Book Review

Regulating Code: Good Governance and Better Regulation in the Information Age,
by Ian Brown and Christopher T. Marsden, MIT Press, Cambridge, MA, 2013,
ISBN: (978–0–262–01882–1), 267 pages.

Digital technologies have had and continue to have profound impact on multiple facets of societal life. The changes range from the trivial to the momentous—from online shopping, through the emergence of new global value chains, to the very ways we work and write, create, distribute and access information—bringing distant geographical points within instantaneous reach, millions of people organized within hours, and encyclopaedias and virtual libraries produced on a collaborative basis.[1] Not surprisingly, these transformations have triggered regulatory responses at all levels of governance. They affect, to varying degrees, the existing regimes for media and telecommunications, consumer and intellectual property rights protection, to mention but a few of the relevant issue-areas.[2] National policies were the first to be redesigned, but because of the inherent 'globalness' of the digital environment, some solutions needed to be situated at the international level—either framed as an add-on to existing agreements (such the Internet Treaties adopted in 1996 under the World Intellectual Property Organization, WIPO) or as entirely new institutional solutions (such as the Internet Corporation for Assigned Names and Numbers, ICANN). It is also to be borne in mind that in cyberspace, local regulatory actions cannot be neatly isolated and often have spillovers beyond the borders of the nation state.[3]

Contextualizing the impact of the digital (r)evolution, it should be underscored that whereas it is evident that digital technologies have had an impact on the economy as well as on social and cultural practices, they have at least as strongly affected the law and patterns of governance

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[1] See eg Y Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (Yale University Press 2006).

[2] WJ Drake and E Wilson (eds), *Governing Global Electronic Networks: International Perspectives on Policy and Power* (MIT Press 2008); M Burri and T Cottier (eds), *Trade Governance in the Digital Age* (CUP 2012).

[3] J Goldsmith and T Wu, *Who Controls the Internet?* (OUP 2006).

in general.[4] Legal institutions face various challenges, related, amongst other things, to design, enforcement and linkage to social norms. Overall, 'older' institutions at all governance levels have grappled and often failed to master the multi-faceted and multi-directional issues of the internet. Regulatory entrepreneurs have yet to discover and fully mobilize the potential of digital technologies as an influential factor impacting upon the regulability of the environment[5] and as a potential regulatory tool in themselves.[6] At the same time, we have seen a deterioration of some public spaces and lower prioritization of public objectives, when strong private commercial interests are at play, such as most tellingly in the field of copyright.[7] Less tangibly, private ordering has taken hold and captured through contracts spaces, previously regulated by public law.[8] Code embedded in technology often replaces law.[9] Non-state action has in general proliferated and put serious pressure upon conventional state-centred, command-and-control models.[10]

Under the conditions of this 'messy' governance, the provision of key public goods, such as freedom of information, has been made difficult or is indeed jeopardized.[11] The grand question is how can we navigate this complex multi-actor, multi-issue space and secure the attainment of fundamental public interest objectives. This is also the question that Ian Brown and Chris Marsden seek to answer with their book, *Regulating Code*, as recently published under the 'Information Revolution and Global Politics' series of MIT Press. In the following, a brief overview of the book's core arguments is given. It is fair to say from the very outset that the authors do a superb job in addressing the thorny questions of the appropriate governance mechanisms in the internet age in a well-informed, structured, no-nonsense manner.

In a way similar to this review's introduction, Brown and Marsden are fully aware of the intrinsic fluidity and complexity of the internet

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[4] L Lessig, *Code and Other Laws of Cyberspace* (Penguin 2000); L Lessig, *Code: Version 2.0* (Basic Books 2006); PL Bellia, P Schiff Berman, B Frischmann and DG Post, *Cyberlaw: Problems of Policy and Jurisprudence in the Information Age* (4th edn, West Publishing 2011).

[5] J Zittrain, *The Future of the Internet – and How to Stop It* (Yale University Press 2008).

[6] R Brownsword and K Yeung (eds), *Regulating Technologies* (Hart 2008).

[7] S Sell, *Private Power, Public Law: The Globalization of Intellectual Property Rights* (CUP 2003); W Patry, *Moral Panics and the Copyright Wars* (OUP 2009).

[8] See eg Thomas Schultz, 'Carving up the Internet: Jurisdiction, Legal Orders, and the Private/Public International Law Interface' (2008) 19 EJIL 799–839; M Burri, 'User Created Content in Virtual Worlds and Cultural Diversity' in CB Graber and M Burri (eds), *Governance of Digital Game Environment and Cultural Diversity* (Edward Elgar 2010) 74–112.

[9] Lessig (n 4); Joel Reidenberg, 'Lex Informatica: The Formulation of Information Policy Rules Through Technology' (1997) 76 Texas L Rev 553–93; M Burri, 'Controlling New Media (without the Law)' in M Price and S Verhulst (eds), *Handbook of Media Law and Policy* (Routledge 2012) 327–42.

[10] Scott Burris, Michael Kempa and Clifford Shearing, 'Changes in Governance: A Cross-Disciplinary Review of Current Scholarship' (2008) 41 Akron L Rev 1–66; D Levi-Faur (ed), *Oxford Handbook of Governance* (OUP 2012).

[11] See eg E Brousseau, T Dedeurwaerdere and B Siebenhüner (eds), *Reflexive Governance for Global Public Goods* (MIT Press 2012).

environment, and argue that its interdependence and interoperability are both its innovative strength as well as its inherent security weakness.[12] The authors use the now standard in cyber law idea of 'code as regulation'[13] but are not constrained by it and enrich it, as code too can be regulated and indeed, must be regulated so that certain fundamental rights are safeguarded.[14] The authors argue that the growing societal importance of the internet demands apt holistic design, which departs from simple 'magic bullet' solutions based on the study of one discipline, one sector or one regulatory approach. They advance rather the claim that solutions can be malleable and combine different tools, such regulation and code, self-regulation and governmental control, so that both efficiency and human rights guarantees are given.[15] This said, the authors appear to share strong preferences for multi-stakeholder governance, which involves both the state and the citizen, since it stands—in the authors' opinion—good chances of being able to reconcile market failures and constitutional legitimacy failures in self-regulation, and they therefore seek to incorporate it as an essential element in regulatory design.[16]

   In the first two chapters before setting on to explore the five cases, which exemplify different types of tensions for the regulatory toolboxes, as they involve different types of institutions, actors and relationships between government, business and users, the authors map the specificities of governing the digital space. They describe the complex interaction between code, regulation and competition, as well as the ultimate justifications for regulating, and situate this analysis in existing theoretical frameworks. For this exercise, they cover a vast amount of interdisciplinary literature and succinctly present it in context in a fairly unbiased manner. The combination of the skills and experience of an information technology (IT) expert (Brown) and a legal scholar (Marsden) shows well in the fine-grained understanding of the multi-directional relationship between code and regulation, how they influence and constrain each other. This understanding is essential to the book's intended mission as it 'leads to a better understanding of how regulation can work toward better code rather than simply avoiding the worst of code'.[17]

   Chapters (3–7) form the core of the book and each present an empirically grounded, multidisciplinary case study of five 'difficult areas' of governing the internet, to which the authors refer to as 'hard cases'.[18] The cases focus in turn on (i) privacy; (ii) copyright; (iii) censorship, (iv) social

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[12] I Brown and CT Marsden, *Regulating Code: Good Governance and Better Regulation in the Information Age* (MIT Press 2013) xviii. Unattributed page numbers henceforth refer to this book.
[13] Lessig (n 4); Reidenberg (n 9).
[14] At xviii–xix.
[15] At 1.
[16] At 2, 3.
[17] At 21.
[18] At 4 and passim.

networking sites and (v) smart pipes. Each case study has been structured along similar lines and seeks to map four key sets of questions and issues. First, the policy environment is mapped by looking at the social impact of technology, the existent market failures and the fundamental rights, which are relevant in the specific setting. Second, the types of code and the regulation of that code are analysed. The studies look in particular at which layer of the communication model[19] the code is deployed—eg at the network level (think British Telecom or Verizon), in hardware (think Apple) or at the application and content layer (think Google and Facebook). What follows is then a mapping of the institutional political economy specific to each of the cases, and finally, the outcomes of the governance developments so far. The evolution that has been traced throughout all the case studies is with regard to the key question of whether governments have moved from 'sledgehammer' ban-based, en-forcement-oriented regulation towards 'smarter regulation that works tech-nically, with some degree of outcome legitimacy in terms of goals'.[20]

Case 1, on privacy and data protection, is to be sure one of the major regulatory challenges presently, with potentially even growing significance. It is a poster child example of the clash between essential individual rights, broader public interests and markets, which fall short of delivering the socially optimal level of privacy. Greater regulatory intervention may be well justified, as the authors argue—also through code regulation in what has become known as 'privacy by design'. Case 2, on copyright and the challenges it faces due to the affordances of digital technologies related above all to perfect copying and instantaneous distribution to many, has now become a conventional topic in cyber law enquiries. Brown and Marsden rightly map all the salient issues, such as technical protection measures and intermediary liability, and point out at the existing path dependencies and biases. They see a tendency in policy towards protecting the rights of creators at the expense of freedom of expression and privacy but also observe increased public awareness and mobilized action (such as in the cases of the SOPA/PIPA legislation in the USA and ACTA in Europe). Case 3 on censorship is another 'classic' cyber law topic, which deserves attention. Governments, and only oppressive ones, exercise con-trol on the information flows and limit both active and passive freedom of expression. The technological means are now much more sophisticated in comparison to the early days of internet filtering and key industry players drawn to participate (as the PRISM case, which was only exposed after the book's publication vividly illustrates). There is a conflicting public interest in preserving free speech versus for instance minors protection.

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[19] Yochai Benkler, 'From Consumers to Users: Shifting the Deeper Structures of Regulation Toward Sustainable Commons and User Access' (2000) 52 Fed Comm LJ 561–79; Kevin Werbach, 'A Layered Model for Internet Policy' (2002) 1 J Telecomm High Tech L 37–67.

[20] At 45.

Case 4 discusses problems of lack of transparency about corporate policies and consumer lock-in in social networking sites (SNS). As the societal role of Facebook and the like increases and as private ordering proliferates, there is an urgency attached to the debates on new and more appropriate regulation for SNS. User-generated regulation in social media seems not to work well in the face of commercial pressures to reduce privacy for third-party advertiser use and the related financial benefits. The last case on 'smart pipes' is an area well known to the authors as they have previously and aptly discussed net neutrality.[21] The analysis is nuanced and shows well the trade-offs involved in this highly technical area and the dangers of permitting technology development without any privacy and expression oversight. Architecting an internet with relatively low barriers to entry that supports fundamental rights remains a key policy challenge.

Chapter 8 compares the five hard cases and maps the common features and the divergences. This meta-mapping is extremely useful as it exposes the challenges of regulating for the public interest in diverse areas of internet governance and extracts some emerging best practices. All case studies demonstrate that code and law are interdependent and smarter regulation must provide 'nudges and tweaks to coders, users, and companies, as well as us[e] market incentives, standards, and government procurement policies'.[22]

On the basis of the case studies as well as their cross-sectional comparison, Brown and Marsden build their normative idea of the so-called 'prosumer law',[23] as what is needed 'to square the circle of Internet regulation in the broader public interest for all Internet users, not the fortunate few or the even more fortunate and fewer dominant corporations'.[24] A key element of the prosumer framework is ensuring interoperability (also through additional regulation), so that the internet remains open to innovation and denies dominant actors the mean to reinforce their position through unfair means and users can effectively exercise freedom of choice. This also necessitates introducing greater transparency and a healthy dialogue between consumer groups and other civil society stakeholders and standard experts. At the same time, the benefits of rapid standard-making must not be compromised by the additional multi-stakeholder arrangements. These key, and admittedly not straightforward, tasks need to be fulfilled in the midst of a complex governance architecture, where economic interests seem to have over time found a higher level of institutionalization at the international level with more binding dispute settlement mechanisms and stronger influence on domestic policy-making.[25]

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[21] CT Marsden, *Net Neutrality: Towards a Co-Regulatory Solution* (Bloomsbury 2010).

[22] At 165.

[23] As in producer and consumer.

[24] At 183.

[25] J Braithwaite and P Drahos, *Global Business Regulation* (CUP 2000).

The authors fully realize the challenges behind their call for prosumerism and its integration into digital media policies and see the need for more transdisciplinary research that would make this possible by (i) assessing the impact of different market structures and their dynamics; (ii) developing the international political economy work for the internet, as this has been done for the energy, transport, health care and pharmaceuticals sectors;[26] (iii) predicting how the emergence of new players and 'gorilllas' (such as Facebook) is likely to affect regulation in discrete areas (such as data protection); and (iv) assisting governments in effective impact assessment for policy- and law-making in the IT field.

Summing it up, one can clearly say that *Regulating Code* provides an excellent and sophisticated overview of the most critical internet policy developments. The mapping of issues and problems is well-structured and done by experts, who can easily zoom in and out on the issues discussed, giving the readers the necessary information on some details, while keeping the 'big' governance picture in sight too. One can nonetheless criticize the book. One major line of criticism has to do with the apparent mismatch between the book's ambition and amount of pages devoted to elaborating on it. The book's objective is to advance design of better regulation and code, which is capable of steering towards the attainment of key public interest objectives in the information age but it does so only from a bird's eye view and may be so missing important analytical elements. The case studies tackle very complex issue-areas in only some twenty pages each, thus often presenting stylised narratives, which may miss some of the counter arguments. This is true in particular for the two key concepts used in the proposed normative framework of prosumer law, namely the notions of 'multistakeholderism' and of 'interoperability'. The actual experience with the former, despite the initial praise in the literature, has remained somewhat limited in yielding actual results and there has been increased criticism as to the democratic legitimization of this participation, its accountability and sustainability.[27] Interoperability has been generally accepted as an important functional principle in IT governance but it would have been valuable for the reader to know that it only works and truly contributes to innovation under some circumstances. It may very well be that under others, interoperability actually impedes innovative leaps and may distort market mechanisms, also to the detriment of the consumer.[28] We should also be aware that there is no such thing as level of 'optimal interoperability' that can be set in advance and there is constant experimentation and learning in highly complex and fluid environments as

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[26] ibid.

[27] See eg IM Hoofd, *Ambiguities of Activism: Alter-Globalism and the Imperatives of Speed* (Routledge 2012).

[28] J Palfrey and U Gasser, *The Promise and Perils of Highly Interconnected Systems* (Basic Books 2012).

the internet. Foreclosing these processes may be in fact disadvantageous.[29] As a final critical remark, one is somewhat surprised to see that the authors seek to match pro-innovative regulation with human rights, while taking human rights as a bulk. Human rights experts are usually more careful as human rights encompass various and often conflicting fundamental rights, which have developed differently historically and have been accordingly differently embedded in constitutional and international human rights protection regimes.[30]

Despite these drawbacks, which arguably relate to the intrinsic trade-off between depth and breadth and the clarity of the message that authors face, *Regulating Code* provides an excellent contribution to the scholarly literature and an invaluable resource for policy-makers who need to understand the key elements of a forward-looking public policy agenda for the internet age, as well as for other stakeholders participating in the deliberative process.

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[29] A Thierer, 'What Is "Optimal Interoperability"? A Review of Palfrey & Gasser's "Interop"', The Technology Liberation Front, 11 June 2006, <http://techliberation.com/2012/06/11/what-is-"optimal-interoperability"-a-review-of-palfrey-gasser's/"interop"/> accessed 26 August 2013.

[30] See eg O De Schutter, *International Human Rights Law* (CUP 2010).