

TITLE: HUMAN ENHANCEMENT AND FUNCTIONAL DIVERSITY

SUBTITLE: Ethical concerns of emerging technologies and transhumanism

#### ABSTRACT

The concepts of posthuman, transhuman and transhumanism, together with its three pillars, super-intelligence, super-wellbeing, and super-longevity, and that of human enhancement, are discussed. Emerging technologies, such as nanotechnology, biotechnology, information and communication technologies and cognitive sciences, and their use for human enhancement purposes are described, as well as which are their implications at different expert scientific areas and for the society. The employment of genome editing techniques for enhancement purposes, including on human germline cells and early embryos, as well as their scientific (evolutionary and genetic), societal and ethical drawbacks is specifically discussed. In particular, we focus on a perspective of collective responsibility and social inclusion: listening and considering all people, with their functional diversity or with different abilities. Pros and cons of proposals for radical transformation as endorsed by transhumanism (genome editing), bearing in mind the prospect of their impact on future generations (dystopias) and the need of a global ethical frame, are discussed. Personal or social decisions and their effects on an individual or collective level in subjects with functional diversity is also considered.

#### KEYWORDS

transhumanism, human enhancement (HE), functional diversity, genome edition, future generations.

#### AUTHOR

Miquel-Àngel SERRA, PhD

Laboratory of Neuropharmacology, Department of Experimental & Health Sciences, Universitat Pompeu Fabra, Barcelona Biomedical Research Park (PRBB), c/ Dr. Aiguader, 88. 08003 Barcelona, Spain.

Email: [miquel.serra@upf.edu](mailto:miquel.serra@upf.edu)

*Present address:* Centre for Advanced Studies, Joint Research Centre, European Commission. 21027 Ispra (Varese), Italy.

#### Short bio-sketch

Miquel-Àngel Serra (Barcelona, 1961) has a PhD in Biochemistry & Molecular Biology (UAB, 1992) and a Master on Science Leadership & Management (UPF-UAB-UB, 2009). He has carried out his research in environmental toxicology, in neuroscience and in bioethics from 1984. He is co-author and co-ordinator, with the lawyer Albert Cortina, of three books addressing transhumanism and human enhancement, namely, *¿Humanos o posthumanos? Singularidad tecnológica y mejoramiento humano* (Fragmenta, 2015), *Humanidad∞. Desafíos éticos de las tecnologías emergentes* (Ediciones Internacionales Universitarias, 2016) and *Singulares. Ética de las tecnologías emergentes en personas con diversidad funcional* (Ediciones Internacionales Universitarias, 2016).

## FIGURE CREDITS

Photo 21. Transhuman

Photo 22. Human 2.0

Photo 23. Posthuman

Author of the photos: David Molina Gadea. In A. Cortina & M.A. Serra (coord.) (2021, 3<sup>rd</sup> ed.) *¿Humanos o posthumanos? Singularidad tecnológica y mejoramiento humano*. Barcelona: Fragmenta Editorial.

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