

## ***Guest Editor's Preface: Morality and the Telescope***

Roberto Mordacci

Facoltà di filosofia

Università Vita-Salute San Raffaele, Milano

mordacci.roberto@univr.it

Neuroethics is a flourishing discipline. It is growing up in this first decade of the XXIth century even faster than bioethics was growing in the early Seventies of the past century, with thousands of research articles, hundreds of books, dozens of journals and a lot of people involved all over the world. There is reason to rejoice in this. And at the same time, to raise questions about the real scope of this kind of enterprise and its contribution both to ethics and the neurosciences, as well as about its impact on the self-understanding of people in an age in which looking at what's going on in our brains has become somewhat less than a metaphor.

This is exactly the point which I would like to start with, as a roughly general introduction to this issue of *E&P*. Neuroethics largely derives from the availability of functional Magnetic Resonance Imaging (fMRI) since the early Nineties: a technique that enables a trained experimenter (though the images of brains with highlighted areas in different colours indeed have an impact on everyone) to see the metabolic activation of cortical areas *during* the performance of a cognitive or a decisional task in human subjects *in vivo*, without even raising unanswerable objections from the Ethics Committee. The idea of using this tool in order to see what happens in the brain when hard choices face us could not wait for long. And this is almost a revolution.

This move, I want to suggest, is for ethics today what the idea of pointing the telescope towards the sky was for astronomy in the XVIIth century. The analogy has three steps. First of all, the telescope and fMRI are alike in that they both allow to see directly what so far we only could speculate about: that there are some satellites around Jupiter, or (for example) that emotion and reasoning are *both* involved, and in complex ways that we are now beginning to see more in detail, in the taking of moral decisions. It does make some difference to theorize about the movements of the moon and to see them. And it makes some difference to see that some areas of the brain, usually associated with emotions and reasoning of a certain kind, are active in moral reasoning rather than *assuming* that they do.

But the analogy can go a step farther: Galileo would not have been able to understand what he was seeing had he not placed himself in the perspective offered by the Copernican revolution. Looking for the phases of Mercury was imaginable only in the context of a cosmological theory in which all the planets in the solar system should revolve around the sun (and not vice-versa): indeed, this was exactly the prove which was expected to refute the rival Ptolemaic theory, even though other geocentric models which included the possibility of the phases of Mercury (such as that of Tycho Brahe, accepted by the Jesuits at least up to the first half of the XVII century) could offer some resistance. Yet, in the end, the evidence in favour of the Copernican model was so heavy that the geocentric models had to be abandoned. And here is the analogy: in a sense, something similar to a Copernican revolution has been available in moral philosophy since the beginning of Modernity. The idea of looking for the focus of morality *inside* the human subject rather than *outside*, in the cosmic order of nature, was the great move that, in different manners, authors like Descartes, Montaigne, Hobbes, Spinoza, Hutcheson and many others imposed forcefully over a great

part of research in moral philosophy (although naturalism obviously survived in different forms, many of which were deeply influenced by the «subject-centered» move – think about Hume’s theory). And the Kantian revolution, which he himself dubbed a “Copernican revolution”, is not only the idea of posing the *cognitive* subject and his powers at the centre of the philosophical investigation, but also (and I would suggest, mainly) the idea of looking for the *normative source* of morality within the active powers of practical reason, thereby vindicating the constitutive role of the subject in the construction of morality and giving a foundational role to the notion of autonomy, rather than thinking of the moral realm as an outer order to which the agent is obliged to conform.

Now, the neuroethics revolution is something similar to having a new tool to peer into what really happens in what Modernity has discovered as the basis of morality: the subject. So, in a sense, we are today in a particularly favourable position to appreciate the benefit of having a peculiar kind of telescope, i.e. fMRI, in order to look into the subject and obtain some data that can confirm or deny some of our hypotheses concerning moral psychology and its connections with moral theory.

So far, so good, then. But can we really say that we have a scientific revolution in moral theory thanks to neuroimaging? Not yet. The analogy is not complete: a third step would be needed to say that we are exactly in the same situation. In order to have a scientific revolution, we need something like a *unified theory*, encompassing all the aspects that the new discoveries bring forth and offering a general principle connecting at least the most of them in a coherent frame. Well, such a theory was not available to Galilei, but it was elaborated after some time, when Newton proposed his theory of universal gravitation: a coherent set of natural laws, unified by a single principle, which accounted for both bodies on Earth and celestial bodies, giving a unified picture of their movements and reciprocal influences in the context of the heliocentric conception<sup>1</sup>. This theory constituted the real first step into a scientific account of celestial movements, offering the basis for both knowledge in this field and for technical developments which literally reached the moon. Now, do we have anything like a unified theory of universal gravitation about the human mind? Or even: do we have a general theory of human nature? The answer is that we clearly do not. Not yet, maybe, but it is easy to foresee that it will be much harder to find such a theory than it was to find a theory of the sky. The mind-body problem, to take the most evident example, is in a condition of full blown dispute, with at least four families of theories (monisms, dualisms, property dualisms, functionalisms and so on) crossing swords on the battlefield. And as far as ethics is concerned, issues like the nature of free will, the search for the foundations of moral normativity (where various families of metaethical theories endlessly fight each other) are in the same situation, one which is far more pluralistic (and chaotic) than simply having a Copernican theory competing with a Ptolemaic one.

Thus, here is where the analogy stops, at the third step: modern science has given us an incredible amount of reasonably reliable knowledge, a strong basis for an infinite number of technical devices, and an impressive array of insights into the structure of the world. And also, it has given a lot of problems. Most importantly, it has not even given any *definitive* answer to the most philosophical of our problems. We know that this was not to be expected in the first place, but philosophical illusion is something which even science is not immune from. A century away from neo-positivism, this is quite clear about science: that

---

<sup>1</sup> As the historian of physics Niccolò Guicciardini pointed out to me, in fact Newton’s theory was not exactly heliocentric, since according to his theory the Sun is not at rest being acted upon by the other masses in the planetary system. Indeed, the reference frame that Newton used in order to study planetary motions is not centred on the Sun but rather on the centre of mass of the planetary system. And this is true, making his theory a further advancement event in comparison with the Copernican revolution.

the philosophical problems it raises are not all resolved using telescopes and probes. And yet, what modern science has been invaluablely good for is *excluding* from the field of recognized knowledge and action some of the most absurd ideas and practices (or at least *reducing* their impact).

So it is with ethics. The most philosophical problems of neuroethics do not *depend* on the new experiments with fMRI to be resolved. The issue of free will, the nature of moral normativity, the list of the most authoritative moral principles, to make a few examples: realistically, these problems are not waiting for a single crucial experiment or for a decisive set of fMRI scans. Long, hard philosophical work is needed here to clarify the questions, build up arguments, disprove them, compare frameworks of thought and refute theories. Most of the work needed here is what moral philosophy has always looked like. No real scientific revolution. And yet, a slight change might make a big difference: when our moral theories are built on a totally fantastic conception of human agency, when they suggest an image of our duties and responsibilities which is completely at odds with what can be shown to happen in the brains of normally responsible people, then something has gone awry and we have a reason to stop and to question the “humanity” of those theories, their practicability and sense in relation to our ethical life, to our “human nature”, if you wish. Some of these theories might fail the test of being based on a reasonable description of human deliberation and choice. The possibility of showing that our brain seems to work in a certain way when we make moral choices, assuming that the description is accurate enough, can be an argument (and a strong one) in order to rebut a theory which, to say the least, has been left aside as an evolutionary possibility from the biological history of humanity. We may not have a general theory of the moral brain or of human morality (something we will probably never have), but we may have some scientifically based reasons to reject theories which imply unrealistic conceptions of human morality. To look for these unsustainable theories would be, so to say, like being in a kind of Proustian *Search of Lost Theories*.

Today, the difference with the past, for example with the XVIIIth century dispute concerning human nature, good savages and the like, is that the experimental observation of brain activity is a little less controversial than the reports of travellers and tradesmen coming home from faraway places. Probably, this will not give us a theory of human morality or of human nature. But it may help to criticize the most implausible views about that (e.g.: theories of racial moral superiority, hyper-rationalistic or hyper-sentimentalistic moral theories, etc.). The rest is open for good theory construction, and it is quite clear that disagreement, especially between normative theories, will not disappear at all.

Luckily.