights, falling under the protection of values already safeguarded, notably here, the overarching right to privacy. Just as a new human right for information privacy was not created for the internet age, but rather protections were realized under the broader decades-old right to privacy, mental privacy should similarly be regarded. It represents just another facet already safeguarded under the broad umbrella of the right to privacy.

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Nevertheless, we contend that current regulatory and legal paradigms of information privacy are often still inadequate for precisely protecting mental privacy, and as such, we argue that like rules designed specifically to protect genetic information, legislatures need to devise rules for the protection specifically of the privacy of neural information; we are in favor of neuro-exceptionalism.

Thus, we argue that while the way forward is not necessarily to establish a new human right to mental privacy—human rights are not rigidly defined but represent a spectrum of overlapping rights (Van Boven 2022)—nor should we rely solely on general privacy regimes and established rights. Instead, we advocate for the development of specific laws and regulations tailored to neurotechnologies and brain data.

Consider Chile, home to the world's first effort to create a brain rights regime. The legislation that altered the Chilean constitution was portrayed as granting novel neuro-rights (Republic of Chile 2021). However, in practice it actually didn't really. The legislation comprised an amendment to the constitution with two components: the first being declarative, stating that scientific and technological advancements should benefit humanity and respect the right to life and physical and mental integrity; the second, operational, mandating legal regulation of these advancements, with a specific focus on "mental integrity": the protection of brain activity and the information derived from it. Notably, we see the real innovation in Chile's constitutional amendment as not the recognition of a new right of "mental integrity" as a new neuro-right per se, rather the advancement of a new legal landscape defined by regulatory measures.

An example of the practical impact of the new Chilean law is seen in a significant decision made by Chile's Supreme Court on August 9, 2023 (Corte Suprema de Chile 2023). The court ruled against Emotiv, a neurotechnology company, in a case involving former Senator Guido Girardi and the recording and storing of his brain data using Emotiv's Insight EEG headset. As a result of Girardi's suit, the court required Emotiv to delete all recorded personal data. Notably though, the court didn't rest its opinion only on the new constitutional rights granted to neural data, rather it looked to a broad cross section of rights and regulations, mostly not specific to brain data. This ruling demonstrates that the synergistic creation of specific mental privacy laws, as well as the strategic adaptation of existing legal norms, can significantly and directly impact corporate behavior in the tech sector, ensuring that innovation progresses without

creating brand new human rights and ethical standards.

As such, we propose a legislative framework for brain technologies, particularly those that can extract and influence cognitive processes. This could involve adopting principles from the United Nations' human rights framework for corporate entities (United Nations 2011), and creating national legislation for compliance with human rights as they relate to neuroscience. For instance, a human rights officer could oversee corporate development processes, ensuring adherence to human rights by design akin to the data protection officer role mandated by the GDPR, where an expert ensures data handling complies with privacy laws.

This approach also requires custom-made regulations that don't rely on shoehorning brain data into preexisting terms within privacy protection regimes. For example, the GDPR might cover brain data under terms like 'personal data' (GDPR Art 4(1)), or under special categories of "health" or "biometric" data (GDPR Art 9). However, this leaves room for interpretation and underscores the need for more explicit guidance; the GDPR does not explicitly categorize neural data as standard or sensitive data, creating a gray area regarding compliance and protection standards.

In the context of existing privacy protection regimes, proposed new legislation introduced in Colorado is intended to amend the Colorado Privacy Act to extend protections to neural data. Notably, the newly amended bill would explicitly "expand the definition of "sensitive data" to include biological data, and expands the concept of biological data to include "neural data, which is information that concerns the activity of an individual's central nervous system [...] including the brain and spinal cord, and that can be processed by or with the assistance of a device." The proposal mandates that businesses specifically obtain consent for collecting neural data and conduct data protection assessments (State of Colorado House 2024). This legislation highlights the emerging necessity for more explicit guidance in privacy laws regarding neural data, given uncertainty to the scope of privacy rights currently attributable to neurodata.

Summing up: The advent of neurotechnologies presents both remarkable opportunities and significant challenges for upholding human rights and ethical standards. We concur that inventing a new right to mental privacy might not be the most efficient or effective strategy in protecting our neural privacy in light of emerging neurotechnologies. Rather, we suggest looking to current rights to address the novel

challenges introduced by neurotechnologies, acknowledging that while the essence of privacy has evolved, neuro privacy still fits within the scope of the long-standing right to privacy. However, the paper also argues that existing information protection regimes, while useful, are potentially insufficient for adequately safeguarding mental privacy. We advocate for the creation of legislation specifically designed to protect neural information privacy, inspired by the way genetic information is protected.

We urge policymakers, legislators, and industry stakeholders to proactively engage in collaborations to formulate legal frameworks that ensure mental privacy considerations are respected in the development and application of neurotechnologies. This multi-stakeholder approach will ensure that laws are both practical and reflective of diverse perspectives and interests. We encourage looking to trailblazing initiatives like the legislation in Chile and the proposed bill in Colorado for guidance in establishing legal protections that enhance transparency, accountability, and adherence to human rights in the neurotechnology sector.

This approach champions responsible neurotechnology innovation within a framework oriented around human rights, striving to protect the privacy, autonomy, and well-being of individuals amidst the rapid progress of technological capabilities. Practically this is non-trivial and will require working toward a clear and universally accepted definition of neural data. This includes both delineating what constitutes neural data in legal terms, especially as to how it differs from other types of personal and health data. It further requires that the specific contexts in which brain data collection, use, and sharing are considered by regulators. Moreover, we need to work toward better consent systems to ensure that individuals fully understand what they are consenting to, especially in cases where in the near future neural data may unpredictably reveal sensitive information about things like thoughts, preferences, or potential health conditions. Further, legal frameworks must incorporate ethical principles and oversight bodies with the expertise to monitor compliance, investigate breaches, and impose sanctions where necessary.

Cognizant that the risk of creating overly complex regulatory environments could hinder technological innovation, we hope that a united effort can harness the potential of neurotechnologies for the betterment of society, all the while protecting individual privacy, autonomy, and welfare in this neurotechnology age.

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