Ann Ist Super Sanità 2020 | Vol. 56, No. 2: 251-253
DOI: 10.4415/ANN_20_02_16

Book Reviews, Notes and Comments

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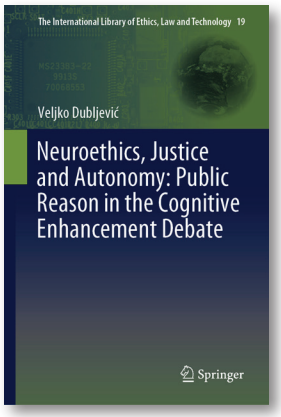

NEUROETHICS, JUSTICE AND AUTONOMY. Public reason in the cognitive enhancement debate
Veljko Dubljević
Springer Nature Switzerland AG 2019.
The International Library of Ethics, Law and Technology, 19.
ISBN 978-3-030-13642-0.
€ 83,19.

In his book, *Neuroethics, justice and autonomy: public reason in the cognitive enhancement debate*, Veljko Dubljević reflects upon the issue of cognitive enhancement technologies, i.e. stimulant drugs or cognition enhancement drugs (CED) and stimulation devices, within the framework of political philosophy, with respect to the risk of violating rights and justice raised by the actual lack of adequate regulation. This focus is particularly relevant in the present society, where, in addition to the ethical and political issues raised by cognitive enhancement technologies, new social and economic pressures raise additional issues deserving a dedicated analysis. To illustrate, pressure to enhance is likely to rise in contexts like the military, the education, and several jobs, with an increasing influence of private business.

The author is right in stressing that CED pose new issues than genetic enhancement, because they target the mind of competent adults making individual choices for themselves, even if it might be objected that competence is a controversial concept. The rationale behind the analysis of the book, which is grounded on Rawls' philosophy, is very clear and agreeable in its simplicity: despite the tendency to see pro-enhancement arguments as liberal and progressive, applying the liberal principles of justice to the discussion on CED leads to the conclusion that, because of the lack of an adequate regulation, cognitive enhancement might be a violation of equal rights and liberties of people preferring not to use it. Moreover CED might violate the principle of equal opportunity. Thus the question why justice did not play a central role in the neuroethical discussion about CED arises.

The question of justice in relation to CED might also be framed in terms of public priorities: given the limited resources available, it might seem unfair to invest money in CED rather than for other health related needs. This is a legitimate concern, even if it might be argued that, at least on theory, the use of CED could be a tool for figuring out new solutions to actual health needs. Yet it is true, as stated by the author, that as a matter of fact CED are used (if not even conceived) as a mean for getting personal advantage. How to react to this state of affairs? The author's suggestion is to use economic disincentives, for both individuals and companies: fees for citizens willing to use CED and special taxation procedures for companies interested in producing them. Economic disincentives would be a tool for the state to exercise its influence, which is justified because unregulated use of CED challenges the principle of justice. First because private interests are fulfilled at the expense of the public; second because cognitive enhancement actually affects the very structure of our society limiting the individual capacity to formulate and revise rational choices concerning their lives.

The second point in particular is related to the indirect coercion exercised on citizens to use cognitive enhancement. If the topic is not new in both neuroethical and political literature, the argument in support of its relevance provided by the author is very interesting, and argued for using the rational choice theory. The conclusion of the argument is that if a sufficient number of people expect others to use cognitive enhancement in a certain competitive context, that is enough to start a chain of reactions supporting the use of cognitive enhancement in order to not be left out. After having highlighted the limits of the two classical models of cognitive enhancement regulation (i.e., prohibition *vs* permissive or *laissez-faire* approaches), the author argues for the Economic Disincentives Model (EDM), which is a sort of middle way approach including forms of taxation and fees, as well as periodic tests about the perils of cognitive enhancement for people using it. The money gained through the application of the EDM would be invested for activities of public utility. I agree that this model basically balances the other two approaches: it allows an active role of the state without denying a liberal organization of society, even though it is not completely clear to me how to balance the prohibition to produce and sell CED with the acceptability of private use by individual citizens.

A key concept of liberal society is autonomy. The third chapter of the book is dedicated to the conceptual analysis of this key notion, arguing against a confusion that has often affected bioethics, neuroethics, and political philosophy, among others, i.e. the confusion between/conflation of the metaphysical notion of free will and the political notion of autonomy. The author rightly stresses that the concept of autonomy embedded in the legal and political system of pluralistic democratic societies does not presuppose any religious or metaphysical doctrine. The political concept of autonomy is open to empirical scrutiny. Particularly interesting is the minimal or basic sense of autonomy, which emerges from the interaction with empirical sciences: it requires

only that the agent is able of making rational decisions in accordance with his or her own long-term interests. This is a form of self-determination that should not be conflated with free-will. Three components of autonomy are identified: volitional (agents act voluntarily or intentionally), cognitive (agents have sufficient information and understanding), and liberty (there are no controlling influences on agents, both external or internal). In sum, autonomy presupposes having the power of self-control and self-regulation, not necessarily exercising this power all the time. Both coercive (from external) and compulsive (from internal) influences are possible at different levels of intensity. Since they can diminish the personal capacity for long-term rational and autonomous decisions, both coercion and compulsion justify the intervention of the state without denying individual autonomy.

Highly illustrative is the example of addiction that the author provides: the model of autonomy he developed leads to the conclusion that both the moral and the medical models of addiction are false because grounded on a view of autonomy as not gradual but rather as an all-or-nothing capacity. In fact, addicted autonomy is highly compromised but not totally gone. The misunderstanding arises again from the confusion between the political notion of autonomy and the metaphysical notion of free will: to avoid this confusion precedence should be given to practical application over metaphysical justification. This is the core of the argument developed in the book.

To summarize, the following main points can be identified in the book:

- policy proposals and detailed models (e.g., what is a responsible use of CE) are scarce;
- particularly, regulatory environment for enhancement technologies (e.g.,Transcranial Magnetic Stimulation, transcranial Direct Current Stimulation) is no clear;
- in order to more effectively address the ethical issues raised by CE it is necessary to reflect less on abstract positions and more on concrete proposals to regulate, providing their operationalization in society;
- the EDM argued for in the book is a sort of middle way between *laissez-faire* and prohibition;
- the philosophical engagement with neuroscience and neurotechnologies should be framed as a political neuroethics, i.e. a combination of both practical and theoretical reflections on the basis of political categories (e.g., autonomy), mainly inspired to John Rawls.

This book is an excellent example of political neuroethics, which is a form of conceptual reflection interested in how political categories can help in analyzing the impact of new technologies on society.

Within the contemporary reflection on the statute of neuroethics, three main methodological approaches have been identified [1] eventually calling for a conceptual expansion of the field [2]. A "neurobioethical" approach is primarily normative and prescriptive: it applies ethical theory and reasoning to practical issues arising from neuroscientific research and its applications. An "empirical neuroethical" approach is descriptive and occasionally explanatory: it uses empirical data to inform theoretical (e.g., what is moral reasoning) and practical issues (e.g., who is really a moral agent). A "conceptual neuroethical" approach is primarily theoretical and particularly interested in clarifying fundamental notions. Basically it calls for a conceptual clarification of relevant notions in order to adequately deal with the issues raised by neuroscience. But semantic clarification does not exhaust the conceptual neuroethics work. In fact, at a deeper level, it emphasizes the need to develop and use a methodological *modus operandi* for effectively integrating scientific (e.g., neuroscience) and philosophical (e.g., ethics) interpretations.

Ideally these three approaches, even if distinct, are combined in practice. The political neuroethics argued for by Dubljević is highly illustrative in this respect. In fact, it combines practical, descriptive, and conceptual interests, eventually showing how mature philosophical reflection can help in clarifying the issues raised by contemporary science and technologies, their impact on traditional political categories, and how to deal with them. This approach seems promising also with respect to recent calls for thinking new strategies in order to make neuroethics more effective in dealing with the issues raised by contemporary science and technologies [3], particularly by big international brain initiatives [4]. Last but not least, political neuroethics seems very promising also with respect to one of the pillars of Responsible Research and Innovation (RRI), which is the engagement of citizens for reflecting on science and technologies and anticipating their future impact [5].

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MOSCHE, CAVALLETTE, SCARAFAGGI E PREMIO NOBEL
Era solo un ragazzo. L'incontro con Rita Levi Montalcini ha cambiato la sua vita

Milano: Harper Collins Italia; 2019.
254 p.
ISBN 978-88-6905-417-4.
€ 16,00.

[Flies, grasshoppers, beetles, and a Nobel Prize. He was just a boy. The meeting with Rita Levi Montalcini changed his life]

Even if especially intended for young fellows, mainly adolescent and young-adults possibly facing the idea of starting a scientific biomedical career, this lively biography is strongly suggested to anyone interested in how started, developed, florished, and still prosecutes a very peculiar, yet thrilling biographical sketch. Luigi Aloe, born 1943, for decades the strictest collaborator of the 1986 Nobel laureate for Medicine or Physiology Rita Levi-Montalcini, eventually got in 1989 from the prestigious "Alma Mater" University of Bologna, followed by a subsequent laurea *honoris causa* in Medicine at a Bulgarian university. The stubborn, intelligent and very concrete figure of Luigi was born in a very humble family in the small seaside village of Amantea, Calabria, Southern Italy. Starting from being busboy of a spoiled tailor, (where he learned some skills very relevant to his "golden hands" subsequent technological career) he emigrated, as many poor Italians from socio-economical deprived Southern areas, in Germany. Thanks to the fortunate effort of Prof. Armando Rigobello (a philosopher active at Rome Tor Vergata University) he got a secondary school degree while undergoing the hard work of construction worker. But his second important step was when he was enrolled by the neuroscientist Prof. Giuseppe Colombo, Faculty of Medicine, University of Perugia, who introduced in his laboratory the young Luigi as an animal keeper, responsible for a colony of beetles, a task which also included the constant cleaning of their "perfumed" faeces.

When Rita Levi Montalcini came to Colombo's lab for giving one of her magnificent conferences, Colombo boasted of having a genial beetles' keeper who, despite his scientific illiterateness, invented and executed a variety of very clever experiments. Impressed from such a strange story, Rita immediately proposed to Luigi to follow her in her US lab, at one of the most prestigious neuroscience American temples, the Washington University in St. Louis, Missouri. There, Luigi's skills, motivation and innumerable scientific results made the rest. Neuroscience discoveries accumulated. A new, important scientists was born and his exceptional curriculum of publications achievement and prizes today well testifies of his uniqueness. By the way, rumours arise that Luigi Aloe's biography soon could become a television fiction.

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