

## Chapter 65

# Robotic Technologies and Fundamental Rights: Robotics Challenging the European Constitutional Framework

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### ABSTRACT

*Robotic technologies constructed systems that interact with their environment in a way that displays some level of agency are increasingly intertwined with human life and human bodies. This raises many regulatory questions, since current legal frameworks have few robotics-specific provisions and robotics pose new challenges to legal notions and underlying assumptions. To help guide the regulation of robotics, fundamental rights should provide a basic touchstone. However, the constitutional framework of fundamental rights is itself not immune to being influenced by robotics. This paper discusses how the protection of fundamental rights is affected by robotics technologies, taking into account the mutual-shaping process of fundamental rights, regulation, and technology. After a general overview of how fundamental rights are challenged by robotics technologies, we zoom in on three specific application domains: industrial robotics and the issue of workers' rights and liability, assistive technology with a focus on autonomy and privacy of elderly and disabled people, and biomedical robotics (including brain-machine interfaces) in relation to informed consent and self-determination. The analysis highlights diverse implications of robotics in light of fundamental rights and values, suggesting that regulators will have to deal with rights and value conflicts arising from robotics developments. To help address these conflicts, a set of shared norms, standards and guidelines could be developed that may, in the form of soft-law, serve as a bridge between abstract fundamental rights and concrete robotics practice.*

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## **A EUROPEAN UNION PERSPECTIVE**

The role played by new technologies in contemporary society has significantly increased over the last decades. Technology is now an essential part of everyday life; it even increasingly is becoming an integrated part of the human body, as people not only use clothes and glasses but also implants and bionic devices. Since technology is neither good nor bad, nor is it neutral (Kranzberg, 1986), technology must be subjected to moral and social controls (Bunge, 1977, p. 106). This makes technoethics an important field of scholarship, which is defined as “the branch of ethics that investigates the moral issues encountered by technologists and by the public at large in connection with the social impact of large-scale technological projects” (Bunge, 1979, p. 70). Technoethics is concerned with “critical debates on the responsible use of technology for advancing human interests in society” and thereby “help guide ethical problem-solving and decision making in areas of activity that rely on technology” (Luppardini, 2009, p. 4).

Ethical questions of morality and ethical problem-solving closely relate to other fields of decision-making, not the least to legislative decisions. A key element in ensuring the responsible use of technology for advancing human interests are human rights, which perform a crucial task in “preventing the wrong” that is one of the concerns of ethics (Griffin, 2008, p. 19). Ever since Locke’s *Two Treatises of Civil Government*, human rights have functioned as “moral constraints on the arbitrary acts of rulers” (Griffin, 2008, p. 11). Although naturalistic accounts of how human rights come into existence have largely given way to procedural, contract-theory accounts (e.g., Dworkin, 1977), recent attempts try to re-introduce a more substantive account of what constitute ‘human’ rights, by conceiving of them as protecting the normative agency of humans (Griffin, 2008).

Interestingly, it is precisely the notion of (normative) agency that is also being affected by technology, through the rise of technologies

that display some level of agency themselves: robotics. Thus, from a technoethical perspective focusing on responsible use of technology, robotics raise questions not only about how the protective function of human rights plays out in a robotics-pervaded world, but also how robotics affect the interpretation of human rights itself. In that light, it makes sense not to speak of ‘human’ rights but rather of ‘fundamental’ rights, i.e., basic rights pertaining to entities with (moral) agency to protect their functioning in society—which may apply not only to humans but also to legal persons and, perhaps in some future, to machines or man-machine combinations that are capable of moral reasoning. Using the term ‘fundamental rights’ is also in line with the way in which these basic rights are currently being shaped in law. Against this background, this paper aims at discussing the protection of fundamental rights in contemporary technology-pervaded society. We will adopt a European Union perspective, because the EU’s dual aim of fostering an innovation-friendly internal market as well as an area of freedom, security, and justice makes the regulation of robotics particularly salient in this jurisdiction.

After an introduction into EU fundamental rights and robotics, we discuss how fundamental rights are challenged by robotic technologies. We then take into consideration three particular fields of robotic applications to highlight some relevant legal issues. As the analysis highlights that conflicts may arise in the protection of fundamental rights, we end with identifying some ways to handle conflicts in the European constitutional framework.

### **The Protection of Fundamental Rights in the EU: The Role of the European Charter of Fundamental Rights**

Since a catalogue of rights was not included in the European Treaties, for a long time fundamental rights have been protected in the EU as “general

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