ABSTRACT

According to several recent studies, a big chunk of college students in North America and Europe uses so-called ‘smart drugs’ to enhance their cognitive capacities aiming at improving their academic performance. With these practices, there comes a certain moral unease. This unease is shared by many, yet it is difficult to pinpoint and in need of justification. Other than simply pointing to the medical risks coming along with using non-prescribed medication, the salient moral question is whether these practices are troubling in and of themselves. In due consideration of empirical insights into the concrete effects of smart drugs on brain and behavior, our attempt is to articulate wherein this moral unease consists and to argue for why the authors believe cognitive enhancement to be morally objectionable. The authors will contend that the moral problem with these practices lies less in the end it seeks, than in the underlying human disposition it expresses and promotes. Some might ask, what is wrong with molding our cognitive capacities to achieve excellence, get a competitive edge, or, as the whim takes us? In all of these occasions, the usage of smart drugs serves a certain goal, a telos. The goal is, broadly speaking, this: outsmarting opponents in an arms race for limited resources and thereby yielding a competitive edge. In plain words: competition is valued higher than cooperation or solidarity. What is wrong with striving for this goal? The authors submit that the question whether people really want to live in a society that promotes the mentality ‘individual competition over societal cooperation’ deserves serious consideration. In developing their answer, the authors draw on an ‘Ethics of Constraint’ framework, arguing that widespread off-label use of smart drugs bears the risk of negative neural/behavioral consequences for the individual that might, in the long run, be accompanied by changing social value orientations for the worse.

Keywords: Cognitive Enhancement, Cognitive Performance, Enhancement, Ethics of Restraint, Methylphenidate, Moral Theory, Neuro-Enhancement, Neuroethics, Neuroimaging, Personal Identity, Social Identity, Stimulant Abuse, Technoethics

DOI: 10.4018/ijt.2015010101
INTRODUCTION: WHAT IS COGNITIVE NEUROENHANCEMENT?

By and large, cognitive neuroenhancement drugs (colloquially also referred to as ‘smart drugs’) is a label given to prescription drugs such as Ritalin that are taken with the intent of improving cognitive performance. Smart drugs improve cognitive function such as alertness, attention, concentration, and memory; and psychological function such as mood and sleep, with the intent to indirectly enhance cognitive performance. By taking these drugs, users hope for amplification and/or extension of core cognitive capacities in order to perform better at the task at hand.

“Ultimately, our drug use is a reflection of our society” so the authors of a recent Nature commentary tell us, “and should never be considered without the broader context of why healthy people choose to use the drugs in the first place” (Sahakian & Morein-Zamir, 2007). According to a recent study, one in seven healthy college students in Switzerland uses neuroenhancement drugs to enhance their cognitive capacities aiming at improving their academic performance (Maier et al., 2013). In a recent survey conducted in Canada, 15% of medical students admitted non-medical and/or off-label use of one or more pharmaceutical stimulants (Kudlow et al., 2013). Many other studies confirmed the widespread use of these drugs in the academic environment; not only students but also faculty members reported use of such substances (Maher, 2008).

It is important to note at the outset that there is a significant difference in the purpose of taking these drugs, compared to the drugs of the 1960s and 1970s such as LSD or marijuana, which have been taken recreationally with the intent to ‘drop out’, i.e., forgetting the hassle of everyday life; whereas neuroenhancers serve an opposite purpose, they are taken to become able to perform better than well in a world that asks for high-achievers.\(^1\)

In what follows, we will approach the ethics of neuroenhancement from the perspective of the emerging field of technoethics—a term that has been coined by Mario Bunge (1977) in the late 1970s. Ever since, this fascinating and growing interdisciplinary research area aims at exploring ethical aspects of technology and its impact on society. Technoethics has been defined as dealing “with human processes and practices connected to technology which are becoming embedded within social, political, and moral spheres of life. It also examines social policies and interventions occurring in response to issues generated by technology development and use. This includes critical debates on the responsible use of technology for advancing human interests in society. To this end, it attempts to provide conceptual grounding to clarify the role of technology in relation to those affected by it and to help guide ethical problem-solving and decision making in areas of activity that rely on technology” (Luppicini, 2010). One of the key areas of technoethics is ‘biotech ethics’; a subfield that is concerned with, “the use of biotechnologies [that] spread rapidly to medical research, health care, and industrial applications” (Luppicini, 2009). This key area of technoethics involves analyzing pressing ethical issues that arise from the application of neuroscience research leading to growing possibilities of artificially enhancing human cognition. We have seen an unprecedented growth in medical technologies such as magnetic resonance imaging (MRI) and associated research investigating the function and anatomy of the human brain. Following something akin to Moore’s law, this will only continuously increase in the future. Therefore, the examination of technoethics and more specifically, biotech ethics are becoming increasingly important and relevant to society.

In order to set the stage, some disclaimers regarding our take on cognitive enhancement are important: we are not concerned here with non-prescription drugs such as caffeine that can be regarded as ‘soft enhancers’, but with a narrow understanding of artificial, and, for that matter, ‘unconventional’ cognitive enhancement by means of psychopharmacological drug intervention with immediate and significant physiological effects on the brain.