The role played by robotic technologies in contemporary society has significantly increased over the last decades. The impact of technological innovation on human life and values, such as identity, health and bodily integrity, privacy, autonomy and human dignity, poses new challenges to legal notions and raises many regulatory questions. Understanding whether a new regulatory ground is needed for the development and launch of emerging technologies or whether, on the contrary, problems posed by robotic technologies can be handled in the framework of existing rules is the main goal of the RoboLaw European project “Regulating Emerging Robotic Technologies in Europe: Robotics Facing Law and Ethics”, funded under FP7 – Science in Society.

This volume originates from the valuable discussion carried out during the workshop that was held on 21-22 June 2012 in Pisa, in the framework of the RoboLaw project. The workshop aimed at analyzing the sources of law at stake in view of the regulation of technological development, with a special focus on soft law, transnational private regulation and technical norms and standards. Starting from a general overview of the questions raised by the use and spread of these legal devices, they are examined from a theoretical perspective and according to their current use in some “sensitive” fields of application (biotechnologies, food technologies, ICT, risk assessment). Moreover, the contributions give specific attention to transnational private regulation (TPR) and its relations with, on the one hand, merchant law and, on the other hand, international public regimes. This book represents the very first step towards the elaboration of Guidelines for the regulation of robotic technologies in Europe, which will be presented by the RoboLaw Consortium to the European Commission in 2014.

Erica Palmerini - Associate Professor of Private Law at the DIRPOLIS Institute, Scuola Superiore Sant’Anna, Pisa. Coordinator of the RoboLaw Project.

Elettra Stradella - Assistant Professor in Comparative Public Law at the Department of Law, University of Pisa.
RoboLaw Series

1

directed by E. Palmerini, R.E. Leenes, K. Warwick and F. Battaglia
Law and Technology

The Challenge of Regulating Technological Development

edited by

Erica Palmerini and Elettra Stradella

344.095 (22.)
I. Palmerini, Erica II. Stradella, Elettra 1. Tecnologia - Aspetti giuridici

CIP a cura del Sistema bibliotecario dell’Università di Pisa

The research leading to these results has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) under Grant Agreement n. 289092.

EU Project: RoboLaw - Regulating Emerging Robotic Technologies in Europe: Robotics facing Law and Ethics

Collaborative project (CP), FP7-SiS-Challenge 1-3: Regulating emerging scientific and technological developments

Cover illustration
Giorgio De Chirico, Interno metafisico con mano di David, oil on canvas (1968)
© Giorgio De Chirico, by SIAE 2013
We wish to thank the Fondazione Giorgio e Isa De Chirico for their kind permission to use Giorgio De Chirico’s Interno metafisico con mano di David for the cover illustration.

© Copyright 2013 by Pisa University Press srl
Società con socio unico Università di Pisa
Capitale Sociale Euro 20.000,00 i.v. - Partita IVA 02047370503
Sede legale: Lungarno Pacinotti 43/44 - 56126, Pisa
Tel. + 39 050 2212056 Fax + 39 050 2212945
e-mail: press@unipi.it

Member of

Association of American University Presses


Le fotocopie per uso personale del lettore possono essere effettuate nei limiti del 15% di ciascun volume/fascicolo di periodico dietro pagamento alla SIAE del compenso previsto dall’art. 68, commi 4 e 5, della legge 22 aprile 1941 n. 633.
Le riproduzioni effettuate per finalità di carattere professionale, economico o commerciale o comunque per uso diverso da quello personale possono essere effettuate a seguito di specifica autorizzazione rilasciata da AIDRO, Corso di Porta Romana n. 108, Milano 20122, e-mail segreteria@aidro.org e sito web www.aidro.org
Contents

Erica Palmerini
*The interplay between law and technology, or the RoboLaw project in context* 7

Part I
Theoretical perspectives

Stefano Rodotà
*Technology and regulation: a two-way discourse* 27

Bert-Jaap Koops
*A taxonomy for descriptive research in law and technology* 37

Alberto Pirni and Antonio Carnevale
*The challenge of regulating emerging technologies. A philosophical framework* 59

Fabrizio Cafaggi
*New foundations of transnational private regulation* 77

Amedeo Santosuosso
*A general theory of law and technology
or a general reconsideration of law?* 145

Astrid Zei
*Shifting the boundaries or breaking the branches?
On some problems arising with the regulation of technology* 167

Anton Vedder
*Inclusive regulation, inclusive design and technology adoption* 205
Part II
Case-scenario perspectives

Alessandra Arcuri
Reimagining risk regulation: from reason to compassionate reason? 215

Eleonora Sirsi
Agri-food technologies and the law 231

Marco D’Ostuni and Federico Marini Balestra
Communication technologies and the law: lessons for technology regulation 253

Michele Passaro
Technology and independent administrative authorities: the case of the electric car 273

Luca Nocco
Medical guidelines between soft law and hard law 287

Gurvinder Singh Virk
The role of standardisation in the regulation of robotic technologies 311

Elettra Stradella
Approaches for regulating robotic technologies: lessons learned and concluding remarks 335

List of Contributors 358