Differentiating Neuroethics From Neurophilosophy

A review of
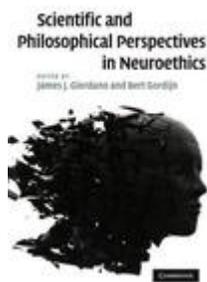
Scientific and Philosophical Perspectives in Neuroethics

by James J. Giordano and Bert Gordijn (Eds.)

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Neuroethics is about gaps: the gap between neuroscience and ethics, the one between science and philosophy, and, most of all, the "hard gap" between mind and brain. The hybrid term *neuroethics*, put into public circulation by the late William Safire (2002), attempts to address these lacunae through an emergent discipline that draws equally from neuroscience and philosophy. What, however, distinguishes neuroethics from its sister discipline—neurophilosophy?

Contrary to traditional "armchair" philosophy, neurophilosophers such as Paul and Patricia Churchland argue that philosophy needs to take account of empirical neuroscience data regarding the mind–brain relation. Similarly, neuropsychologists and neuroscientists should be amenable to philosophical insights and the conceptual rigor of the philosophical

method. Joshua Greene's neuroimaging studies of participants making moral decisions provide a good example of this symbiotic relation between neuroscience and philosophy (Greene, Sommerville, Nystrom, Darley, & Cohen, 2001).

A number of possible answers to the distinction between neuroethics and neurophilosophy emerge from *Scientific and Philosophical Perspectives in Neuroethics*, edited by James J. Giordano and Bert Gordijn. First, neuroethics emerges from the discipline of bioethics and, as such, specifically deals with ethical issues related to neuroscience. As Neil Levy says in his preface to the book, "Techniques and technologies stemming from the science of the mind raise . . . profound questions about what it means to be human, and pose greater challenges to moral thought" (p. xiv).

In this regard the applicability of neuroethics toward paving a road to a better understanding of human nature is much greater than that of neurophilosophy. Moreover, philosophers tend to look down on applied philosophy, including bioethics.

In addition to the useful introductory scientific descriptions and philosophical arguments that one might expect in a book of this kind, a number of chapters address the policy implications and challenges of the new sciences of the mind. In their chapter "Neurotechnology as a Public Good," for example, Jeannotte, Schiller, Reeves, Derenzo, and McBride discuss the ethical, legal, and social implications of these technologies. Because the chapter contains philosophical analysis, scientific description, and policy overview, this book could appeal to a broad audience wishing to learn more about the emergent field of neuroethics.

For this same reason, however, it is unlikely that the entire book will appeal to wide readership. Those familiar with the philosophical concepts might struggle with the scientific descriptions and glaze over the policy analyses. Indeed, this shortcoming is the challenge of many interdisciplinary fields, attempting to provide breadth and depth at the same time.

Besides its practical relevance, neuroethics is discernible from neurophilosophy in dealing primarily with the relation between neuroscience and moral norms. As a number of authors in this volume point out, neuroethics deals with both the ethical reflection on neuroscience techniques and the implications of neuroscience for the conceptualization of moral reasoning (cf. Roskies, 2002). This latter concern differentiates neuroethics from bioethics and will likely become increasingly prominent in the future.

More difficult to delineate is the difference between a meta-ethical aspect of neuroethics and neurophilosophy. The difference between the two disciplines, suggested throughout this volume, is their different conceptions of how to engage the gap between brain and mind.

For example, eliminative materialism—an influential neurophilosophical approach spearheaded by the Churchlands—attempts to reduce common-sense beliefs and psychological concepts to their underlying neurophysiological substrates (Churchland & Churchland, 1998). In other words, the gap between mind and brain, the so-called *hard*

problem of consciousness, seems reducible through the combination of empirical neuroscience and philosophical reflection.

In reading the present volume, we wondered about the editorial choices made in constructing a book of this kind. Does one start with neuroscience or with philosophy? The editors wisely intersperse philosophy and neuroscience throughout the book in equal measure. Strikingly, however, multiple contributors consistently argue against eliminative materialism throughout the book.

As a case in point, Ellis argues against the facile explanation by correlation of mental phenomena and advocates dealing directly with the hard problem of consciousness; Birnbacher advocates for the limits of natural philosophy in making sense of mental events; Costa distinguishes between the self's enabling conditions and the self, which is not an essential substance that can be objectified and manipulated; Autiero and Galvagni propose that neuroethics discussions include existential dimensions; Giordano shifts the attention from the *why* of the neurobiology of pain to discussing *how* to care for those suffering from pain for individual and social good; and Fitzgerald and Wurzman argue against the reductionist position that conflates brain and mind as ontologically identical. Finally, Gini and Giordano "opine that neuroethics entails a human ecology that reflects the interaction of embodied brain-minds that are embedded within sociotemporal environments" (p. 345).

This last statement is probably revealing of the editorial tenor of this volume. While such an antireductionistic stance is clear, it is tacit rather than explicit. The editors claim to merely provide "information about important developments in neuroscience and neurotechnology, and address[es] the philosophical, ethical, and social questions, issues, and problems that such advancements generate" (p. xxviii), without explicitly advocating a particular philosophical perspective.

Indeed, the word *perspectives* in the title of the book suggests a spectrum of approaches to neuroscience issues and philosophical approaches. After all, Patricia Churchland contributes one chapter on the cognitive neurobiology of moral virtues, suggesting that the gap between neuroethics and neurophilosophy in this volume is not as significant as this review implies. Many authors of this volume, however, deal with the tension of acknowledging the importance of the brain for the mind without falling into the temptation of reductionism (cf. Kirmayer & Gold, in press).

The task for neuroethics, so well captured in this volume, is how to bridge the gap between mind and brain while acknowledging that this chasm cannot, and perhaps should not, be filled. It would be interesting to trace how future contributions to neuroethics define the emergent discipline in relation to this fundamental scientific and philosophical issue.

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