

Kickoff Meeting RoboLaw

European Robotics Forum - Odense, 5th March 2012

RoboLaw project – the full title is “*Regulating Emerging Robotic Technologies in Europe: Robotics facing Law and Ethics*” – intend to investigate the ways in which emerging technologies in the field of bio-robotics (e.g. bionics, neural interfaces and nanotechnologies) have a bearing on the content, meaning and setting of the national and the European legal systems. The need for research in this area starts from the observation that the radical novelty of some robotic and nanorobotic technologies challenges traditional legal categories and qualifications. Just to give you an idea of the technologies we have in mind and the impact they have on common legal concepts, think of these few examples:

1. Implanted devices can be used to track an individual who is in need of constant surveillance and care, like people with dementia, minors with mental disability. Does a tracking device limit the freedom of the person concerned and in what sense? Could it be implanted without his consent if he is not capable of giving it? What could be the best way to protect the individual rights involved such as physical integrity, liberty, identity, privacy?

2. Brain-Computer Interfaces (BCI), which use specific biometric brain signal deriving from the variation in brain activities, can be used as assistive technologies in order to create particular forms of “alternative communication” for people having no possibilities to speak or to move any parts of their own body - even imperceptibly. These brain technologies are applicable both for people suffering from pathologies that do not affect self-awareness, and people with various reductions in their self-awareness. The main legal issue concerns whether and to what extent the will expressed by the individual through these biomedical “media” can be considered legally relevant and valid; and whether, and in which terms, tribunals and jurisdiction could base their decisions on the use of these devices to determine the capacity of the person to exert his/her rights and interests without the need for legal instruments of guardianship provided by various state legislations.

3. Another example is the use of cybernetic devices and the impact on the legislation to promote the rights of disabled people. Individuals suffering from disabilities may regain functionality through the use of exoskeletons or prostheses, blind and deaf people may gain their sight or hearing respectively, through the application of retinal or cochlear implants. Could this lead to redefine the concept of disability and, perhaps, conflict with the current assumptions on which disability legislation is based? Moreover, robotics technologies may also be used in healthy individuals, to expand or strengthen their capacities, for example to enhance their memory or muscle power. The idea itself of human enhancement calls for reflexion from multiple standpoints, but it definitely affects the legal concepts of personhood, of identity and autonomy.

4. Finally, the prospect of developing robots as companions, sentient machines able to perform various kind of activities, but mainly dedicated to assist elderly and disabled people, opens a plethora of legal issues. These are pertaining to the robots’ legal status, to the question of awarding them some kind of legal capacity (so that they can enter into basic transactions for purchasing goods or services of minor value), to the allocation of liability for the damages caused to their users and to third parties.

Starting from an observation of these different types of robotic technologies, RoboLaw has the purpose of creating a taxonomy of their possible applications and clarifying their legal relevance in terms of: influencing legal concept such as legal capacity and competence; affecting interests such as identity, privacy, health, bodily integrity, posing a risk of infringement of the correspondent constitutional rights; otherwise exerting an impact on different areas of the law, as tort law or insurance law. In the general framework of the studies on the interactions between science and law, RoboLaw will provide an inventory of the ethical, legal and social consequences of the use and proliferation of robotic technologies, both in terms of promoting human enhancement through implants into the body (or attaching them to the body) and in terms of autonomous, assistive robotic technologies.

The complex and interwoven problems that we have to address calls for an interdisciplinary approach, and that is why multiple competences and expertises are involved in the consortium that will carry out the research. The diverse technologies we are going to study will be described in their features and potential scenarios of employment directly by the researchers who are developing them (for instance at the BioRobotics Institute of the Scuola S. Anna); the contribution of philosophers is crucial in order to ascertain whether human enhancement and overcoming handicaps and disabilities through robotic technologies might entail a reconceptualization of the natural/artificial divide or challenge the real or supposed distinction between persons and things, human and non-human. On these aspects I leave to my colleagues to say something more.

As for the legal part of the research, exploring this area of law requires an overview of several legal systems, both European and not European; therefore a comparative methodology will be used. We will consider multiple democratic context and particularly the EU level, the national level of Member States, and the legal system in US and Japan. The US represents an obvious starting point for every comparative analysis in law, whilst Japan is a forerunner in Robotics. Several research institutes worldwide have investigated the legal consequences of developments in robotics. However, so far the landscape of robolaw (in Europe and outside) is still quite fragmentary. We will carry out a comprehensive analysis and outline the current state-of-the-art of legislation and regulation pertaining to robotics in different legal systems, trying to highlight a feasible approach to the regulation of new technologies and pointing towards areas of regulation that are in need of adjustment or revision.

We will set to understand whether new regulation is needed or the problems posed by robotic technologies can be handled in the framework of existing law. In other words, after framing the problems posed by robotic technologies as legal problems, we are going to advance possible legal answers and see if they demand for new regulation or only for an adaptation of the existing law that can take place by means of interpretation.

An action at the European level is nonetheless necessary either to introduce harmonised legislation or to provide member States with common patterns of interpretation for national laws. Both the research level and the industrial level of production of new technological products occur in a transnational context; they are by nature cross-boundaries phenomena. Therefore either the formulation of new kind of regulation or the adaptation of the existing laws in order to accommodate the problems posed by these technologies has to take into account their international character, that is the a-territorial context in which their development and spread take place.

The research develops along a double line of investigation, looking at the contents of any possible regulation, in order to decide which is the rule that better adjust to the specific features of a given technology; but also trying to identify the type of legal tool that is best suited to reach the goals of a certain uniformity of regulation and of spontaneous compliance. As said, the a-territorial quality of the technological advance asks for an intervention at (at least) the European level, but this can take different forms: soft-law instruments – such as guidelines, policy recommendations – without binding force, although with potential normative effects or hard law. Soft law refers to a great variety of instruments: declarations of principles, codes of practice, codes of conduct and ethics, recommendations, guidelines, standards, charters, resolutions, etc. Although all these kinds of documents formally lack legal status, there is a strong expectation that their provisions will be respected and followed by the international community; they state a set of principles that can guide decision making and behaviour within organizations, corporations, and professional categories. Over the past decades, a new regulatory policy has been developing in the EU framework, with increasing emphasis on the use of instruments that are alternative or complementary to traditional legislation. The role of these non-governmental sources is directly connected with the transnational nature of the object to be regulated; technological progress runs across jurisdictions and hence needs to resort to soft law, rather than hard law. On the other hand, the European Parliament has become increasingly sceptic towards the use of normative instruments deprived of formal force, because they do not guarantee the judicial protection of rights [Ris. 2007/2028 (INI)].

Mandatory instruments, like directives, better reach the goal of harmonised regulation but require to identify a sound normative ground for an intervention at the European level.

We have planned to elaborate, as the final product of our investigation, a set of policy recommendations defining guidelines and suggestions on regulating emerging robotic technologies and replying to the ethical concerns regarding their applications, possibly distinguishing among the various technologies examined because different characteristics and impacts will suggest different and multidisciplinary strategies of regulation. This body of principles will take the form of a Draft “White Paper on Regulating Robotics” addressed to the European policy makers. I would like to stress that the implementation of robotic technologies is just another example of policy-related science, where the innovation processes and their regulation occur, or should occur, in an open space of cross-countries discussion; stakeholders and civil society contribute to the debate, introducing ethical and social aspects in the process of elaborating the normative provisions and establishing a two-ways communication with the scientists. Second, the RoboLaw project aims to develop a specific European approach on its topic, characterized by core “European values” deriving from the main European sources of law and from the humanistic socio-cultural background in which scientific/technologic research is rooted. For both these reasons, those of you who are interested to give a contribution are very welcomed.