Andrea Lavazza (Ed.)

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When we consider the vast territory of contemporary *neuro*-disciplines, "neuroethics" looks like one of the most challenging and rapidly progressing: this might be due both to its countless connections with such traditional domains as ethics and metaethics and, on the other side, to its meaningful consequences for scientific research and practical decision.

Though interdisciplinary in nature, as the editor says, when we deal with neuroethics we need to set up a basic distinction between "the neuroscience of ethics" (i.e.: "the area of study dealing with the way in which ethics is rooted in the brain"), and "the ethics of neuroscience" which "regards the reflection on the controversial applications of neuroscience itself" (p. 9).

The volume contains two main collections of papers: the first one presenting some contributions focusing on theoretical studies and discussions, and the second which gathers various contributions focusing on experimental research and empirical studies.

Interestingly, in his essay "Neuroethics: A New Framework – From Bioethics to Anthropology", Andrea Lavazza suggests a particular approach to neuroethics, stating that "it is the *strong* naturalization of the human being that calls for a *discipline* resorting to different existing forms of knowledge, trying to integrate them" (p. 12). This emphasis put on the "naturalization of the human being" seems to be truly relevant for at least two different reasons: *i*) the opportunity to reach a deeper understanding of ethical phenomena, putting them into relation with their biological and cerebral roots; *ii*) the necessity to collect relevant empirical data, in order to support the new emerging perspectives.

As regards the first point, in "The Contribution of Blindsight to the Understanding of Consciousness" Ienca highlights the fact that neural research concerning the origins and functioning of consciousness in human beings (and animals) sheds new light into the current debate concerning the several and complex relations between consciousness, responsibility, choice and the

## MICHELE BORRI

possibility of ethics. Mecacci and Haselager's "Dualism and Materialism in the Era of Neurotechnology", in its turn, suggests that much needs to be done if we want to overcome the traditional dualistic metaphysics that poses a strict separation between mind and body, thinking of them as two distinct and dissimilar "substances". In his contribution "Neuroethics of Cognitive Artifacts", Fasoli focuses on the influences that digital technologies might have on our mind and behavior, though very often it's not easy to evaluate if the changes brought about by such technologies are to be considered positive or negative for our cognitive habits.

When we pass to consider the second point, the contributions presented in the second section of the volume aim to give evidence and explore new fields of research, in order to link together different perspectives of inquiry and, possibly, to expand the boundaries of neuroethics.

Plebe's "Moral Computation" acknowledges the fact that, in the last few decades, the studies about human morality have manifested a clear bent towards an "empirical turn", stating that a neurocomputational approach could enhance our overall understanding of morals. The other contributions included in the second part, take into consideration various aspects and implications of neuroethics, starting from an empirical approach: possible alterations in moral conflictual decisions following from deep brain stimulation (Fumagalli and Priori); the relationship between consciousness and responsibility in the case of REM sleep behavior disorder (Cerri); the ethical implications of a neuropsychological study about near-death-experience memories (Kleinbub and Zidarich).

One of the most stimulating problems discussed in the book refers to the concept of *autonomy* as a fundamental feature of moral decision and action. The case history proposed in Lavazza's study investigates the special circumstance of Oscar: a Swedish man who was an activist of the vegan movement before getting Alzheimer's desease and being admitted to a care home for severe dementia; one day, accidentally, Oscar was given a portion of meatballs in tomato sauce and he liked them very much. From that day on, he refused to eat vegetables and, therefore, the ethics committee decided to abide by his non-vegan "choice".

The questions following from this case could be quite a lot: did Oscar make a real "choice"? Did he have the ability to weigh up and evaluate his course of action? Was he aware of the rules that he wanted to follow? How serious was his loss of autonomy? And, furthermore, in such a case, who has the authority to make the final decision: the ethics committee, the medical staff, the family, Oscar himself ?

Following Lavazza's perspective: "Giving him meat, then, wasn't prob-

ably the best way to respect him as a person who, before being ill, expressed specific choices with regard to his moral conduct. Of course there is much to discuss about this. The contribution of neuroethics, which can help us make decisions based on facts and convincing reasons, is to clarify the overall framework as exhaustively as possible, 'updating' classical moral reasoning in the light of new knowledge" (p. 24). As an example, speaking of "classical moral reasoning", I presume it would be really interesting to bring into comparison these new perspectives with the aristotelian concept of *phronesis* (practical wisdom), designating the ability to apply general ethical principles to real (and often unforeseen) situations; in fact, as Bernard Williams summoned in his famous book about *Ethics and the Limits of Philosophy*, ethical theories cannot substantiate universal moral choices, because they are deeply rooted in history, in different social realities, in personal experiences, in different characters and circumstances.

Another relevant issue, concerning a very important philosophical debate, regards some possible connections between neuroethics and Kant's philosophy (and anthropology). Following what Lavazza says: "Looking at some passages by Kant turns out to be very helpful to understand the centrality of neuroethics to the scientific and philosophical contemporary landscape" (p. 25).

As a matter of fact, one of the main axioms of Kant's ethics is that without *free will* there is no moral action: "Autonomy of the will is the sole principle of all moral laws and of the duties conforming to them" (Theorem IV of the *Critique of Practical Reason*). The supreme authority that Kant, in his time, ascribed to the "autonomy of the will" was due to at least two preeminent reasons: in the first place, he wished to assert categorically the difference between "laws of nature" (regulating what happens in the physical world) and "laws of freedom" (establishing the foundation of true moral action); in the second place, he felt the necessity to distance himself from the *moral sense theories* (laying the foundations of morality on emotions, sentiment and experience), because – from Kant's point of view – the only reliable bases for morality could be found in pure reason (*moral rationalism*).

In view of the recent results of neurosciences and neuroethics, however, such a drastic division between reason and emotions appears to be no more defensible. To cite just an example, this is what Antonio Damasio writes in this respect: "The role of emotions, feelings and intuitions is likely to be primary, with intuitions engaged first and reasoning following shortly thereafter. It is important, however, to avoid drawing an opposition between emotion and reasoning, and equally important not to oppose emotion to cognition. Emotions deliver ample cognitive information via feelings" (*The Neurobiological Grounding of Human Values*, 2005).

MICHELE BORRI

In conclusion, I wonder if Hume's theory about morality would be more suitable than Kant's, in order to support and develop a better understanding of "the new image of the human being as it emerges from neuroscientific knowledge" (p. 28).

> Michele Borri <u>borrimic@iol.it</u> Università di Milano Bicocca

R4