

Neurodiversity, neurodevices, and deep brain stimulation

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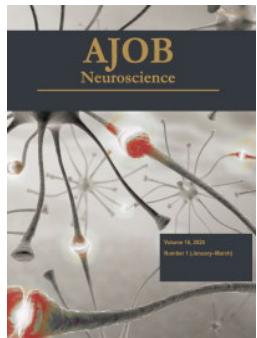
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Insel, T. R. 2010. Faulty circuits. *Scientific American* 302 (4):44–51. doi:10.1038/scientificamerican0410-44.

Noble, S., J. Curtiss, L. Pessoa, and D. Scheinost. 2024. The tip of the iceberg: A call to embrace anti-localizationism in human neuroscience research. *Imaging Neuroscience* 2:1–10. doi:10.1162/imag_a_00138.

Schleim, S. 2021. Neurorights in history: A contemporary review of José MR Delgado’s “Physical Control of the Mind” (1969) and Elliot S. Valenstein’s “Brain Control” (1973). *Frontiers in Human Neuroscience* 15:703308. doi:10.3389/fnhum.2021.703308.

Schleim, S. 2022. Why mental disorders are brain disorders. And why they are not: ADHD and the challenges of heterogeneity and reification. *Frontiers in Psychiatry* 13:943049. doi:10.3389/fpsyg.2022.943049.

Schleim, S. 2023. *Mental health and enhancement: Substance use and its social implications*. Cham: Palgrave Macmillan.

Neurodiversity, Neurodevices, and Deep Brain Stimulation

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INTRODUCTION

Over the last decade, Deep Brain Stimulation (DBS) has garnered significant attention as a potential treatment for psychiatric and neurological conditions (Alho et al. 2022). As our mechanistic understanding of these conditions advances and this technology becomes more precise, neurodevices present a promising opportunity for those seeking treatment. However, patients' concerns about the potential for significant changes in how they experience the world have been largely overlooked.

In their target article, Ineichen and Glannon (2025) seek to address this gap by offering a nuanced analysis of the promises and drawbacks of Deep Brain Stimulation through the lens of neuropsychiatric anthropology. Their focus on the “lifeworld” of patients, informed by neuropsychiatric anthropology, provides valuable insights into what it is like to live with neurodevices—not merely as tools for correcting neurological deficits but as new forms of engagement with the world. This approach moves beyond neuroreductionist perspectives, placing the actual experiences of patients at the center of the conversation.

In this commentary, I aim to expand on their arguments by incorporating neurodiversity theory as a

framework for understanding the unique experiences of patients using technical “world enablers.” Specifically, I will argue that the neurodiversity paradigm provides valuable insights for addressing patients’ concerns about potential changes in their self-perception.

NEURODIVERSITY AND NEUROPSYCHIATRIC ANTHROPOLOGY

The concept of neurodiversity originated with activism among autistics to appreciate the autism as a form of human diversity rather than a medical condition to be cured (Blume 1998; Singer 1998). The concept has since been extended to include many other psychiatric/mental health conditions and led to an appreciation of the wide diversity of ways humans experience the world—which I shall argue is relevant to the new forms of experiences those with neurodevices may undergo. Ineichen and Glannon (2025) describe neuropsychiatric anthropology as “the practice of applying and refining ideas and concepts from philosophical anthropology to psychiatric suffering” (4). Philosophical anthropology is a diverse school of thought but centers in the first-person phenomenological perspective to understand the place of humans in the world. Ineichen

and Glannon emphasize the role of a “lifeworld” where neurodeices become prostheses for patients. One of their sources suitably describes the lifeworld as “the province of reality inhabited by a given person, having its own *style* of subjective experience” (Stanghellini and Aragona 2016, 4). This style of subjective experience can of course vary widely as work in neurodiversity theory has demonstrated.

NEURODIVERSITY, DEEP BRAIN STIMULATION, AND CHANGES IN SUBJECTIVE EXPERIENCE

Ineichen and Glannon (2025) usefully describe psychiatric conditions as a disruption between the self and world. While this may not cover all psychiatric conditions, it provides a useful lens to think of neuroprosthetics as correctives to “restore” or “fix” this disruption. Notably, this perspective is not restricted to a reductionist view where anomalies in the brain may be addressed, but the focus is the experience of patients, because the implementation of neurodevices capable of deep brain stimulation may seemingly fix the “biological issue” without helping patients to “reestablish the individual’s relationship to the lifeworld” (Ineichen and Glannon 2024, 3). Indeed, neurodiverse patients may not wish their unique style of experiencing the world to be removed. As has been highlighted in the literature, deep brain stimulation can come along with unintended personality changes (Baylis 2014; Pugh et al. 2021; Thomson, Segrave, and Carter 2021; Zuk et al. 2023). While this may solve some problems it could create a disconnect with oneself—a different kind of alienation.

However, I do not mean to suggest that these concerns are necessarily equivalent to or worse than the issues driving patients to consider neurodevices as a potential solution. The problems leading patients to explore these devices are often so severe that they compromise their agency, personhood, and engagement with the world. Yet, this does not guarantee that post-operation patients will feel like their “true self.” This is partially evidenced by the somewhat disappointing track record of such neurodevices. Crucially, even if these devices worked perfectly, patients might not fully embrace their new style of subjective experience.

The phenomenological complexity among humans, much like the diversity across animal species, can vary along numerous dimensions. We must be cautious not to assume a single correct way of experiencing the world (Veit 2023). Therefore, I fully agree with Ineichen and Glannon that transparent communication about the expected value and potential

outcomes of a procedure as invasive as the surgical implantation of neuroprostheses is essential for informed consent to be possible.

But this is not the only way in which taking a neurodiversity perspective can be useful. Neurodiversity could also enable patients to find value and meaning in their new way of experiencing the world. Differences from the population average or norms in terms of how patients with neuroprosthetics experience the world may not at all have to be negative. Emphasizing that there can be value in new experiences could help patients who have undergone surgical procedures to implant neural devices but struggle with their new lifeworld. Ineichen and Glannon (2025) discuss how deep brain stimulation can change the perception of time, which impacts how individuals understand themselves as agents “persisting and enduring through time” (8). While Ineichen and Glannon view such temporal changes in subjective experience as an unrecognized positive factor, some patients might actually prefer the slower temporal experiences associated with conditions like depression. Although they may wish to alleviate negative emotions, it is not immediately clear that the same desire applies to their experience of time, which might be more akin to a neutral or personal preference. A neurodiversity perspective could encourage patients to embrace this new “flow of time” as a different but not inherently worse way of being.

However, I want to stress the importance of a highly individualized approach. The diversity of human minds means there will be a wide spectrum of responses to neurodevices. What might function as a transformative cure for some could result in a distressing shift in personal identity for others. This underscores the need for sensitivity and transparency about the vast range of potential effects and risks associated with deep brain stimulation.

CONCLUSION

To conclude, neuroimplants capable of deep brain stimulation offer great potential for patients suffering from neuropsychiatric conditions. Ineichen and Glannon have offered a useful perspective here through the lens of neuropsychiatric anthropology to focus on the experience of patients. I sought to strengthen and expand their arguments here through the lens of neurodiversity. I am hopeful that future engagement between these literatures will be crucial to allow patients to make informed decisions that are sensitive to the diversity of responses. It is unlikely any one-size-fits-all-solutions will be found here.

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REFERENCES

Alho, E. J. L., J. C. Baldermann, L. E. C. Castelo-Branco, and W. O. Contreras Lopez. 2022. Deep brain stimulation for neuropsychiatric disorders: Current status and perspectives. *Frontiers in Neurology* 13:1029102. doi:[10.3389/fneur.2022.1029102](https://doi.org/10.3389/fneur.2022.1029102).

Baylis, F. 2014. Neuroethics and identity. In *Handbook of neuroethics*, ed. J. Clausen and N. Levy, 367–372. Dordrecht: Springer.

Blume, H. 1998. Neurodiversity: On the neurological underpinnings of geekdom. Atlantic. <https://www.theatlantic.com/magazine/archive/1998/09/neurodiversity/305909/>.

Ineichen, C., and W. Glannon. 2025. Deep Brain Stimulation and Neuropsychiatric Anthropology—The “Prosthetisability” of the Lifeworld. *AJOB Neuroscience* 16 (1):3–11. doi:[10.1080/21507740.2024.2402219](https://doi.org/10.1080/21507740.2024.2402219).

Pugh, J., L. Pycroft, H. Maslen, T. Aziz, and J. Savulescu. 2021. Evidence-based neuroethics, deep brain stimulation and personality – Deflating, but not bursting, the bubble. *Neuroethics* 14 (Suppl 1):27–38. doi:[10.1007/s12152-018-9392-5](https://doi.org/10.1007/s12152-018-9392-5).

Singer, J. 1998. Why can't you be normal for once in your life? From a problem with no name to the emergence of a new category of difference. In *Disability discourse*, ed. M. Corker and S. French, 59–70. London: Open University Press.

Stanghellini, G., and M. Aragona. 2016. *An experiential approach to psychopathology: What is it like to suffer from mental disorders?* London: Springer.

Thomson, C. J., R. A. Segrave, and A. Carter. 2021. Changes in personality associated with deep brain stimulation: a qualitative evaluation of clinician perspectives. *Neuroethics* 14 (S1):109–24. doi:[10.1007/s12152-019-09419-2](https://doi.org/10.1007/s12152-019-09419-2).

Veit, W. 2023. *A Philosophy for the Science of Animal Consciousness*. New York: Routledge.

Zuk, P., C. E. Sanchez, K. Kostick-Quenet, K. A. Muñoz, L. Kalwani, R. Lavingia, L. Torgerson, D. Sierra-Mercado, J. O. Robinson, S. Pereira, et al. 2023. Researcher views on changes in personality, mood, and behavior in next-generation deep brain stimulation. *AJOB Neuroscience* 14 (3):287–99. doi:[10.1080/21507740.2022.2048724](https://doi.org/10.1080/21507740.2022.2048724).

Who is Becoming Part of What?

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In their article, Ineichen and Glannon (2025) explore the therapeutic benefits of Deep Brain Stimulation (DBS), addressing the complexities of targeting certain psychiatric conditions and the limitations of current neurostimulation techniques. They stress that these challenges can lead to unintended effects, highlighting gaps in our understanding of the technology and raising existential questions about patient experiences, as suggested elsewhere in literature (Gilbert and Viaña 2018). The authors compellingly argue that humans must extend the process of self-constitution through

various means, suggesting that “neurodevices and other forms of neurotechnology can be an important part of this extension” (5).

We would like to delve deeper into their suggestion and explore what it means to be “part of this extension.” Specifically, we want to examine Ineichen and Glannon’s hypothesis that “the prosthesis becomes part of [users’] biological and psychological identity”(6). By employing a neuroanthropological framework, their paper facilitates an individualized approach to the patient, highlighting the effects of DBS. This