Review of *Moral Brains: The Neuroscience of Morality*

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**Biography**
James William Lincoln is a PhD candidate in Philosophy at the University of Kentucky. His primary research project, broadly speaking, focuses on moral perception and its role in making reliable moral judgments. Presently, his research uses a comparative philosophical approach in an effort to articulate a theory which accounts for an agent’s ability to see salient moral properties in everyday life. He argues that our perceptual faculties are, at least in the moral domain, cognitively penetrable by our beliefs and attitudes. This means that moral features or properties of the world are perceivable and that one must possess the appropriate moral beliefs and affective/emotional attitudes regarding the contents of morality if that perceptual experience is to be trusted as justification for an accurate moral judgment of any present situation. His work utilizes Feminist Affect Theory, Marcusean Social Theory, Buddhist Moral Psychology, the Philosophy of Perception, and Moral Neuroscience to unpack this topic because he believes that each of these domains offers conceptual tools from which to understand the moral subject as a member of the larger social environment and as an integrated cognitive system.

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**Abstract**
S. Matthew Liao’s recent publication of *Moral Brains: The Neuroscience of Morality* represents a valuable contribution to the field of moral neuroscience. In this review, I provide a brief summary of Liao’s collected anthology of essays by philosophers and scientists that explore the intersection of neuroscience and ethical theory. I claim that this text is an excellent resource for philosophers and scientists alike and briefly argue for a cautious engagement with its contents because of empirical limitations commonly associated with philosophical investigations into refining the object of study.

**Keywords**
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**Review of**

**Review**
By creating a collaborative space for neuroscience and ethical theory, the field of moral neuroscience seems poised to provide invaluable insights into our moral lives. *Moral Brains: The Neuroscience of Morality* is an accessible and instructive contribution to this field. In its editor’s own words, this collection “is the first to take stock of fifteen years of research” (Liao 2016, 33). Its arrival onto the scene as the “first” to do this is, however, less important in my assessment than what the volume attempts to accomplish and its addition of thirteen original works to field. As editor, S. Matthew Liao seems intent on providing a guide from which to introduce the uninitiated to almost two decades of work regarding the intersection of neuroscience and ethics. Something that, prior to this volume’s publication, has been virtually impossible to find.

Moreover, this collection appears to be a genuine attempt to foster a collaborative conversation between the neuroscientific and philosophical communities. Unfortunately, professional philosophy has a recent history of resistance to the inclusion of empirical data into its methodology. However, this volume represents a substantial effort among scientists and philosophers to survey moral neuroscience’s major issues. Moreover, it
does this while maintaining a willingness to engage questions regarding the value or admissibility of neuroscience findings to ethical theory. Julia Driver, Jesse Prinz, James Woodward, Joshua Greene, S. Matthew Liao, and many of the other contributors represented in this collection have been vanguards for this kind of interdisciplinary scholarship. This volume is an effective invitation into a field which asks us to acknowledge that ethical theory should be sensitive (while not necessarily assenting) to theories about cognitive mental structures. As such, Liao’s collection attains part of its value from the fact that it successfully puts established and emerging scientists and philosophers into meaningful conversation with each other.

_Moral Brains_ gives its reader an introductory picture of the landscape one might encounter while exploring the larger body of scholarship in moral neuroscience. To that end, this volume is organized into four parts and includes an invaluable introduction by Liao. His introduction gives a helpful overview of the research responsible for inspiring the field by reviewing several landmark studies during the 1990s. It also briefly discusses the debate regarding the admissibility of neuroscience data to ethical theory while introducing the reader to the major topics explored throughout the rest of the volume. These topics include such things as motivational internalism, the role of emotions and reasoning in moral judgments, moral intuitions, and the intersection of neuroscience and normative ethics. Overall, Liao’s introduction accomplishes a difficult task. It provides the philosopher with access to the science, the neuroscientist with a general idea of the philosophy, and the completely uninitiated with tools to find footholds for further engaging the subject.

Part one, titled “Emotions vs. Reasons,” tackles the issue of sentimentalism and rationalism in moral decision-making. Prinz’s argument for a sentimentalist theory of moral judgment in “Sentimentalism and the Moral Brain” is appropriately followed by Kennett and Gerrans’s argument, in “The Rationalist Delusion?: A Post Hoc Investigation.” Prinz argues that psychological evidence supports a sentimentalist view of moral judgment even though uncertainty plagues the neuroscientific research on this point. Prinz’s view maintains that emotions, traditionally understood in the history of western philosophy as passions, are the driving force behind moral judgments (66–69). In contrast, Kennett and Gerrans respond to this kind of view by pointing out how deliberative reflection and reasoning over time is essential to making moral judgments (77). They, thereby, present a rationalist counterview in opposition to Prinz’s kind of sentimentalism. They argue, essentially, that moral deliberation’s relationship with reason and diachronic agency is more important than Prinz, or those that might hold similar views, would want to admit (83). The section concludes with Woodward’s piece on
emotion and cognition which argues that the very distinction between emotion and cognition in cases of moral judgment is a dubious dichotomy (88-89). Moreover, he observes that if this rigid delineation between emotion and cognition is problematic, then there exists a questionable assumption in both rationalist and sentimentalist positions (113).

Part two, titled “Deontology verses Consequentialism,” gives the reader a general sense of how moral neuroscience approaches issues regarding moral intuitions and their role in moral judgments. This section begins with a reprint of Greene’s 2014 article, “Beyond Point-and-Shoot Morality,” in which he observes that deontological forms of moral deliberation utilize emotional thereby making them automatic forms of judgment formation whereas consequentialist forms are shown to be more grounded in rational deliberation. Taking the neuroscience to support a dual-process view of judgment formation, wherein emotions and rationality simultaneously yet independently shape one’s judgments, Greene argues for a kind of epistemic caution in regards to deontological moral claims. He believes such judgments are unreliable because of their dependence on automatic rather than deliberative judgment formation processes (130–134). Julia Driver’s “The Limits of the Dual-Process View” responds to Greene’s claim by arguing that his concerns only seem to apply to a narrow set of intuitionist moral views and that more complicated theories of moral judgment avoid his critical gaze (157). Stephen Darwall, in “Getting Moral Wrongness into the Picture,” argues that there are forms of rule consequentialism that would be “characteristically deontological” in the sense that Greene is concerned. Darwall thereby suggests that the kind of recklessness associated with deontological judgments also seem to apply to consequentialist judgments as well (168). Thus, Darwall claims, there is no ground to privilege consequentialist over deontological judgments epistemically. The section concludes with a reply to Darwall and Driver by Greene. It is, however, unclear if Greene is successful in his response.

Part three, titled “New Methods in Moral Neuroscience,” turns the discussion towards issues of cognitive functioning and the selections within attempt to use neuroscientific observations to argue for the presence of moral predispositions in our neurological structures. Blair, Hwang, White, and Meffert observe that emotion-learning systems contribute to full moral development by shaping norm expectations and that, from a neurological perspective, there are four kinds of norms associated with this growth. These include disgust-based, harm-based, and justice-based norms as well as norms prescribed by social convention (195). Oliveira-Souza, Zahn, and Moll attempt to flush out the neurological foundations of moral cognition by applying a lesion study to brain-damaged patients using neuroimaging techniques (203). Crockett uses serotonin studies
to explore its impact on moral judgment and behavior. She argues that moral judgment decisions are closely related to one’s neuromodulator levels and stress even in cases where serotonin’s presence had no detectable impact on the subject’s mood (239). Borg examines the nature of unjustified violence and suggests that rodent models of negative Intersubjectivity have the potential to effectively develop treatments for clinically violent patients (267). Ultimately, the hope here, as I understand it, is that such research would help us understand, in a more robust sense, our mental relationship to morally relevant actions.

The final section, titled “Philosophical Lessons,” explores the implications of moral neuroscience on normative ethical claims. Kahane’s contribution argues for three main things. First, that “there are multiple ways to validly draw potentially interesting normative conclusions from empirical premises” (301). Second, “that findings about the internal structure of our moral psychology, or about its underlying neurobiology, will have only a limited role to play in such arguments” (301). And lastly, that if we want neuroscience to contribute to ethical theory, then we cannot let these fields operate independently of the other on these issues (301). He also claims that we might need to rethink our approach to empirical research as a consequence of the observations mentioned above. Liao’s contribution to this section argues that intuitions are not heuristics and that one consequence of this insight is that Greene’s view that deontological intuitions tend to be inaccurate because of their automatic (i.e., heuristic) nature is unsupported (328). The section concludes with a piece by Sinnott-Armstrong which argues that morality is not unified. It observes of “judgments that are intended to be about morality … [that they are] are not unified by any single common and distinctive feature that enables important generalizations about distinctive properties of those judgments” (335). He goes on to suggest that “scientists should isolate smaller classes of judgments” by content and context, rather than employing a top-down method, which begins by making the distinction between moral and non-moral judgments. I take Sinnott-Armstrong to be suggesting that an alternative methodology, which he calls bottom-up, shifts us towards taxonomic rigor by accepting that we cannot “study morality all at once” (350).

In general, I believe this collection is a valuable contribution to the field of moral neuroscience because it gives its reader access to a new perspective on three important questions in ethical theory, questions Liao discusses in his introduction. These include “How do moral judgments differ from non-moral judgments?”, “Are moral judgments based on or driven by reasons or emotions?”, and “To what extent can moral judgments be reliable?”. The importance of these questions, I hope, is clear from what I have written.
thus far, but we might also observe that neuroscience and ethical theory still operate independently of each other in both their methodology and pre-theoretical assumptions. The history of western philosophy since Descartes is one in which a belief in the rational subject has become a kind of ideology. This ideological predisposition to conceive of the subject as a rational being often manifests in the presumption that our rational and emotional systems are distinctly isolated or that our emotive existence consistently corrupts our capacities to make moral judgments. Additionally, the theoretical preference for reason over emotion motivates a social convention in many domains of professional philosophy to acknowledge that the moral agent is capable of compartmentalizing or unifying moral judgment under the faculty of reason. Moreover, the neuroscientific community can, from its first step into the metaphorical lab, carry pre-theoretical beliefs about morality or moral judgments which simultaneously limit the scope of the salient questions and the methods for their investigation. Sinnott-Armstrong’s piece hints at this observation, and it is refreshing to see similar claims from some of the volume’s other contributors who advocate for a reimagining of the scientific approach to studying the moral features of the brain and the philosophical approach to the moral agent.

To conclude, the strengths of this volume are numerous. It is designed for an academic audience while being accessible to the non-academic hobbyist with minimal difficulty. For those looking to take the first step into moral neuroscience scholarship, you would be hard-pressed to find something as valuable as this collection. However, there are some limitations to the volume that the potential reader should be aware. First, it is limited in its scope in virtue of its status as an anthological collection of essays. The reader will need to spend time investigating the studies mentioned by Liao during the introduction to grasp the full history of the field because such additions would seemingly have been cumbersome to include in this kind of text. Second, one needs to be aware that debates on things like motivational internalism or cases of psychopathy involve numerous disputes about language. Debates in motivational internalism vs. externalism, for example, often result in interlocutors talking past each other or holding different criterion for saying that an agent possesses a moral belief. Philosophy’s engagement with psychopathy cases also seems to center on what it means when we say so-and-so understands moral reasons. In these instances, the philosophy attempts to refine its sense of the object of study rather than its understanding of the object under study, and empirical projects are better suited to the latter kind of efforts. In these cases, what it means to have a moral belief, what it means to make a judgment, and so on are somewhat isolated from any aid by empirical science.
Overall, one should engage this text cautiously aware of these limitations. Until such time that philosophers and scientists have a richer collaborative history which includes, not just the investigations of ethical questions, but the construction of those questions, it is best to keep an eye on the distinction between investigations into refining the object of study and empirical research into the targeted object under study. What Liao has provided in the publication of this volume is a start to that history and a model for furthering an invaluable interdisciplinary relationship between cognitive science and philosophy’s investigation of ethical theory.