

Transdisciplinary philosophy and public policy

June 7, 2023

Human enhancement and the ethical challenges of transhumanism



In the not-so-distant future, it's clear that neurological interventions are going to play a part in humanity's approach to life and wellness. With that fact in mind, what are the implications for wider society? This blog explores the themes of transhumanism, neuromodulation, and transdisciplinary tools and paradigms to protect all humanity.

The history of humanity is a tale of self-improvement. Last month, a man who was paralysed in a cycling accident over a decade ago was able to walk again after doctors implanted a device that reads his brain waves and sends instructions to his spine to move the right muscles. Meanwhile, the brain chip firm Neuralink has announced that it plans to help restore people's vision and mobility by connecting brains with computers.

Some of these types of improvements can be attained through [neuromodulation](#), the targeted alteration of specific neuronal activities by technological interventions or drugs. When such interventions aim to augment our abilities, rather than restore them to a given baseline, we refer to them as human enhancement. In recent years, the reality of human enhancement has started creeping into discussions at the heart of medicine, law, ethics, as well as the military and the future of work, amongst many other fields. Neurotechnologies and implantable devices for neurostimulation and physical/cognitive enhancement can provide us with new tools to address old questions. But scientific progress, technological development and the commercial interests of neurotechnology companies can also create a host of [ethical and philosophical dilemmas](#), for example: what are the implications of these developments for freewill, authenticity, fairness, and meritocracy? Will transhumanism pose a serious threat to our collective sense of a common moral status or comparative vulnerabilities? To answer these questions and many others, we will need to apply [transdisciplinary tools and paradigms such as Neuro-Techno-Philosophy](#), to help us connect the dots.

The human brain is pre-programmed so that we instinctively avoid pain and seek pleasure: the hardwiring for neurochemical gratification is inbuilt within us. Neuroscience points to five key powerful motivators of human action, which I call the Neuro P5: power, profit, pleasure (physical and aesthetic), pride, and permanency (longevity and legacy). This means that we are bound to pursue technologies which enhance one or all of these motivators. As human enhancement technologies become more widespread and efficient, we will find it increasingly hard to resist the temptation to adopt them, even if we recognise that they clash with our individual and collective best interests. Our neurochemical makeup predisposes us to an almost blind pursuit of neurochemical gratification. Because of this, I believe that we are on a path to inevitable [transhumanism](#), a next phase of evolution in which neuroactive innovations in technologies and biology will alter our neurochemistry in radical ways to the point that future humans might no longer resemble past and present humans.

The ethical dilemmas of human enhancement are in large part linked to the neurochemical predilections in human nature. For that reason, the way we will employ and rely on enhancement technologies cannot be separated from the [defining traits of human nature](#): emotionality, amorality, and egoism. Neuroscience teaches us that decision-making in the brain relies heavily on neuronal mechanisms that also underpin emotions. Humans are amoral insofar as we are born neither inherently moral nor immoral: it is in the course of existence that our notions of what is 'good' or 'bad' develop, and that is why circumstances (personal and political) are critical in shaping our moral compass. The human brain is malleable and therefore so is our 'nature'. That does not mean, however, that we are born as entirely blank slates. We are conditioned from birth to pursue survival, and human egoism is tightly connected to this predisposition for survival, in what I have called a 'predisposed tabula rasa'.

The potential perils surrounding human enhancement demand governance paradigms rooted in neuroscientific and technological frameworks as well as critical philosophical insights. I call the philosophical approach to these changes [Neuro-Techno-Philosophy](#), a paradigm that I originally developed in an article in *Metaphilosophy*. I have argued that we cannot neglect the virtues of human nature, and we must not assume that our relationship with enhancement technologies will be driven by reason or moderation. More broadly, future discussions of the ethical issues raised by enhancement also need to take into account the philosophical implications of human enhancement. The neurobiological and neurotechnological modifications of our brain's neuronal structures could irrevocably transform the subject matter and method of philosophy. They may affect how we feel and think, thereby gradually [altering what defines us](#). Neuro-Techno-Philosophy can help us get to grips with these changes – in addition to helping form a moral compass for the ethical and regulatory challenges of enhancement drugs and devices.

The emergence of technologically enhanced humans is, in my opinion, unstoppable. It is not a question of if it will happen, only when, how, and at what cost. We therefore need to do everything in our power to make sure that the trajectory of human enhancement is urgently regulated by all stakeholders to be safe, fair, and transparent.

Professor Nayef Al-Rodhan is a philosopher, neuroscientist, geostrategist and futurologist. His current research focuses on transdisciplinarity, [Neuro-Techno-Philosophy and the future of philosophy](#).

Professor Nayef Al-Rodhan

Email: Nayef.AI-Rodhan@sustainablehistory.com

References:

Al-Rodhan, N, (2023) The future of philosophy is transdisciplinary. *Research Features*, 147. Available at: [10.26904/RF-147-4479785320](https://doi.org/10.26904/RF-147-4479785320)

Al-Rodhan, N, (2022) Transdisciplinarity, neuro-techno-philosophy, and the future of philosophy. [online] *Metaphilosophy*. doi.org/10.1111/meta.12595

Al-Rodhan, N, (2021) The rise of neurotechnology calls for a parallel focus on neurorights, [online] *Scientific American* blogs.scientificamerican.com/observations/the-runaway-train-of-cognitive-enhancement

Al-Rodhan, N, (2019) The runaway train of cognitive enhancement [online] *Scientific American* philosophynow.org/issues/127/Free_Will_in_the_Age_of_Neuromodulation

Al-Rodhan, N, (2019) A Neuro-Philosophy of human nature: Emotional amoral egoism and the five motivators of humankind [online] *Blog of the APA* blog.apaonline.org/2019/04/04/a-neuro-philosophy-of-human-nature-emotional-amoral-egoism-and-the-five-motivators-of-humankind

Al-Rodhan, N, (2019) Neurophilosophy and transhumanism [online] *Blog of the APA* <https://blog.apaonline.org/2019/02/19/neurophilosophy-and-transhumanism>

Al-Rodhan, N, (2018) Free will in the age of neuromodulation, [online] *Philosophy Now* philosophynow.org/issues/127/Free_Will_in_the_Age_of_Neuromodulation