

Chapter 3

Personal Liability and Human Free Will in the Background of Emerging Neuroethical Issues: Some Remarks Arising from Recent Case Law up to 2013

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ABSTRACT

In this chapter, the authors analyse the issues connected to emerging neurotechnologies, in particular their effects on (legal) concepts like capacity, liability, testimony, and evidence, and also on fundamental constitutional rights and freedoms like the right to autonomy and the right not to be treated without consent (in the general framework of the principle of human dignity). Starting from preliminary remarks on the key concepts of neuroethics/technoethics, neurolaw/technolaw, the authors investigate how personal liability is changing in the framework of new scientific developments. The chapter underlines that neurolaw challenges some of the traditional legal institutions in the field of law (e.g., criminal law). From the point of view of ethics, the chapter concludes that neuroethics is not challenged by the data coming from the use of emerging neurotechnologies, but human self-perception is strongly affected by it.

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PRELIMINARY REMARKS: NEUROETHICS AND TECHNOETHICS AND NEUROLAW AND TECHNOLAW

The aim of this chapter is to analyse some of the issues connected to emerging neurotechnologies, considering in particular their effects on (legal) concepts like capacity, liability, testimony, and evidence.

Some preliminary clarifications should be made regarding the relationship between neuroethics and technoethics. Starting from concrete issues we can underline the “intersection” between the various “N-Ethics”: the growing attention to the ethical questions regarding both neuroscientific applications in general and all the emerging technologies in the field of biomedical research in particular, such as nanotechnologies, bionics, and neural interfaces, as well as innovative biomedical applications, such as biomechatronic prostheses, hybrid bionic systems, and bio-mechatronic components for sensory and motor augmentation.

All these “forms of technique,” in various ways connected with biomedical applications, are generating (and will increasingly generate) new ethical, legal and safety implications, such as human enhancement and human tele-operation but they also affect already known issues, such as surveillance, privacy, and dual-use.

Starting from these implications it is possible to find common ground uniting neuroscience, robotics, and different emerging technologies, and, at the same time, to define a uniform but pluralistic scenario of technoethics. Although there exist many differences between different technologies in terms of legal relevance, the main standard to be used could be the “enhancing standard”, concerning how these technologies can affect human functions (looking at every human “capability,” in the language of Sen and Nussbaum, from cognitive capabilities to the power to exert one’s own rights and freedoms). This standard allows us to put together technological developments like neuro-

robotics and bionics, neural interfaces, robotics for neurorehabilitation, assistive robotics, prosthetics, gerontechnologies, and generally neuroscience goals. Indeed, they not only affect ethical issues like the controversial philosophical concepts of identity, autonomy, and self-assessment, but actually bear on fundamental rights, simultaneously enhancing some of them and infringing on the true implementation of others. An important example is the right to privacy. Many robots are already endowed with the ability to perceive, store and use sensitive data related to human beings, such as biometric information, but also details concerning, for example, users’ consumer preferences, habits, or emotional states; at the same time, as we will see, the *vulnus* to privacy is raised as a potential peril deriving from the use of neurotechnologies (Farah, 2002; Wolpe *et al.*, 2005).

In this chapter we will not deal with the problem of regulating emerging technologies and designing a common framework of ethical and legal principles. Instead our point of view will be grounded on the political and social application of sciences and technologies providing society with new instruments to prevent crimes and to administer justice.

The “ethical intersection” is clear with particular reference to the relationship between neuroethics and technoethics, and, consequently, between neurolaw and technolaw. The inclusive vocation of technoethics could be quite plainly drawn from the application of the syllogism: “Humans are naturally technical (*homo technicus*); humans are naturally ethical; technology is naturally ethical.” The thesis is that humankind is technical by nature. Technology is not an addition to humanity but is just one of the ways, maybe one of the more significant ways, in which humans are distinguished from animals because human beings are forced to interact by working with the material cosmos in order to produce technology (Galvan, 2003).

This is connected with the second statement: *humans are naturally ethical*, from which the third would derive.

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