

The Oxford Handbook of Neuroethics

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The Oxford Handbook of Neuroethics is an impressive list of contributions (53, for a grand total, index excluded, of more than 900 pages) spanning the medical and cognitive sciences, ethics and philosophy, and the law. All chapters are more or less related, in the editors' intention, to the emerging (or emerged) field of neuroethics.

"Neuroethics" is usually thought to have at least two meanings: first, the ethics of neuroscience and neuroscientific techniques – to what extent experiments with the brain are acceptable; second, the neuroscience of ethics – what scientific discoveries about our brain tell us on the mechanisms involved in moral deliberations and on moral deliberation itself. The editors, however, add several other kinds of contributions, thus stretching the field's boundaries.

The Handbook is organized in seven parts plus an epilogue.

In part I (*Consciousness and Intention*), the various contributors investigate the neural correlates of those epiphenomena usually identified as decision-making processes and mental states (among others: intention, pleasure and happiness in § 2, and deception in § 6). Sutherland and Churchland (§ 3) give an account of what they take to be the "neurological basis of morality": after surveying the state-of-the-art of moral psychology and neuroeconomics, they settle on Churchland's well-known thesis (Churchland 2011): affect and reward, the central tenets of morality, need not "conscious reasoning" (53) but quite on the contrary they depend on neuropeptides (oxytocin and vasopressin) that would "explain the expanding sphere of caring and valuation characteristic of much of morality (34)."

In part II (*Responsibility and Determinism*), the contributors analyze different kinds of determinism (brain, genetic, tout court – in § 9), the neuroscientific basis of addiction and its ethical consequences (§§ 11-12), the rise of neuroessentialism ("we are our brains", Reiner, § 10) and the standard topic of the neuroscience of ethics: a scientific investigation

of free will, with Libet's experiments, some criticism and some final remarks, among which it is proposed a different conception of responsibility not based on free will but one that "pass[es] a normative judgment on the practices, values and reinforcement history that lead to the action. On this view, [...] society disapproves of the rules they (= the guilty) have learned for governing the action (Haggard, p. 224)."

In part III (*Mind and Body*), the focus is mostly on cognitive enhancement, both from a physiological and ethical point of view: what is it, is it unfair (unjust, discriminatory) or morally obligatory for some? Neil Levy's contribution (§ 18, *Neuroethics and the Extended Mind*) recasts the thesis of (Levy 2007): cognitive enhancement is peculiar (and morally problematic with respect to other kinds of betterment such as education) only inasmuch as the mind is confined to the skull. But since (he argues) the mind is extended, there is no real difference, in nature, between "cognitive" enhancement and other enhancements. Levy hastens to add that by no means his thesis implies a "laissez-faire"; quite on the contrary cognitive enhancement should be carefully assessed with regard to its effects and not to its location – just as other kinds of intervention, physical or otherwise, should be judged. This leads him to formulate the "Ethical Parity Principle: whether a particular means of altering cognition directly targets the brain/Central Nervous System or the external scaffolding shouldn't make a difference to the assessment of its permissibility or advisability. [...] what matters is the result (Levy: 293)".

In part IV (*Neurotechnology*), the contributors assess the ethical import of neuroscientific techniques such as pediatric neuroimaging, functional neurosurgery and deep-brain stimulation. Take brain stimulation: it can be used non-invasively as a therapeutic and investigative tool (but to what extent? – § 25) or as compulsory treatment for neuropsychiatric disorders (how far should one go? – § 26).

In part V (*Aging and Dementia*), the focus is on neuroscientific techniques used to foresee, prevent and treat generative or aging diseases (such as Alzheimer's or Parkinson's disease – §§ 29-30, 32-3) and their moral permissibility and consequences (§§ 31, 34-6).

In part VI (*Law and Public Policy*), the focus is on the impact of neuroscience on society, the current or foreseeable use of neuroscientific techniques in courts, the problem of incidental findings during neuroscientific studies, and the relationship between neuroscience and national security.

Among others, Greene and Cohen's reprint of their influential paper (Greene and Cohen 2004): *For the Law, Neuroscience Changes Nothing*

and Everything (§ 39) should be of wide philosophical interest, albeit its scope is limited to the law.

Neuroscience would change nothing, they argue (following Morse 2004), because it is on a different level: the law is interested in human rationality, whereas neuroscience is concerned with basic, neural processes – although they are obviously related, none is reducible to the other in straightforward way. For starters, they split up the field of punishment justification neatly in two: consequentialism and retributivism. Then, they reject retributivism on the basis that any tenable retributivist (or non-consequentialist) notion of responsibility requires free will, and since free will is questionable, then retributivism must be abandoned. Yet, they do not seriously consider the so-called “semi-compatibilism”: (non-consequentialist) responsibility without free will. Neuroscience would seriously weaken people’s strong feeling of free will, and therefore – according to Greene and Cohen – their retributivist intuitions, thus giving the law a strong reason to change completely its rationale. This change in underlying moral intuitions should lead the law towards a consequentialist conception of responsibility and punishment.

Part VII (Science, *Society and International Perspectives*) is a sort of a mixed bag, with contributions ranging from the relationship between neuroscience and the media to ethical aspects of education, from the “globalization” of neuroethics to drug trials in developing countries.

In the epilogue (*Neuroethics and the Lure of Technology*), Fins engages in a sort of “meta-neuroethics”. His most intriguing thesis is that “neuroethics is essentially an ethics of technology” (895). Technology is what distinguishes neuroethics from medical ethics, to name one. After some brief historical remarks, Fins goes on to evaluate the “promise and the peril” of technology, that might tear apart the discipline of neuroethics itself: on one hand, the unreasonable hope of an immediate brighter future (“the promise”); on the other hand an equally unlikely danger of catastrophic scenarios (“the peril”) that would lead to an alleged “technofobia”. In the end, he advocates for a general caution about the state of our current knowledge: “although we have progressed, we need to avoid hubris and remain humble about our mastery of neuroscience and the ability to predict the interplay of technology and society” (903).

In conclusion, this collection is simply the most comprehensive on the market: be it for philosophers who want to explore the “med” side of neuroethics or for practitioners who want to have a hint to the ethical shade of their everyday practice. The best part is the technical one, wide in scope and heterogeneous in content. Unfortunately it would need a

thorough update in few years' time. Philosophical contributions are informing but not completely satisfying: sustained and thoughtful discussion, careful argumentation and ingenious insights are hard to find.

References

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