

INTRODUCTION TO THE SPECIAL ISSUE IN NEUROETHICS

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Neuroethics is a field that studies the implications of modern neuroscience for human self-understanding, ethics, and policy. Although neuroethics is, by its very nature, interdisciplinary, it includes issues that naturally lend themselves to broader philosophical analysis. As soon as we reject any general ban on altering or digging into the human mind, as we believe is increasingly the case today, it becomes important to think about the values to be used in deciding for or against any proposed intervention, as well as about the metaphysical and epistemological assumptions on the basis of which such decisions are made. Having this perspective in mind, what we wanted to do in this special issue was to find the most pertinent questions of neuroethics from the viewpoint of philosophy and to challenge philosophers to address these questions.

The authors of this issue represent a selection of contributors who accepted our challenge. They are well-known scholars from Finland, Germany, the Netherlands, the United Kingdom, and the United States and have worked with the philosophical questions of neuroethics for a number of years. The aim in all of the papers is to tease out certain underlying questions of value and metaphysics common to neuroethical debates. The analyses offered in this special issue provide an overview of the major debates in the philosophy of neuroethics and an examination of the view that neuroethical issues are both theoretical and evaluative in a way that is context-dependent.

The first three papers of this collection deal with the limits of the moral and philosophical implications of neurosciences. The questions addressed here include the relevance of moral physiology to normative ethics and the implications of neuroscience to philosophical discussions on free will and moral responsibility. Another philosophically important aspect raised by neuroscience concerns the elusive notions of personality and personal identity. Two of the articles focus on

these issues. And of the last two articles, one discusses the question of the alleged unnaturalness of certain neuroscientific interventions and the other the question of mental privacy.

This special issue opens with a paper by Stephan Schleim and Felix Schirrmann on moral physiology. In the article, they provide a detailed overview of the empirical, methodological, and theoretical aspects of functional magnetic resonance imaging (fMRI) that are relevant when the possible normative implications of the results of fMRI studies are assessed. The authors argue that these aspects and the many related uncertainties are too often dismissed when the implications of fMRI are discussed. While it is possible that fMRI might yield some normatively significant findings, Schleim and Schirrmann show how these only become relevant in a predetermined philosophical context. It is the philosophical assumptions that give meaning to the findings; the findings do not, in and by themselves, yield normative implications.

In his contribution, Gardar Árnason studies the common claim that neuroscience poses a challenge to the existence of the free will. According to Árnason, the challenge works on three levels – the metaphysical, the epistemological, and the empirical – and he considers them in turn. Both the metaphysical and epistemological challenges can be seen to be based on scientific assumptions and hence to be such that they can never be empirically fully verified. The most potent of the challenges lies, according to Árnason, on the empirical level. Neurological research seems to show that much of our decision-making happens on an unconscious level, and if this really were so, it could be seen to undermine the notion of free will and the idea that we are morally responsible for our actions. Árnason's answer to this challenge is twofold. On the one hand, it seems that the science behind many of these studies is not reliable; and on the other, he suggests that perhaps we should redefine the notion of consciousness to better correspond with the increasing understanding of it and its levels. The main lesson to take home from Árnason's paper is that the claims that neuroscience could prove free will to be an illusion are probably unfounded. Similarly to Schleim and Schirrmann, he does, however, believe that neuroscience might indeed affect our views on moral responsibility.

While Árnason's contribution deals with the limits to which neuroscience can challenge a philosophical tenet, i.e. something that cannot be empirically falsified, Simo Vehmas further discusses another theme hinted at in Schleim and Schirrmann's paper, namely that the social reality gives a context to the interpretation of various neurological findings. Vehmas studies the conditions of psychopathy, intellectual disability, and ADHD with special attention to moral responsibility. He maintains that, regarding these conditions, moral responsibility comes in degrees and is eventually determined on social grounds. In agreement with the previous authors, Vehmas accedes that neuroscientific findings often have moral implications, but rather than emphasising the philosophical background assumptions that are needed to give these meaning and context, he reminds us that we also

need to bear in mind the social and relational aspects of people's actions and selves to correctly interpret these findings.

The fourth paper by Tuija Takala and Tom Buller brings the questions of personality and personal identity to the centre of the analysis. It is often felt that the new possibilities of neurosurgery, neuroprosthetics, and neural grafting will lead to situations where we are forced to reconsider our notions of identity. As many types of interventions to the brain will, intentionally or as a side-effect, change the personal characteristics of the patient, the question raised is: will the patient still remain the same person? Takala and Buller survey various philosophical views on personality and personal identity and discuss these in relation to the future possibilities of repairing brains. In conclusion they maintain that while neural grafting and related technologies will indeed raise difficult questions concerning the identity of the patients, these questions are not, contrary to what is sometimes claimed, totally new. The point that Takala and Buller make is that these challenges are already with us, say, when we are talking about more conventional neurosurgery or many other medical and non-medical interventions that are changing the way we are, and are perceived by others to be, as persons.

One of the problematic questions concerning cases where identity actually changes as a result of a medical intervention (and for other reasons too) is what happens to moral responsibility and moral obligations. In his contribution, Søren Holm suggests an analogy from person-like entities – deemed to have a legal personality – to deal with the issues. The identities of firms change through insolvency, merger, and acquisition; and such changes also happen with states. With examples from the law, Holm shows us that with these kinds of entities we have been able to solve the issues of responsibility, and suggests that perhaps a similar line of thinking could help us to deal with questions of moral (and other kind of) responsibility when it comes to actual persons whose identity has (been) changed.

With Helena Siipi's contribution, we move on to one of the most often used, and at the same time one of the most ambiguous, notions against any new technology, namely, unnaturalness. In this paper her specific interest lies in how this concept is used in debates concerning neuroenhancements. Siipi studies the concept of unnaturalness in its various forms and shows that while indeed neuroenhancements can be described as unnatural in many senses of the word, it does not follow that therefore there is something morally wrong with them. In fact, none of the interpretations offered to 'unnaturalness' gives sufficient support to the view that neuroenhancements are morally problematic because of their alleged unnaturalness.

The final article brings us back to brain imaging. In their contribution, Valteri Arstila and Franklin Scott study the threats that the possibilities of fMRI and other brain imaging techniques allegedly constitute to privacy. Their analysis shows that while there could be some potential risks to privacy, brain reading does not violate privacy in any way different from already established psychological methods to determine mental phenomena, such as whether someone suffers from color blind-

ness or is clinically depressed. That is to say, the results of brain reading are not morally exceptional and that the subjects do not need special protection. Arstila and Scott conclude that, while there clearly is a need for policies that specify when and how brain imaging can be used, these policies should be treated within a broader context of privacy issues in psychology rather than as a special case.

The seven articles of this special issue focus on the philosophical problems of neuroethics with considerable input from metaphysics, social philosophy, and philosophy of mind. Although neuroethics is, and should continue to be, a forum for interdisciplinary studies, it is our hope that by carefully exploring the various philosophical questions addressed in this issue, it can also begin to deliver philosophically mature responses. The time is right to integrate philosophical critiques into the debates and to form a more philosophically-informed neuroethics.