## **GUEST EDITORIAL PREFACE**

## Special Issue on Technoethics: **Human Extension and Identity**

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In this issue we explore Technoself in terms of three progressively enveloping approaches to the evolution of human identity as a result of technological inclusion. In the first instance. the technology impacting identity is in the form of neuroenhancing drugs, the second case involves cognitive engineering between human and environment, while the third approach considers human cognitive extension as high-tech cyborgs. Following this, we explore cases of technological inclusion that indirectly shape human identity by changing our environment and how we navigate it. To this end we focus on human values about virtual reality, smart meters, and other smart technologies that are shaping our human identity by altering our environment and public spaces.

In "The Ethics of Neuroenhancement: Smart Drugs, Character and Society", Nils-Frederic Wagner, Jeffrey Robinson and Christine Wiebking explore the "moral unease" surrounding the non-medicinal use of neuroenhancing drugs, concluding that such indulgence in these psychopharmaceuticals is wrong in itself. Providing both neuroscientific and ethical evidence to support their claim, Wagner, Robinson and Wiebking argue that in addition to possible neuronal damage, the misuse of smart drugs has the potential to steer a society toward self-made, neuroenhanced, higher achievers not living within natural cognitive limitations, resulting in the promotion of individual competition over societal cooperation.

In "A Design Model for Cognitive Engineering", Hector MacIntyre focuses on the practical consequences of a technogenic account of cognitive agency. After exploring both human-centered, and machine-centered automation designs, MacIntyre opts for a third option, proposing factitious virtue as a design model for cognitive engineering, which would enable the situational determination of what counts as a preferred cognitive trait "from our own design aims and from the environment itself". The factitious intellectual virtue design model is a pragmatic approach, offering flexibility of choice for criteria for cognition as well as a dynamically variable locus of control.

In "Cyber-bullies as Cyborg-bullies" Tommaso Bertolotti and Lorenzo Magnani argue that high tech usage in general has collapsed dualisms such as mental/physical and online/offline, providing a seamless connection between humans and technology. They move the focus beyond cyborgs as human with extensions to physical and cognitive capabilities, to an expanded notion of a Diffused and Artificially Cognizing Cyborg (DACC) entity. Participation in Social Networking Systems instantiates such entities, wherein the implicit inaccessible operation of artificial processes has a strong resemblance to unconscious processes in the un-enhanced human. "Cyborghood" expands both our conscious and unconscious processes, and Bertolotti and Magnani bring to light the potential for mischief in manipulation of unconscious processes. As Internet related unpleasant issues such as cyber-bullying may be considered as a clash between such entities. resolution of these issues will require a digital literacy that encompasses "being cyborg" with all of its entailments.

In "Citizen perspectives on the customization/privacy paradox related to smart meter implementation" Jenifer Sunrise Winter employs the framework of contextual integrity related to privacy developed by Nissenbaum (2010) as a tool to understand citizen response to implementation of residential smart metering technology. Following this, Octavian Machidon's "Societal Implications of Current and Emerging "Smart" Technologies" delves into the implications of smart technologies in terms of psychological and physical effects on their users, the social changes imposed, privacy concerns. Finally, in "The power and appeal of manipulation" Mario Radovan argues that Information technology has facilitated the creation of a virtual reality which differs from the reality in which we live in significant ways which alter our self-perception, how we engage in public discourse, and how we approach democracy. Taken together, this special issue looks at some of the many pushes and pulls by which technology is redefining human life and the world.

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Susan Hempinstall is a Philosophy PhD candidate at the University of Ottawa, and has an extensive technical background in Information Technology. Her dissertation in the Philosophy of Mind argues for extended human memory, and her research focuses on artificial intelligence, deeper learning, and the effects of technology on personal identity.

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