

derline and show the social construction of energy societies, but we are left with very little in terms of alternatives in the end, especially with regard to different political or market organization. However, this is perhaps not surprising considering the predominantly historical perspective.

Nevertheless, this volume is a great contribution to the field of energy history and provides the reader with many useful and enlightening case studies. I especially want to underline that certain contributions will be excellent as readings for university education dealing with social and historical perspectives on energy discourses in production, consumption and culture.

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**Ronald Leenes and Eleni Kosta (eds.)**

*Bridging Distances in Technology and Regulation*

Oosterwijk: Wolf Legal Publishers, 2013, pp. 204

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The recent history of technology is characterized by a significant degree of regulatory pluralism. As a rough approximation, this growing pluralization is the consequence of two intersecting processes. Firstly, the fundamental transformation induced by globalization affects the previously unchallenged role of the nation state in setting regulations domestically through traditional command-and-control mechanisms and internationally through the forms of international public law (Ferrarese 2000; Malsch 2013, with a reference to S&T) and opens up the regulatory space to non-state actors. Secondly, in emerging technological fields that are characterized by a high degree of uncertainty regulators lack the resources or information needed to develop sound “discretion-limiting rules” of mandatory nature (Dorbeck-Jung and Shelley-Egan 2013). As a consequence, new regulatory instruments complement traditional hard, mandatory regulation. Soft regulation is typical of this context and it constitutes a tool for leveraging the information advantages of those actors to be regulated. In this broad picture, space opens for other forms of normativity. Such normative but extra-legal aspects enter regulation especially through the science advisory system (Tallacchini 2010), and instruments and mechanisms such as ethics advisory committees (Tallacchini 2009, Mali *et al.* 2012) and technology assessment (Rip *et al.* 1995).

As far as high scientific uncertainty pushes “regulatory decision-making into a more political direction” and thus requires “the weighing up of sometimes competing values” (Falkner and Jaspers 2012), the reli-

ance on these policy advising instruments intersected the rapidly consolidating consensus that early involvement of both stakeholders and the broader public is extremely important for effective and sustainable science policy (von Schomberg 2010). This convergence opens up regulation and contributes to build, in turn, a diversified and plural regulatory and policy space.

The book by Ronald Leenes and Eleni Kosta collects twelve chapters that provide several interesting entry points into regulatory pluralism and new technologies. The papers in the book are grouped in four different parts. The first one examines how the fast scientific and technological development and scientific uncertainty (Gregory Mandel and Gary Marchant; Hans Ebbers, Huub Schellekens, Hubert Leufkens and Toine Pieters; Johan Söderberg) challenge the capacity of regulation to adapt and cope with its changing object. This first part is completed by a comparison of the European and Australian approaches to innovate regulation for dealing with new technologies (Lyria Bennett Moses). The second part discusses the scope of law in technology regulation. The two chapters in this section of the book explore the plurality of legal, social and technical rules, their interplay and their effects in a networked society (Michael Anthony C. Dizon; Robin Hoenkamp, Adrienne de Moor-van Vugt and Gorge Huitema). The third part presents four case studies on how technology affects moral judgement (Mark Coeckelbergh), trust (Esther Keymolen; Federica Lucivero and Lucie Dalibert) and healthcare relations (Anton Vedder). The fourth part includes two chapters on the technical and legal instruments to regulate access to data stored either by the owner of a website or, in a more general fashion, to data about the users of online services (Maurice Schellekens; Gergely Alpár and Bart Jacobs). The chapters of the book present a variety of case studies, ranging from synthetic biology (Mandel and Marchant), to pharmaceuticals (Ebbers, Schellekens, Leufkens and Pieters; Söderberg), smart grids (Hoenkamp, de Moor-van Vugt and Huitema), nanomedicine (Lucivero and Dalibert), and a various set of cases from the internet and ICT (Keymolen on online collaborative consumption, Vedder on e-health, Schellekens on internet robots and privacy issues, Alpár and Jacobs on the design of credentials in user identity management, Dizon on hacking).

Collectively, these chapters are a fascinating journey into regulatory pluralism, well beyond law. For example, Dizon explores the interplay of legal and social norms with technical codes and instructions in the building of a regulatory framework; Hoenkamp, de Moor-van Vugt and Huitema examines how technical standards obtain legal effects; Lyria Bennett Moses compares the experiences of the law reform commissions in Australia and of technology assessment in Europe to assess their respective strengths and weaknesses in informing regulation to cope with technological development.

As from the title, “bridging” conceptual and empirical distances in technology and regulation is the overall goal of the book and this meta-

phor of the “bridge” provides its unifying logic. Sometimes, the Authors of the chapters straightforwardly interpret the “bridge metaphor” and examine what can overcome such distances in technology or (and) regulation. With regard to this, bridging temporal distances between technology and regulation through soft law (Mandel and Marchant) or building trust between consumers through the technological infrastructure supporting online collaborative consumption (Keymolen) are examples of relevant themes that are covered by the book. Some other times, technology ambiguously relates with distance. For example, technologies and the related human practices simultaneously create both physical distance and relational proximity as Coeckelbergh illustrates by referring to the links between the target and the operator in drone fighting. On the contrary, other technologies work precisely because they unrelate data and properties, as it happens in attribute-based credential data management (Alpár and Jacobs).

In general, although many bridges are built, the book provides only a few road signs to travel the distances in technology and regulation. Indeed, the reader is left with the feeling that little dialogue exists in between the chapters and the absence either of a thematic introduction or of a section dedicated to digest and frame the individual contributions in a broader, comprehensive perspective may be puzzling, as one has to figure out such a framework and the links between the chapters on his own. This is particularly evident for the whole section on ethics (Part III) with regard to the rest of the book and for the last chapter on credentials design and identity management (Chapter 12).

Notwithstanding this aspect, the book is undoubtedly rich and provides a broad and diverse review of the connections between technology and regulation.

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## **Paul Rabinow and Gaymon Bennett**

*Designing Human Practices: An Experiment with Synthetic Biology*  
Chicago: The University of Chicago Press, 2012, pp. 200

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Rabinow and Bennett’s book addresses their experiments in what they term the design of human practices, which they conducted whilst working within the Synthetic Biology Engineering Research Centre (SynBERC) in the USA. Their work sits alongside a number of other projects internationally that have sought to develop new forms of collaboration between the natural, engineering and social sciences in the context of synthetic biology. They outline the phases through which their experiments in collaboration proceeded, describing their conceptual and methodological approach and reflecting on the various factors that eventually contributed to what appears to have been a rather acrimonious end to the collaboration and parting of ways.

The book has so far proven controversial in some communities, particularly perhaps within the synthetic biology community itself. Some in this field have characterised it as an intractable and intentionally abstruse description of the events that took place at SynBERC whereas others have labelled it an undignified airing of dirty laundry. For our part, being admirers of conceptual developments in human practices so far, we find ourselves wishing the book could update itself as its own reception unfolded, further detailing the ways in which the struggle to develop new