



Tecnologías cerebro-afectantes, identidad personal y autenticidad

*Brain-affecting technologies,
personal identity and authenticity*

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Abstract

One of the recurring debates surrounding «human enhancement» is how new technologies affect our personal identity. Certain technologies also raise questions regarding authenticity. This paper analyses the impact of brain-affecting technologies on personal identity and authenticity. Using as a reference Deep Brain Stimulation (DBS), a technique developed in recent years to treat disorders such as Parkinson's disease, and Brain-Machine Interfaces (BMI), I will consider whether brain-affecting technologies could threaten or, at least, lead to morally relevant changes in the identity or authenticity of the treated persons.

Keywords: Bioethics, Personal Identity, Authenticity, Deep Brain Stimulation, Brain-Machine Interfaces.

Resumen

Uno de los debates recurrentes en torno al «mejoramiento humano» es cómo las nuevas tecnologías afectan a nuestra identidad personal. Algunas tecnologías también plantean problemas en relación a la autenticidad. Este artículo analiza el impacto de las tecnologías de afectación cerebral directa en la identidad personal y la autenticidad. Tomando como referencia la Estimulación Cerebral Profunda (ECP), una técnica desarrollada en los últimos años para tratar trastornos como la enfermedad de Parkinson, y las Interfaces Cerebro-Máquina (ICM), consideraré si estas tecnologías podrían amenazar o, al menos, provocar cambios moralmente relevantes en la identidad o autenticidad de las personas tratadas.

Palabras clave: Bioética, identidad personal, autenticidad, estimulación cerebral profunda, interfaces cerebro-máquina

1. Personal identity

PERSONAL IDENTITY is generally considered an important aspect of ethics. Who I am is directly related with my values and purposes. The concept of personal identity -the idea that each of us is a unique being, different to the rest, and whose existence extends over time- is essential for understanding our moral world. Only if I can recognize those who I interact with (particularly my family, my workmates, my neighbours) can I operate morally (Rubinelli, 2020). As Taylor explains, personal identity allows us to orient ourselves in the moral world in the same way that our physical capacities allow us to orient ourselves in the physical world (1989, 48).

As Schechtman explains, personal identity “serves as a minimum condition in the assessment of responsibility, obligation, and certain sorts of entitlement. Our practices of promising, contracting and assessing praise or blame depend on this notion” (Schechtman, 2009, 68). Personal identity’s function also distinguishes it from personality. The difference can be clearly seen in an example. If I contract someone to paint my house and during the painting the painter’s wife leaves him and gets depressed, that personality change does not change the fact that I still have to pay that person. He is not a different person; his personal identity has not changed. (Cf. Baylis, 2011, 517). One question we will have to answer in this regard is: can personal identity be affected by drastic personality changes as the ones sometimes derived from Deep Brain Stimulation (DBS)?

2. Authenticity

AUTHENTICITY, AS PERSONAL IDENTITY, is also a relevant ethical concept, although arguably trickier than personal identity. A first and tentative definition could be that being authentic is the same as being «true to oneself», that is, being loyal to your inner and real way of being. As Pugh et al. express, “to be authentic is to live in accordance with one’s «true self»” (2017, 641). This very basic definition varies from one philosopher to another, but the main idea of ethical truthfulness is the common attribute to all forms of authenticity.

Authenticity has been a philosophical and ethical concept at least since the beginning of western tradition (Ferreira, 2021). Pindar's maxim «be what you are», or the Delphic maxim «know thyself» are some of the first recorded examples. However, it is true that the ancient comprehension of authenticity and the modern one can be significantly different. More recently, Martin Heidegger established authenticity as one of the key concepts of his philosophy. Heidegger understands that the human being –or as he prefers, the *Dasein*– lives unauthentically most of the time, because of our immersion in the daily unproblematic activities. We don't live by ourselves, but in some sort of unconscious «they» that dictates what we should and shouldn't do. Only when something of our surroundings fails, we «wake up» and realise we have been living automatically and start our path towards authenticity. As Sherman explains, “Dasein inevitably moves between our day-by-day enmeshment” and “the challenge is to bring ourselves back from our lostness in the they to retrieve ourselves so that we can become our authentic selves” (Sherman 2009: 4). A waking and self-aware life is what Heidegger would understand as an authentic life.

Similarly, authenticity also plays a very important role in Ortega y Gasset's ethics. In one of his main works regarding this topic, *Pidiendo un Goethe desde dentro*, Ortega talks about «vocation», a calling we hear from our deepest self -what Ortega calls «fondo insobornable» (Ortega y Gasset, 2006: 182)- that vaguely and imprecisely guides our actions and warns us when we are deviating from ourselves. This «true self» cannot be positively known, Ortega argues, but we can feel how close or how far we are from it by the easiness or, on the contrary, the effortfulness by which we carry out our life (Ortega, 2009: 1172-1174). Living authentically is striving to listen and obey this inner voice as much as possible. Many others philosophers, especially existentialist philosophers as Sartre or Simone de Beauvoir, have debated at length about authenticity. We will not delve more on this tradition, as the main idea is sufficiently depicted with the descriptions of Heidegger's and Ortega's thought.

In the last decades, some authors have begun talking of an «ethic of authenticity» (Ferrara 1993), while others have considered it an identity dispositive of the past, already on a decline (Moeller and D'Ambrosio, 2021). The growing literature on human enhancement has reinforced this focus on authenticity. The innumerable modifications proposed by human enhancement –some already feasible, some expected in a near future (Bostrom and Sandberg, 2009)– inevitably raise questions of how and to what degree we will be changed, and if these changes would affect who we really are –that is, our authenticity.

Some authors (Parrens, 2005; Bolt, 2007; Erler and Hope, 2015) have argued that enhancement could affect us in such a way that we would become inauthentic. Some authors as Bolt claim enhancement is dangerous because it can break

our “connection to reality” (2007, p 287); or, as Parens puts it, that we should be concerned about the possibility that enhancement would “separate us from who we really are and how the world really is” (2005: 36). These are generally valid arguments, but I believe they miss the point because they operate under an exceedingly strict concept of authenticity. I see two main problems with these positions: 1) they fail to take into account the dynamic nature of our personal identity; and 2) they rely on an unrealistic notion of truthfulness. We will return to these two points in subsequent sections.

3. Brain stimulation and brain-machine interfaces

SOME RECENT TECHNOLOGIES that have raised diverse ethical issues are brain stimulation technologies and brain-machine interfaces. These new technologies force us to reconsider aspects of our comprehension of personal identity, authenticity agency and autonomy. Deep brain stimulation (DBS) is an invasive neurosurgical procedure that has been used to treat diseases such as depression or Parkinson’s disease (Mayberg et al., 2003; Bari et al., 2016). Brain-machine interfaces (BMI) connect the brain to devices such as prostheses, exoskeletons or computers that improve the functionality of people with some kind of movement limitation or neurodegenerative condition such as Parkinson’s disease (Monasterio et al., 2019, 31).

There is a growing literature on the potential benefits and harms of deep brain stimulation (DBS) (Glannon, 2009; Merkel, et al. 2007; Müller and Christen, 2011; Schechtman, 2009; Schermer, 2011). Among them, there are cases of changes in personality and on the understanding of oneself that could be seen as threats to personal identity and authenticity. Although brain-machine interfaces (BMI) are usually more concerned with agency and autonomy issues (Monasterio et al., 2019), some of this identity problems and authenticity issues could also be raised about these technologies.

As Baylis (2011, 513-514) exposes regarding DBS patients’ testimonials, there are patients reporting “a feeling of strangeness and unfamiliarity with themselves after surgery, stating things like “I don’t feel like myself anymore” or that “I haven’t found myself again after the operation” (Schüpbach et al. 18132: 2006). Other important side effects that have been reported are dysarthria or slurred speech, major depression and mania (Baylis, 2011, 516-517). In this line, Pugh et al. also explain that a small number of patients “have even seemingly undergone radical changes in their personalities, becoming far more impulsive, and developing tastes and behaviours that they only exhibit under the influence of stimulation” (2017, 640).

Many other patients have experienced an overall and profound improvement of their lives, with these technologies allowing them to live better and «be themselves» once again (Pugh et al., 2017, 640).

4. Can brain-affecting technologies threaten our personal identity?

THE KEY QUESTION IS: can technologies such as DBS or BMI be a threat to our personal identity or to our authenticity?

I would say personal identity is not really threatened by these technologies. Of course, this depends on what definition and understanding of personal identity we hold. As Baylis has explained (2011, 517), a static view of personal identity could believe DBS or even BMI can change the personal identity of someone. If a timid, introvert and depressive person becomes a joyful extrovert under the influence of these brain affecting technologies, one could think we are talking about a different person. We sometimes talk in these terms when we see a radical personality change in someone. But, as we previously mentioned, our moral and legal practices show otherwise, as we wouldn't write off a debt from that person just because they have drastically changed.

A dynamic understanding of personal identity, which allows changes to happen to someone without changing their personal identity, seems closer to our real understanding. On this view, as Baylis explains, “what matters is whether (and, if so, to what extent) an event or experience is integrated (consciously or unconsciously) into an identity-constituting narrative” (2011, 526-527). Not embracing this at least somewhat dynamic view of personal identity would force us to consider virtually all changes in our life as possibly identity changing. Not only brain affecting technologies, but also events such as our wedding, becoming a parent, losing a relative and many more could be considered identity changing. But this seems implausible.

This may seem to some like a strange position to defend. It would seem that our brains are the most sensitive part of our body regarding personal identity, the organ on which it precisely depends. Psychological theories of personal identity defend that personal identity is based on the psychological connection, link, or unity between the different moments of consciousness or mental states of a person (Locke, 1690; Parfit, 1984). On this view, intervening the brain in the way brain-affecting technologies do would probably entail a personal identity change. However, I believe a dynamic understanding of identity, as the ones proposed by narrative theories (Lindemann, 2009; Schechtman, 2014), are more appropriate

and better reflect how our identities really work. Our «mental states» -whatever that may be- or our memories are too fragile and malleable to be the nucleus of who we are. A different but maybe complementary argument could come from biological/animalistic theories of personal identity (Olson, 1997; Degrazia, 2015). From these theories it could be argued that it is our body as a whole, and our external appearance decisively, what contributes most to the generation of our personal identity.

5. Can brain-affecting technologies threaten our authenticity?

AUTHENTICITY, ON THE OTHER HAND, is a more difficult subject to tackle. As I stated previously, I believe in most cases the authenticity rhetoric introduces an understanding of truthfulness that is too vague or simply unrealistic. But this point is much less clear than the personal identity issue.

Even though we are used to operate under some notion of truthfulness -when, for example, we say that someone is «acting fake» when they don't behave as expected- a closer examination of this idea shows this concept is much vaguer than what we could have thought, given how extended its use is. Some authors have gone as far as declaring that the idea that we have a hidden essential self is most likely a fiction (DeGrazia, 2005, 233–34). Other authors, as Charles Taylor does in *The Ethics of Authenticity* and in *Sources of the Self*, have tried to nuance and calibrate better what this idea of authenticity could mean. Taylor affirms, contrary to the understanding of early 20th century philosophers mentioned before as Heidegger or Ortega, that authenticity should not be connected to any form of individual and exacerbated freedom, but that it should be understood as a relational, not solipsistic, reality (Taylor 1991: 26-28). Taylor emphasizes the role of others, of a community or a collective, in our understanding of authenticity (and the demand for it) (Taylor 1989: 35). Levinas's ethics of otherness is another philosophical paradigm that also points out to this comprehension (Méndez and Iza, 2021).

This kind of understanding would be in line with some psychological findings that show how the idea of «true self» is connected not so much to some sort of inner and true self, but to some features that we tend to understand as intrinsically valuable (Newman et al., 2014). Particularly, people tend to be considered more authentic when they are more extroverted, altruistic, and overall sociable. Pugh et al. use the radical transformation of Ebenezer Scrooge in *A Christmas Carol* as an example of how drastic change can be seen as authentic as long as the change brings some positive values with it (Pugh et al., 2017, 647). Because Ebenezer Scrooge's change was from greed and misanthropy to generosity and philanthropy,

his change is seen as revealing his true authentic being. If the change had gone in the other direction, and a good person would have transformed into a bad one, we would say the change was inauthentic.

If we embrace this understanding of authenticity, it is clear that brain-affecting technologies such as DBS and BMI can be a threat to authenticity. If a technology turns someone anti-social or depressive, we could say her authenticity has been damaged or disrupted, we could conclude that “she is no longer herself” or that “she is not really that way, that is not her true self”.

But even if we accept this conclusion, we might ask: is this enough of a reason to recommend against the use of DBS or BMI? What would be better, a person who basically cannot live because of its tremors and overall physical problems, or a person who is «inauthentic»? I would say this kind of dilemmas require a case by case examination. But I would not give authenticity such a high value that it overrides all other considerations, as the «authenticity rhetoric» tends to do.

6. The importance of autonomy

A STRINGENT UNDERSTANDING of authenticity and «true self» seems highly problematic and unnecessary, as some authors have pointed out (DeGrazia 2005: 233–34; Levy 2009: 73; Newman et al. 2014). Given the creative nature of our memory and our narratives, it seems hard to distinguish authentic life projects from inauthentic ones, at least on principle. DeGrazia, for example, understands that “any self-creation project that is autonomous and honest is ipso facto authentic” (2005: 112). While this affirmation needs qualification, I would say his idea is basically right. This same author develops a more detailed approach, stating that:

A autonomously performs intentional action X if and only if (1) A does X because she prefers to do X, (2) A has this preference because she (at least dispositionally) identifies with and prefers to have it, and (3) this identification has not resulted primarily from influences that A would, on careful reflection, consider alienating. (DeGrazia, 2005: 102)

The point is that, even in some problematic cases when you would forget your previous election (for example, when a memory enhancement erases some part of your past, including your decision to erase it), if your election was autonomous, there can’t be nothing bad about it -at least on principle. However, as Monasterio et al. have stated, “the advancement and development of brain-machine interfaces and other emerging neurotechnologies not only challenges the axes of classical agency theory, but also of our sense of agency” (2019, 37).

One clear example of this is pathological gambling, which has been identified as a potential side-effect of DBS (Baylis, 2011, 529). As Baylis explains, personal identity -and authenticity, for the reasons previously stated- seems threatened, as agency is undermined “to such an extent that the person is no longer able to meaningfully contribute to the authoring of her own life” (Baylis, 2011, 530). This author exposes that people have reported to feel like a robot, meaning that they are not the authors of their actions.

However, even though this argument holds some intuitive strength, I ultimately believe that these feelings of lack of autonomy do not really mean autonomy is absent, at least completely. We tend to talk of autonomy in all or nothing terms, but this collides with our daily experience where autonomy is never absolute. Again and again, we encounter innumerable circumstances that condition and limit us; most decisively, our body. If DBS, BMI and other brain-affecting technologies were condemned or even prohibited, we should probably condemn or prohibit sugar, computers and many other things that can make us considerably less autonomous. But that seems implausible.

An additional and empirical counter argument is that most cases of persons facing this very dilemma have elected to keep using brain-affecting technologies to gain physical functionality even when that brings severe personality changes and undermines their authenticity (Baylis, 2011, 522-523). I would say that this shows how authenticity, personal identity or even autonomy are really valued in comparison to wellbeing.

7. Conclusions

IN THIS ARTICLE I have analysed whether brain-affecting technologies such as DBS or BMI impact or threaten ethically sensitive aspects of our lives such as personal identity and authenticity. After briefly discussing why personal identity and authenticity are usually regarded as ethically relevant, I tried to answer the two key questions regarding these topics: Can brain-affecting technologies radically change a person? Could they cause someone to cease to be him or herself?

I concluded that -at least by the general definition of personal identity given, and with today’s state of art regarding brain-affecting technologies- personal identity would not be subverted by brain-affecting technologies. Given what these technologies can do today and taking as a reference a sufficiently dynamic conception of personal identity, this aspect should not be affected in most cases. The same goes, I argued, for authenticity. In this case, however, the main argument was that

authenticity is not so relevant (or even clearly identifiable) as to override most well-being concerns. Lastly, I considered whether personal identity or authenticity could be affected by how brain-affecting technologies such as DBS and BMI undermine our autonomy. But, again, I explained that only a stringent account of autonomy could consider that these technologies negate autonomy.

Brain-affecting technologies like DBS or BMI are morally charged. They impact very clearly and directly our behaviour and relationships with other. However, it does not seem, on principle, that they affect it negatively. Or, at least, they do not affect it in a significantly different or worse way that other technologies do. Therefore, I argue that we should approach them more openly and abandon a general mistrust and unease that is often invoked when dealing with these technologies' implementation.

BIBLIOGRAPHY

Bari AA, Kon Kam King N, Lipsman N, Lozano AM. Deep brain stimulation for neuropsychiatric disorders. In: Tuszynski MH, ed. *Translational Neuroscience*. New York: Springer US; 2016:499–516.

Baylis, F. (2013). “I Am Who I Am”: On the Perceived Threats to Personal Identity from Deep Brain Stimulation. *Neuroethics*, 6, 513–526.

Bolt, L. L. E. (2007). True to Oneself? Broad and narrow ideas on authenticity in the enhancement debate”. *Theoretical Medicine and Bioethics* 28, 285–300.

Bostrom, N. and Sandberg A. (2009). “Cognitive enhancement: Methods, ethics, regulatory challenges”. *Science and Engineering Ethics* 15, 311–341.

DeGrazia, David. (2000). “Prozac, enhancement, and selfcreation”. *The Hastings Center Report* 30, (2), 34–40.

DeGrazia, D. (2005). *Human Identity and Bioethics*. New York: Cambridge University Press.

Elliott, C. 1998. “The tyranny of happiness: Ethics and cosmetic psychopharmacology”. In *Enhancing human traits: Ethical and social implications*, ed. E. Parens, 177–88. Washington, DC: Georgetown University Press.

Erlor, A. and Hope, T. (2015). “Mental disorder and the concept of authenticity. *Philosophy, Psychiatry, & Psychology*” 21 (3), 219–32.

Ferrara, A. (1993). *Modernity and authenticity: A study in the social and ethical thought of Jean-Jacques Rousseau*. Albany: State University of New York.

Ferreira González, J. E. (2021). Luis Villoro y el criterio epistémico de autenticidad filosófica actualizado. *Utopía Y Praxis Latinoamericana*, 26 (94), 81–109. Recuperado a partir de <https://produccioncientificaluz.org/index.php/utopia/article/view/36127>

Glannon, W. 2009. Stimulating brains, altering minds. *Journal of Medical Ethics* 35: 289–292.

Lindemann, Hilde. 2009. “Holding on to Edmund: The Relational Work of Identity”. In H. Lindemann, M. Verkerk, and M. Walker (eds.), *Naturalized Bioethics: Toward Responsible Knowing and Practice* (65–79). New York: Cambridge University Press.

Locke, J. 1690/1975. *An Essay Concerning Human Understanding*. Oxford: Clarendon Press. DOI: 10.1093/actrade/9780198243861.book.1

Mayberg HS, Lozano AM, Voon V, McNeely HE, Seminowicz D, Hamani C. Deep brain stimulation for treatment-resistant depression. *Neuron* 2003;45(5):651–60

Méndez Reyes J., Iza Villacis V. (2021). Apuntes para una reflexión en torno a la ética de la alteridad. *Revista de Ciencias Humanas, Teoría Social y Pensamiento Crítico*, Extra n° 1 (Las ciencias sociales y sus perspectivas interdisciplinarias). 44-59.

Merkel, R., S. Rosahl, B. Nuttin, et al. 2007. Ethical and legal aspects of neuro-modulation: On the road to guide- lines. *Neuromodulation* 10: 177–186.

Moeller, H., and D’Ambrosio, P. (2021). *You and Your Profile: Identity After Authenticity*. New York, NY.

Monasterio Astobiza, Aníbal, Txetxu Ausín, Mario Toboso, Ricardo Morte, Manuel Aparicio, & Daniel López. (2019). Traducir el pensamiento en acción: Interfaces cerebro-máquina y el problema ético de la agencia. *Revista de Bioética y Derecho*, 46(46), 29-46.

Müller, S., and M. Christen. 2011. Deep brain stimulation in Parkinsonian patients—Ethical evaluation of cognitive, affective, and behavioral sequelae. *AJOB Neuroscience* 2 (1): 3–13.

Newman, G.E.; Bloom, P. and Knobe J. (2014). “Value judgments and the true self”. *Personality and Social Psychology* 40 (2): 203–16.

Olson, Eric (1997). *The Human Animal: Personal Identity without Psychology*. Oxford: Oxford University Press.

Ortega y Gasset, J. (2006). *Obras completas. Tomo V*. Madrid, Taurus.

Ortega y Gasset, J. (2009). *Obras completas. Tomo IX*. Madrid, Taurus.

Parens, E. (2005). “Authenticity and ambivalence: Toward understanding the enhancement debate”. *The Hastings Center Report* 35 (3): 34–41.

Parfit, D. (1984). *Reasons and persons*. Oxford: Clarendon.

Pugh, J, Maslen, H, & Savulescu, Julian. (2017). Deep brain stimulation, authenticity and value. *Cambridge Quarterly of Healthcare Ethics*, 26, 640-657.

Rubinelli, M. L. (2020). Las categorías de reconocimiento y dignidad en el pensamiento crítico latinoamericano. Homenaje a Ricardo Salas. *Utopía Y Praxis*

Latinoamericana, 25 (88), 103-114. Recuperado a partir de <https://produccion-cientificaluz.org/index.php/utopia/article/view/30867>

Schechtman, M. (1996). *The constitution of selves*. Ithaca: Cornell University Press.

Schechtman, M. 2009. Getting our stories straight: Self-narrative and personal identity. In *Personal identity and fractured selves*, ed. D.J.H. Mathews, H. Bok, and P.V. Rabins. Baltimore: Johns Hopkins University Press.

Schechtman, Marya. 2014. *Staying Alive: Personal Identity, Practical Concerns, and the Unity of a Life*. Oxford: Oxford University Press.

Schermer, M. 2011. Ethical issues in deep brain stimulation. *Frontiers in Integrative Neuroscience* 5: 17. doi:10.3389/fnint.2011.00017.

Schüpbach, M., M. Gargiulo, M.L. Welter, et al. 2006. Neurosurgery in Parkinson disease: A distressed mind in a repaired body? *Neurology* 66: 1811–1816.

Sherman G. L. (2009) “Martin Heidegger’s Concept of Authenticity: A Philosophical Contribution to Student Affairs Theory, *Journal of College and Character*”, 10:7, DOI: 10.2202/1940-1639.1440

Taylor, C. (1989). *Sources of the Self. The Making of the Modern Identity*, Cambridge: CUP.

Taylor, C. (1991). *The Ethics of Authenticity*, Cambridge: Harvard University Press.

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