Section Introduction: Focus, Theories, and Methodologies in Neuroethics

6

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Abstract

In this introduction to the section on the focus, theories, and methodologies in neuroethics, we present part of the ongoing debate surrounding the disciplinary status of neuroethics (e.g., is it a field, is it a discipline), which reflect varied expectations about the ability or even the requirement for neuroethics to offer new approaches to academic inquiry. Accordingly, the following four chapters offer different perspectives on these theoretical and methodological issues.

Academic disciplines are usually defined by a focus and a set of theories and methodologies. For example, in the late nineteenth century, Durkheim defined the object of sociology as the study of social facts, global properties of institutions, and societies (and not the psychology of individuals) (Durkeim 1894). This galvanized the development of sociological theories and methods and, eventually, led to faculty positions and departments in sociology that sustained this new emerging discipline. Psychology is also a field marked by early tensions between distinct traditions of scholarship that defined the object and methods of psychology in sometimes strongly opposing ways. Indeed, between Wundt's psychophysical and

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experimental approach, and the introspective tradition that includes psychoanalysis, there are huge epistemological ruptures. The disciplines of sociology and psychology are now well established, even if debates about their focus, theories, and methodologies persist. These debates are often considered signs of their vitality. In contrast, neuroethics is a long way from becoming an established discipline. Indeed, such disciplinary aspirations might not even be appropriate, since the traditional model of the academic discipline may not align well with the scholarly and practical goals of neuroethics. For the sake of comparison, even after almost five decades of active scholarship, bioethics is not yet considered a discipline from both scholarly and institutional standpoints.

However, some scholars, in particular those who are more optimistic about the potential contribution of the neuroscience of ethics, suggest that the theoretical insights generated by neuroscience, as well as the behavioral and brain sciences more broadly, could form a new foundation for ethics, perhaps even establishing a new discipline (Changeux 1996; Gazzaniga 2005). Adopting a more cautious interpretation, others have suggested that the neuroscience of ethics can at least make an important contribution to how we understand moral thinking and moral behavior, but that this contribution has to be folded into a much broader set of studies in empirical ethics (Racine 2005; Churchland 2002). Still others argue that much of the neuroscience of ethics should remain the province of social psychology or of neuroscience itself (Farah and Wolpe 2004). However, this latter position neglects the potential enrichment that neuroscience could bring to ethics (Racine et al. 2017). Finally, there also exist questions about whether there is room within neuroethics for dissenting opinions about the value of the neuroscience of ethics at all—especially given external critiques (e.g., from critical neuroscience (Choudhury and Slaby 2012)). Only the future can tell whether the knowledge generated by neuroscience will have transformative effects on ethics and society to the point of establishing a discipline. But the future is notoriously hard to predict, notably in this case regarding whether the gaps between the humanities and social sciences, and the biological sciences, will give way to evermore creative and engaging scholarship that helps establish, in the words of Potter—one of the founders of bioethics—"bridges to the future" (Potter 1970, 1971).

In this spirit, the second section of the book surveys different theories and methodologies deployed in neuroethics, while critical contributions assess theoretical blind spots and the methodological standards relied on thus far. Chapter 7, *Theoretical Framing of Neuroethics: The Need for a Conceptual Approach,* is presented by Arleen Salles and Michele Farisco of the Centre for Research Ethics & Bioethics at Uppsala University, under the leadership of the philosopher and head of the Ethics and Society Subproject of the Human Brain Project, Kathinka Evers. They provide an overview of dominant theoretical perspectives in neuroethics, before arguing in favor of a model based on informed materialism, which they claim

could provide a novel theoretical foundation for neuroethics. In Chap. 8, *Neuroethics: A Renewed View of Morality? Intentions and the Moral Point of View,* Bernard Baertschi, a long-time professor of philosophy at the University of Geneva and a neuroethics pioneer in the French-speaking world, explores the neuroscience of intentional actions and rejects interpretations of neuroscience evidence that call for radical shifts in the attribution of responsibility. In Chap. 9, *Is it Time to Abandon the Strong Interpretation of the Dual Process Model in Neuroethics?*, Veljko Dubljević, an emerging force in neuroethics located at North Carolina State University, rejects the dual process theory of moral judgment given mounting scientific evidence undermining this foundational neuroethics theory. Finally, in Chap. 10, *Neuroethics and Policy at the National Security Interface: A Test Case for Neuroethics Theory and Methodology*, Nicholas Evans, an expert in the ethics of dual-use research, and reputed American bioethicist Jonathan Moreno explore the significant issues that neuroscience raises with respect to armed conflict and national security. They draw conclusions about the methodological development needed to allow neuroethics to address broader social issues, such as the military application of neurotechnologies. The four chapters in this second section hint at the numerous theoretical and methodological questions to be addressed in future neuroethics scholarship.

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