

IJLT | THE INDIAN JOURNAL OF LAW AND TECHNOLOGY

Volume 14 | Issue 1 | 2018

[Cite as: 14 (1) IJLT, < page no. > (2018)]

NATIONAL LAW SCHOOL OF INDIA UNIVERSITY
BANGALORE

Subscription: INR 900

© The Indian Journal of Law and Technology 2018

The mode of citation for this issue of The Indian Journal of Law and Technology 2017 is as follows:

14 (1) IJLT, <page no.> (2018)

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission.

The articles in this issue may be reproduced and distributed, in whole or in part, by non-profit institutions for educational and research purposes provided that such use is fully acknowledged.

Published by:

Student Bar Association

National Law School of India University

Nagarbhavi, Bangalore – 560072

Website: www.ijlt.in

Email: ijltedit@gmail.com or editorialboard@ijlt.in

Distributed exclusively by:

Eastern Book Company

34, Lalbagh, Lucknow - 226 001

U.P., India

Website: www.ebc.co.in Email: sales@ebc-india.com

The views expressed by the contributors are personal and do not in any way represent the institution.

IJLT

WWW.IJLT.IN

THE INDIAN JOURNAL OF
LAW AND TECHNOLOGY

Volume 14 | Issue 1 | 2018

CHIEF PATRON

Prof. Dr. R. Venkata Rao
Vice Chancellor
National Law School of India University

BOARD OF EDITORS

Chief Editor

Aniruddha Majumdar

Deputy Chief Editor

Dhruv Jadhav

Editors

Aman Deep Borthakur

Nikhil Purohit

Pratiksha Basarkar

Rajashri Seal

Viraj Ananth

First Year Observers

Kabeer Jay

Vrishank Singhania

Patron

Dr. R. Venkata Rao
Vice-Chancellor, National Law School of India
University

Faculty Advisor

Prof. Rahul Singh
Associate Professor of Law & Director,
Institute of Competition Law-and-Economics
National Law School of India University

IJLT

THE INDIAN JOURNAL OF
LAW AND TECHNOLOGY

Volume 14 | Issue 1 | 2018

BOARD OF ADVISORS

Justice S. Ravindra Bhat
Judge, Delhi High Court

Justice Prathiba Singh
Judge, Delhi High Court

Chinmayi Arun
Research Director of the Centre for Communication Governance
at NLU Delhi.

Dr. Shamnad Basheer
Founder, SpicyIP

Dr. T. Ramakrishna
Professor of Law, National Law School of India University,
Bangalore, India

Malavika Jayaram
Fellow at the Berkman Center for Internet and Society at
Harvard University; Fellow Society, Bangalore

Graham Greenleaf
Professor of Law, University of New South Wales,
Sydney, Australia;
Co-Director, Cyberspace Law and Policy Centre,
Sydney, Australia

CONTENTS

ARTICLES

- Law and Technology: Two Modes of Disruption, Three Legal
Mind-Sets, and the Big Picture of Regulatory Responsibilities
Roger Brownsword 1
- Infrastructure Innovation in India: What can
be inferred from EU Regulation?
Serge J.H. Gijrath 41
- Dual Capacity of Advocates: Implications For Ip Law Firms
Arpan Banerjee & Manasi Chaudhari 61

BOOK REVIEW

- Diversity in Intellectual Property: Identities,
Interests, and Intersections
Weijie Huang & Yabong Li 70

LAW AND TECHNOLOGY: TWO MODES OF DISRUPTION, THREE LEGAL MIND-SETS, AND THE BIG PICTURE OF REGULATORY RESPONSIBILITIES

*Roger Brownsword**

ABSTRACT *This article introduces three ideas that are central to understanding the ways in which law and legal thinking are disrupted by emerging technologies and to maintaining a clear focus on the responsibilities of regulators. The first idea is that of a double disruption that technological innovation brings to the law. While the first disruption tells us that the old rules are no longer fit for purpose and need to be revised and renewed, the second tells us that, even if the rules have been changed, regulators might now be able to dispense with the use of rules (the rules are redundant) and rely instead on technological instruments.*

The second idea is that the double disruption leads to a three-way legal and regulatory mind-set that is divided between: (i) traditional concerns for coherence in the law; (ii) modern concerns with instrumental effectiveness; and (iii) a continuing concern with instrumental effectiveness and risk management but now focused on the possibility of employing technocratic solutions. The third idea is one of a hierarchy of regulatory responsibilities. Most importantly, regulators have a 'stewardship' responsibility for maintaining the 'commons'; then they have a responsibility to respect the fundamental values of a particular human social community; and, finally, they have a responsibility to seek out an acceptable balance of legitimate interests within their community.

Such disruptions notwithstanding, it is argued that those who have regulatory responsibilities need to be able to think through the regulatory noise to frame questions in the right way and to respond in ways that are rationally defensible and reasonable. In an age of smart machines and new possibilities for technological fixes, traditional institutional designs might need to be reviewed.

I. INTRODUCTION

In a series of articles, I have argued that lawyers need to engage more urgently with the regulatory effects of new technologies;¹ and, while I have argued this in relation to the full spectrum of technological interventions, whether they are ‘soft’ and ‘assistive’ or ‘hard’ and fully ‘managerial’,² my concerns have been primarily with the employment of hard technologies. For, whereas assistive technologies (such as those surveillance and identification technologies that are employed in criminal justice systems) reinforce the prohibitions and requirements that are prescribed by legal rules, full-scale technological management introduces a radically different regulatory approach by redefining the practical options that are available to regulatees.³ Instead of seeking to channel the conduct of regulatees by prescribing what they ‘ought’ or ‘ought not’ to do, regulators focus on controlling what regulatees actually can or cannot do in particular situations. Instead of finding themselves reminded of their legal obligations, regulatees find themselves obliged or ‘forced’ to act in certain ways.⁴

If lawyers are to get to grips with these new articulations of regulatory power, I have suggested that they frame their inquiries by employing a broad

* King’s College London and Bournemouth University. I am particularly grateful to Hans Micklitz who read an earlier draft and made many valuable comments that made me think more than twice about what I was saying. That said, of course, the usual disclaimers apply.

¹ See, e.g., R. Brownsword, *In the Year 2061: From Law to Technological Management*, 7 LAW, INNOVATION AND TECHNOLOGY 1 (2015); Field, *Frame and Focus: Methodological Issues in the New Legal World* in RETHINKING LEGAL SCHOLARSHIP 112 (Rob van Gestel, H. Micklitz, and E. Rubin, eds., Cambridge: Cambridge University Press, 2016); and, *Law as a Moral Judgment, the Domain of Jurisprudence, and Technological Management* in ETHICAL RATIONALISM AND THE LAW 109 (P. Capps and S.D. Pattinson, eds., Oxford: Hart, 2016).

² For an illustration of this spectrum, see, e.g., P. O’Malley, *The Politics of Mass Preventive Justice* in PREVENTION AND THE LIMITS OF THE CRIMINAL LAW 273, 280 (A. Ashworth, L. Zedner, and P. Tomlin, eds., Oxford University Press, 2013):

In the ‘soft’ versions of such [speed-regulating] technologies, a warning device advises drivers they are exceeding the speed limit or are approaching changed traffic regulatory conditions, but there are progressively more aggressive versions. If the driver ignores warnings, data—which include calculations of the excess speed at any moment, and the distance over which such speeding occurred (which may be considered an additional risk factor and *thus* an aggravation of the offence)—can be transmitted directly to a central registry. Finally, in a move that makes the leap from perfect detection to perfect prevention, the vehicle can be disabled or speed limits can be imposed by remote modulation of the braking system or accelerator.

³ See, e.g., R. Brownsword, *Whither the Law and the Law Books: From Prescription to Possibility*, 39 JOURNAL OF LAW AND SOCIETY 296 (2012); and *Law, Liberty and Technology* in THE OXFORD HANDBOOK OF LAW, REGULATION AND TECHNOLOGY 41 (R. Brownsword, E. Scotford, and K. Yeung, eds., Oxford: Oxford University Press, 2016 [e-publication]; and 2017).

⁴ Compare S. Veitch, *The Sense of Obligation*, 8 JURISPRUDENCE 415, 430-432 (2017) (on the collapse of obligation into obedience).

concept of the ‘regulatory environment’ (one that recognises both normative rule-based and non-normative technology-based regulatory mechanisms);⁵ I have identified the ‘complexion’ of the regulatory environment as an important focus for inquiry (because the use of technological management can compromise the context for the possibility of both autonomous and moral human action);⁶ and I have argued that it is imperative that the use of regulatory technologies is authorised in accordance with the ideal of the Rule of Law.⁷

I have also posed a number of questions about the future of traditional rules of law where ‘regulators’ (broadly conceived)⁸ turn away from rules in favour of technological solutions or where historic regulatory objectives are simply taken care of by automation—such as will be the case, for example, when it is the design of autonomous vehicles that takes care of concerns about human health and safety that have hitherto been addressed by legal rules directed at human drivers of vehicles.⁹ Hence, if we look ahead, what does the increasing use of technological management signify for traditional rules of criminal law, torts, and contracts? Will these rules be rendered

⁵ See, e.g., R. Brownsword, *Comparatively Speaking: “Law in its Regulatory Environment”* in THE METHOD AND CULTURE OF COMPARATIVE LAW 189 (M. Adams and D. Heirbaut, eds., (Festschrift for Mark van Hoecke) Oxford: Hart, 2014); and *In the Year 2061: From Law to Technological Management*, 7 LAW, INNOVATION AND TECHNOLOGY 1 (2015).

⁶ See, especially, R. Brownsword, *Lost in Translation: Legality, Regulatory Margins, and Technological Management*, 26 BERKELEY TECHNOLOGY LAW JOURNAL 132 (2011).

⁷ See, R. Brownsword, *Technological Management and the Rule of Law*, 8 LAW, INNOVATION AND TECHNOLOGY 100 (2016).

⁸ In this article, we should understand ‘regulators’ in a broad way as covering those whose function is to direct, guide, or channel human conduct. This is to be contrasted with a narrow understanding of ‘regulators’ as those who staff (what we commonly refer to as) regulatory agencies, who are part of the State apparatus, and who regulate by issuing and enforcing standards. Rather, in the broad sense employed, regulators reach beyond those who work in regulatory agencies to include members of legislatures and executives as well as members of the Judiciary (when undertaking regulatory functions); regulators as broadly employed also include agents who undertake regulatory functions in the private sector; and, following from my broad conception of the ‘regulatory environment’, regulators may be employing both standards (rules) and technologies to direct, guide, or channel the conduct of their regulatees. See further, R. Brownsword, *In the Year 2061: From Law to Technological Management*, 7 LAW, INNOVATION AND TECHNOLOGY 1, 14-24 (2015).

⁹ See, e.g., R. Brownsword, *Field, Frame and Focus: Methodological Issues in the New Legal World* in RETHINKING LEGAL SCHOLARSHIP 112 (Rob van Gestel, H. Micklitz, and E. Rubin, eds., Cambridge: Cambridge University Press, 2016); *The E-Commerce Directive, Consumer Transactions, and the Digital Single Market: Questions of Regulatory Fitness, Regulatory Disconnection and Rule Redirection* in EUROPEAN CONTRACT LAW IN THE DIGITAL AGE 165 (S. Grundmann ed., Antwerp: Intersentia, 2017); and *The Rule of Law, Rules of Law, and Technological Management* (edited version of an introductory keynote given at the ACELG’s sixth annual conference, Amsterdam, November 4, 2016) [The Rule of Law in the Technological Age Challenges and Opportunities for the EU Collected Papers (July 20, 2017) 9-17. Amsterdam Law School Research Paper No. 2017-35, available at <https://ssrn.com/abstract=3005914>].

redundant, will they be directed at different human addressees, or will they simply be revised? In short, how are traditional laws disrupted by technological innovation and, in an age of technological management, how are rule-based regulatory strategies disrupted? It is questions of this kind that I want to begin to address in the present article.

Yet, why linger over such questions? After all, the prospect of technological management implies that rules of any kind have a limited future. To the extent that technological management takes on the regulatory roles traditionally performed by legal rules, those rules seem to be redundant;¹⁰ and, to the extent that technological management does not supersede but co-exists with legal rules, while some rules will be redirected, others will need to be refined and revised (imagine, for example, a legal framework that covers both autonomous and driven vehicles sharing the same roads). Accordingly, the short answer to these questions is that the destiny of legal rules is to be found somewhere in the range of redundancy, replacement, redirection, revision and refinement. Precisely which rules are replaced, which refined, which revised and so on, will depend on both technological development and the way in which particular communities respond to the idea that technologies, as much as rules, are available as regulatory instruments—indeed, that legal rules are just one species of regulatory technologies.

This short answer, however, does not do justice to the deeper and distinctive disruptive effects of technological development on both legal rules and the regulatory mind-set. Accordingly, in this article, I want to sketch a backstory that features two overarching ideas: one is the idea of a double technological disruption and the other is the idea of a regulatory mind-set that is divided in three ways. With regard to the first of these overarching ideas, the double disruption has an impact on: (i) the substance of traditional legal rules; and then (ii) on the use—or, rather, non-use—of legal rules as the regulatory modality. With regard to the second overarching idea, the ensuing three-way legal and regulatory mind-set is divided between: (i) traditional concerns for coherence in the law; (ii) modern concerns with instrumental effectiveness (relative to specified regulatory purposes) and particularly with seeking an acceptable balance of the interests in beneficial innovation and management of risk; and (iii) a continuing concern with instrumental effectiveness and risk management but now focused on the possibility of employing technocratic solutions.

¹⁰ However, we might find that there are some contexts in which, although ‘rule compliance’ is technologically guaranteed, agents will continue to be guided by rules that are familiar or by a rule-book. See, further, R. Brownsword, *Technological Management and the Rule of Law*, 8 LAW, INNOVATION AND TECHNOLOGY 100 (2016).

If what the first disruption tells us is that the old rules are no longer fit for purpose and need to be revised and renewed, then the second disruption tells us that, even if the rules have been changed, regulators might now be able to dispense with the use of rules (the rules are redundant) and rely instead on technological instruments. Moreover, what the disruptions further tell us is that we can expect to find a plurality of competing mind-sets seeking to guide the regulatory enterprise. However, what none of this tells us is how regulators *should* engage with these disruptions. When there is pressure on regulators to think like coherentists (focusing on the internal consistency and integrity of legal doctrine), when regulators are expected to think in a way that is sensitive to risk and to make instrumentally effective responses, and when there is now pressure to think beyond rules to technological fixes, what exactly are the responsibilities of, and priorities for, regulators? Without some critical distance and a sense of the bigger picture, how are regulators to plot a rational and reasonable course through a conflicted and confusing regulatory discourse? Although these are large questions, they are ones that I also want to begin to address in this article.

Accordingly, the shape of the article, which is in four principal Parts, is as follows. We start (in Parts II and III) with some questions about the future of traditional legal rules, the backstory to which is one of a double disruption that technological innovation brings to the law and, in consequence, a three-way re-configuration of the legal and regulatory mind-set. While the double disruption is elaborated in Part II of the article, the three elements of the re-configured legal and regulatory mind-set (namely, the coherentist, regulatory-instrumentalist, and technocratic elements) are elaborated in Part III. Given this re-configuration, we need to think about how regulators should engage with new technologies, whether viewing them as regulatory targets or as regulatory tools¹¹; and this invites thoughts about the bigger picture of regulatory responsibilities as well as regulatory roles and institutional competence. Some reflections on the bigger picture are presented in Part IV of the article; and, in Part V, I offer some initial thoughts on the competence of, respectively, the Courts and the Legislature to adopt the appropriate mind-set. While this discussion will not enable us to predict precisely what the future of legal rules will be, it will enable us to appreciate the significance of the disruption to traditional legal mind-sets, to understand the confusing plurality of voices that will be heard in our regulatory discourses, and to have a sense of the priorities for regulators.

¹¹ Compare the structure and organisation of the essays in *REGULATING TECHNOLOGIES* (R. Brownsword and K. Yeung eds., Oxford: Hart, 2008).

II. LAW AND TECHNOLOGY: A DOUBLE DISRUPTION

It is trite that new technologies are economically and socially disruptive, impacting positively on some persons and groups but negatively on others.¹² Famously, for instance, Instagram, a small start-up in San Francisco, disrupted the photographic market in a way that benefitted millions but that wiped out Eastman Kodak, one of the biggest corporations in the world.¹³ However, it is not just economies and social practices that are disrupted by the emergence of new technologies; the law and legal practice, too, is disrupted.¹⁴ Currently, law firms are taking up new technologies that enable much routine documentary checking to be automated; and new technologies promise to make legal services more accessible and cheaper.¹⁵ Without doubt, these developments will shake up employment patterns in the legal sector. My focus in this article, though, is somewhat different. The double disruption to which I am drawing attention concerns, first, the substance of legal rules and, secondly, the use of technological management rather than legal rules.

Given that this is not an essay in legal or social history, we should think of these disruptive effects as particular modes or types rather than as features that distinctively characterise a certain period or a certain time and place. Nevertheless, I take it that signs of the first disruption emerge in the industrialised societies of the Nineteenth Century and persist as the pace of technological development accelerates; and I take it that signs of the second disruption emerge at the Millennium and are with us right now.

¹² Compare, e.g., C.M. Christensen, *THE INNOVATOR'S DILEMMA: WHEN NEW TECHNOLOGIES CAUSE GREAT FIRMS TO FAIL* (Boston: Harvard Business Review Press, 1997); and M.E. Price, *The Newness of New Technology*, 22 *CARDOZO LAW REVIEW* 1885 (2001).

¹³ Evidently, in its final years, Kodak closed thirteen factories and 130 photolabs, and cut 47,000 jobs. See, A. Keen, *THE INTERNET IS NOT THE ANSWER* 87-88 (London: Atlantic Books, 2015).

¹⁴ See, e.g., R. Susskind and D. Susskind, *THE FUTURE OF THE PROFESSIONS* (Oxford: Oxford University Press, 2015).

¹⁵ See, e.g., *THE FUTURE OF LEGAL SERVICES* 38 (London: the Law Society, 2016), where technology is said to be impacting legal services in the following ways: enabling suppliers to become more efficient at procedural and commodity work; reducing costs by replacing salaried humans with machine-read or AI systems; creating ideas for new models of firm and process innovation; generating work around cyber-security, data protection and new technology laws; and, supporting changes to consumer decision-making and purchasing behaviours.

A. The first disruption

The first disruption (technology impacting on the substance of legal rules) is highlighted in a seminal article, published in 1933, by Francis Sayre.¹⁶ In this paper, Sayre remarks on the ‘steadily growing stream of offenses punishable without any criminal intent whatsoever’.¹⁷ In what was apparently a parallel, but independent, development in both England and the United States, from the middle of the Nineteenth Century, the courts accepted that, so far as ‘public welfare’ offences were concerned, it was acceptable to dispense with proof of intent or negligence.¹⁸ If the food sold was adulterated, if vehicles did not have lights that worked, if employees polluted waterways, and so on, sellers and employers were simply held to account. For the most part, this was no more than a tax on business; it relieved the prosecutors of having to invest time and resource in proving intent or negligence; and, as Sayre reads the development, it reflected ‘the trend of the day away from nineteenth century individualism towards a new sense of the importance of collective interests’.¹⁹

Although there was no mistaking this development, and although in a modernising world it was not clearly mistaken—as Sayre recognises, the ‘invention and extensive use of high-powered automobiles require new forms of traffic regulation;...the growth of modern factories requires new forms of labour regulation; the development of modern building construction and the growth of skyscrapers require new forms of building regulation’,²⁰ and so on—Sayre emphatically rejects any suggestion that it would, or should, ‘presage the abandonment of the classic requirement of a *mens rea* as an essential of criminality’.²¹ In a key passage, Sayre says:

The group of offenses punishable without proof of any criminal intent must be sharply limited. The sense of justice of the community will not tolerate the infliction of punishment which is substantial upon those innocent of intentional or negligent wrongdoing; and law in the last analysis must reflect the general community sense of justice.²²

¹⁶ F.B. Sayre, *Public Welfare Offences*, 33 COLUMBIA LAW REVIEW 55 (1933).

¹⁷ F.B. Sayre, *Public Welfare Offences*, 33 COLUMBIA LAW REVIEW 55 (1933).

¹⁸ So far as the development in English law is concerned, illustrative cases include *R. v. Stephens*, (1866) LR 1 QB 702; *Hobbs v. Winchester Corpn.*, (1910) 2 KB 471; and *Provincial Motor Cab Co. v. Dunning*, (1909) 2 KB 599.

¹⁹ F.B. Sayre, *Public Welfare Offences*, 33 COLUMBIA LAW REVIEW 67 (1933).

²⁰ F.B. Sayre, *Public Welfare Offences*, 33 COLUMBIA LAW REVIEW 68-69 (1933).

²¹ F.B. Sayre, *Public Welfare Offences*, 33 COLUMBIA LAW REVIEW 55 (1933).

²² F.B. Sayre, *Public Welfare Offences*, 33 COLUMBIA LAW REVIEW 70 (1933).

In other words, so long as there is no stigmatisation or serious punishment of those (largely business people) who act in ways that deviate from public welfare regulatory requirements, dispensing with *mens rea* is tolerable. However, what is not to be tolerated is any attempt to dispense with *mens rea* where the community sees the law as concerned with serious moral delinquency and where serious punishments follow on conviction. As Sayre puts it:

For true crimes it is imperative that courts should not relax the classic requirement of *mens rea* or guilty intent.²³

False analogies with public welfare offences, in order to ease the way for the prosecution to secure a conviction, should be resisted. He concludes with the warning that the courts should avoid extending the doctrines applicable to public welfare offenses to ‘true crimes’, because this would be to ‘sap the vitality of the criminal law’.²⁴

Similarly, in their Preface to Miquel Martin-Casals’ edited volume, *The Development of Liability in Relation to Technological Change*,²⁵ John Bell and David Ibbetson remark that, as new technologies developed from the mid-Nineteenth Century, we can see the beginnings of a movement from ‘tort’ to ‘regulation’. Thus, they say:

We see the way in which regulatory law, private insurance and state-run compensation schemes developed to deal with the issues the law now confronted. Regulatory law and inspections by officials and private insurers and associations dealt with many of the issues of preventing accidents. Compensation systems outside tort offered remedies to many of the victims of accidents. In this matrix of legal interventions,

²³ F.B. Sayre, *Public Welfare Offences*, 33 COLUMBIA LAW REVIEW 80 (1933).

²⁴ F.B. Sayre, *Public Welfare Offences*, 33 COLUMBIA LAW REVIEW 84 (1933); Compare, R.A. Duff, *Perversions and Subversions of Criminal Law* in THE BOUNDARIES OF THE CRIMINAL LAW 88, 104 (R.A. Duff *et al*, eds., Oxford: Oxford University Press, 2010): ‘We must ask about the terms in which the state should address its citizens when it seeks to regulate their conduct, and whether the tones of criminal law, speaking of wrongs that are to be condemned, are more appropriate than those of a regulatory regime that speaks only of rules and penalties for their breach.’ According to Duff, where the conduct in question is a serious public wrong, it would be a ‘subversion’ of the criminal law if offenders were not to be held to account and condemned. For questions that might arise relative to the ‘fair trial’ provisions of the European Convention on Human Rights where a state decides to transfer less serious offences from the criminal courts to administrative procedures (as with minor road traffic infringements), *see e.g.*, *Öztürk v. Germany*, (1984) 6 EHRR 409.

²⁵ THE DEVELOPMENT OF LIABILITY IN RELATION TO TECHNOLOGICAL CHANGE (M. Martin-Casals ed., Cambridge: Cambridge University Press, 2010).

we can see that the place of tort law and of fault in particular changes. We become aware of [tort law's] limitations.²⁶

In a similar vein, Geneviève Viney and Anne Guégan-Lécuyer remark that a tort regime 'which seemed entirely normal in an agrarian, small-scale society, revealed itself rather quickly at the end of the nineteenth century to be unsuitable'.²⁷ So, for example, in Sweden, following a railway accident in 1864 when seven people died and eleven were seriously injured, and with no realistic claim for compensation (the train driver being in no position to satisfy a personal tort claim), a petition was presented to parliament to respond to the special needs created by the operation of the railways.²⁸ However, the movement to regulation was not only about easing the way to compensation for the victims of accidents, it was (and it continues to be) also about ensuring that innovative businesses are not over-exposed to liability. Accordingly, for tort law, the challenge provoked by the first kind of disruption is not simply to change the rules but to achieve an acceptable balance between, on the one hand, supporting and shielding vulnerable enterprises and, on the other, managing the risks now presented by those enterprises and their new technologies.²⁹

In contract law, too, the technologies of the Nineteenth Century had a significant disruptive effect on transactional doctrine. Notably, there was a shift from a 'subjective' consensual (purely transactional) model to an 'objective' approach. In the United States, against the background of an 'increasingly national corporate economy, the goal of standardization of commercial transactions began to overwhelm the desire to conceive of contract law as expressing the subjective desires of individuals',³⁰ and, in English law, in addition to the general shift to an objective approach, there was a particularly significant shift to a reasonable notice model in relation to the incorporation of the terms and conditions on which carriers (of both goods and persons) purported to contract. In the jurisprudence, this latter

²⁶ THE DEVELOPMENT OF LIABILITY IN RELATION TO TECHNOLOGICAL CHANGE viii (M. Martin-Casals ed., Cambridge: Cambridge University Press, 2010).

²⁷ G. Viney and A. Guégan-Lécuyer, *The Development of Traffic Liability in France* THE DEVELOPMENT OF LIABILITY IN RELATION TO TECHNOLOGICAL CHANGE 50, 50 (M. Martin-Casals ed., Cambridge: Cambridge University Press, 2010).

²⁸ See, S. Friberg and B.W. Dufwa, *The Development of Traffic Liability in Sweden*, THE DEVELOPMENT OF LIABILITY IN RELATION TO TECHNOLOGICAL CHANGE 190 (M. Martin-Casals ed., Cambridge: Cambridge University Press, 2010).

²⁹ Compare J. Morgan, *Torts and Technology*, in THE OXFORD HANDBOOK OF LAW, REGULATION AND TECHNOLOGY 522 (R. Brownsword, E. Scotford, and K. Yeung, eds., Oxford: Oxford University Press, 2016 [e-publication]; and 2017).

³⁰ M.J. Horwitz, *THE TRANSFORMATION OF AMERICAN LAW 1870-1960* 37 (Oxford: Oxford University Press, 1992); at 48-49, Horwitz notes a parallel transformation in relation to both corporate forms and agency.

shift is symbolised by Mellish LJ's direction to the jury in *Parker v. South Eastern Railway Co.*,³¹ where the legal test is said to be not so much whether a customer actually was aware of the terms and had agreed to them but whether the railway company had given reasonable notice. In effect, this introduced an objective test. However, as Stephen Waddams has pointed out, there was an even more radical view, this being expressed in Bramwell LJ's judgment in *Parker*, the emphasis of which is 'entirely on the reasonableness of the railway's conduct of its business and on the unreasonableness of the customers' claims; there is no concession whatsoever to the notion that they could only be bound by their actual consent'.³² With this embrace of objectivism and reasonableness, contract law was able to shield the carriers of the Nineteenth Century against otherwise crippling claims for compensation (when valuable packages were lost or when there were accidents on the railways); and when, in the middle years of the last century, a mass consumer market for new technological products (cars, televisions, kitchen appliances, and so on) developed, it was able to make a fundamental correction to the traditional value of 'freedom of contract' in order to protect consumers against the small print of suppliers' standard terms and conditions. Today, at any rate, in the English law of consumer contracts, the abandonment of traditional transactionalist thinking is complete. Following the Consumer Rights Act 2015, we can say that consumers engage, not so much in contracts, but in regulated transactions.

So, while intentionality and fault were set aside in the regulatory parts of criminal law and torts, classical transactionalist ideas of consent and agreement were marginalised, being replaced in the *mainstream* of contract law by 'objective' tests and standards set by reasonable business practice. In short, as Morton Horwitz puts it, with the disruption of legal rules, there was a dawning sense that 'all law was a reflection of collective determination, and thus inherently regulatory and coercive'.³³

What we see across these developments is a pattern of disruption to legal doctrines that were organically expressed in smaller-scale non-industrialised communities. Here, the legal rules presuppose very straightforward ideas about holding to account (moreover, holding *personally* to account) those who engage intentionally in injurious or dishonest acts, about expecting others to act with reasonable care, and about holding others to their word. Once new technologies disrupt these ideas, we see the move to strict or absolute

³¹ *Parker v. South Eastern Railway Co.*, (1877) 2 CPD 416.

³² S. Waddams, *PRINCIPLE AND POLICY IN CONTRACT LAW* 39 (Cambridge: Cambridge University Press, 2011).

³³ M.J. Horwitz, *THE TRANSFORMATION OF AMERICAN LAW 1870-1960* 50 (Oxford: Oxford University Press, 1992).

criminal liability without proof of intent, to tortious liability without proof of fault, to vicarious liability, and to contractual liability (or limitation of liability) without proof of actual intent, agreement or consent. Even if the development in contract is less clear at this stage, in both criminal law and torts we can see the early signs of a risk management approach to liability. Moreover, we also see the early signs of doctrinal bifurcation,³⁴ with some parts of criminal law, tort law and contract law resting on traditional principles (and representing, so to speak, ‘real’ crime, tort and contract) while others deviate from these principles—often holding enterprises to account more readily but also sometimes easing the burden on business for the sake of beneficial innovation³⁵—in order to strike a more acceptable balance of the benefits and risks that technological development brings with it.

B. The second disruption

Arguably, the second technological disruption (manifesting itself in the turn to architecture, design, coding, and the like as a regulatory tool) is as old as the (defensive) architecture of the pyramids and the target-hardening use of locks. However, the variety and sophistication of the instruments of technological management that are available to regulators today is strikingly different to the position in both pre-industrial and early industrial societies. Whether or not this amounts to a difference of kind or merely one of degree scarcely seems important; we live in different times, with significantly different regulatory technologies. In particular, there is much more to technological management than traditional target-hardening: the management involved might—by designing products and places, or by coding products and people—disable or exclude potential wrongdoers as much as harden targets or immunise potential victims; and, there is now the prospect of widespread automation that takes humans altogether out of the regulatory equation. Crucially, with a risk management approach well-established, regulators now find that they have the option of responding by employing various technological instruments rather than rules. This is the moment when, so to speak, we see a very clear contrast between the legal and regulatory style of the East coast (whether traditional or progressive) and the style of the West coast.³⁶

³⁴ As recognised, for example, in the Canadian Supreme Court case of *R. v. Sault Ste. Marie*, 1978 SCC OnLine Can SC 37: (1978) 2 SCR 1299, at 1302-1303.

³⁵ For example, in the United States, the interests of the farming community were subordinated to the greater good promised by the development of the railroad network: see M.J. Horwitz, *THE TRANSFORMATION OF AMERICAN LAW 1780-1860* (Cambridge, Mass.: Harvard University Press, 1977).

³⁶ Seminally, see L. Lessig, *CODE AND OTHER LAWS OF CYBERSPACE* (New York: Basic Books, 1999); See, too, R. Brownsword, *Code, Control, and Choice: Why East is East*

Two things are characteristic of technological management. First, as I have emphasised elsewhere, unlike rules, the focus of the regulatory intervention is on the practical (not the paper) options of regulatees.³⁷ Secondly, whereas legal rules back their prescriptions with *ex post* penal, compensatory, or restorative measures, the focus of technological management is entirely *ex ante*, aiming to anticipate and prevent wrongdoing rather than punish or compensate after the event. As Lee Bygrave puts it in the context of the design of information systems and the protection of both IPRs and privacy, the assumption is that, by embedding norms in the architecture, there is ‘the promise of a significantly increased *ex ante* application of the norms and a corresponding reduction in relying on their application *ex post facto*.’³⁸

This evolution in regulatory thinking is not surprising. Having recognised the limited fitness of traditional legal rules, and having taken a more regulatory approach, the next step surely is to think not just in terms of risk assessment and risk management but also to be mindful of the technological instruments that increasingly become available for use by regulators. In this way, the regulatory mind-set is focused not only on the risks to be managed but also how best to manage those risks (including making use of technological tools).

For example, with the development of computers and then the Internet and World Wide Web, supporting a myriad of applications, it is clear that, when individuals operate in online environments, they are at risk in relation to both their ‘privacy’ and the fair processing of their personal data. Initially, regulators assumed that ‘transactionalism’ would suffice to protect individuals: in other words, it was assumed that, unless the relevant individuals agreed to, or consented to, the processing of their details, it would not be lawful. However, once it was evident that consumers in online environments routinely signalled their agreement or consent in a mechanical way, without doing so on a free and informed basis, a more robust risk-management approach invited consideration. As Eliza Mik, writing about the privacy policies of Internet companies, puts the alternative:

What could be done...is to cease treating privacy policies *as if* they were contracts and evaluate consent and disclosure requirements

and West is West, 25 LEGAL STUDIES 1 (2005).

³⁷ See, e.g., R. Brownsword, *Whither the Law and the Law Books: From Prescription to Possibility*, 39 JOURNAL OF LAW AND SOCIETY 296 (2012).

³⁸ L.A. Bygrave, *Hardwiring Privacy* in THE OXFORD HANDBOOK OF LAW, REGULATION AND TECHNOLOGY 754, 755 (R. Brownsword, E. Scotford, and K. Yeung, eds., Oxford: Oxford University Press, 2016 [e-publication]; and 2017).

from a purely regulatory perspective. Enhanced or express consent requirements may constitute a good first step. It could, however, also be claimed that the only solution lies in an outright prohibition of certain technologies or practices. In this context, the difficulty lies in regulatory target setting. The first overriding question is what is it that we are trying to protect? It can hardly be assumed that the ‘protection of autonomy’ is sufficiently precise to provide regulatory guidance.³⁹

We might, however, take this a step further. Once we are thinking about the protection of the autonomy of Internet-users or about the protection of their privacy, why not also consider the use of technological instruments in service of the regulatory objectives (provided that they can be specified in a sufficiently precise way)? Indeed, in Europe, this is just what we find in the General Data Protection Regulation (GDPR)⁴⁰ which comes into force this Spring.

Following Recital 75 of the Regulation, which lays out a catalogue of risks and harms that might impact individuals as a result of the processing of their data,⁴¹ we have in Recital 78 an enjoiner to data controllers to take ‘appropriate technical and organisational measures’ to ensure that the requirements of the Regulation are met. In the body of the Regulation, this is expressed as follows in Article 25 (Data protection by design and by default):

- I. Taking into account the state of the art, the cost of implementation and the nature, scope, context and purposes of processing as well as the risks of varying likelihood and severity for rights and freedoms

³⁹ E. Mik, *Persuasive Technologies—From Loss of Privacy to Loss of Autonomy* in PRIVATE LAW IN THE 21ST CENTURY 363, 386 (K. Barker *et al* eds., Oxford: Hart, 2017).

⁴⁰ Regulation (EU) 2016/679.

⁴¹ According to Recital 75:

The risk to the rights and freedoms of natural persons, of varying likelihood and severity, may result from personal data processing which could lead to physical, material or non-material damage, in particular: where the processing may give rise to discrimination, identity theft or fraud, financial loss, damage to the reputation, loss of confidentiality of personal data protected by professional secrecy, unauthorised reversal of pseudonymisation, or any other significant economic or social disadvantage; where data subjects might be deprived of their rights and freedoms or prevented from exercising control over their personal data; where personal data are processed which reveal racial or ethnic origin, political opinions, religion or philosophical beliefs, trade union membership, and the processing of genetic data, data concerning health or data concerning sex life or criminal convictions and offences or related security measures; where personal aspects are evaluated, in particular analysing or predicting aspects concerning performance at work, economic situation, health, personal preferences or interests, reliability or behaviour, location or movements, in order to create or use personal profiles; where personal data of vulnerable natural persons, in particular of children, are processed; or where processing involves a large amount of personal data and affects a large number of data subjects.

of natural persons posed by the processing, the controller shall, both at the time of the determination of the means for processing and at the time of the processing itself, implement appropriate technical and organisational measures, such as pseudonymisation, which are designed to implement data-protection principles, such as data minimisation, in an effective manner and to integrate the necessary safeguards into the processing in order to meet the requirements of this Regulation and protect the rights of data subjects.

2. The controller shall implement appropriate technical and organisational measures for ensuring that, by default, only personal data which are necessary for each specific purpose of the processing are processed. That obligation applies to the amount of personal data collected, the extent of their processing, the period of their storage and their accessibility. In particular, such measures shall ensure that by default personal data are not made accessible without the individual's intervention to an indefinite number of natural persons.

While talk of 'privacy enhancing technologies' and 'privacy by design' has been around for some time,⁴² in the GDPR we see that this is more than talk; it is not just that the regulatory discourse is more technocratic, there are signs that the second disruption is beginning to impact on regulatory practice—although how far this particular impact will penetrate remains to be seen.⁴³

Having sketched the ways in which the development of new technologies can shake up our thinking about the law, we now need to look more carefully at the way in which regulators are likely to frame their thinking about modifications to the regulatory environment. In short, we now need

⁴² See, L.A. Bygrave, *Hardwiring Privacy* in THE OXFORD HANDBOOK OF LAW, REGULATION AND TECHNOLOGY 754, 755 (R. Brownsword, E. Scotford, and K. Yeung, eds., Oxford: Oxford University Press, 2016 [e-publication]; and 2017); and A. Cavoukian, *PRIVACY BY DESIGN: THE SEVEN FOUNDATIONAL PRINCIPLES* (Information and Privacy Commissioner of Ontario, 2009, rev. ed. 2011) available at <https://www.ipc.on.ca/images/Resources/7foundationalprinciples.pdf> (Last visited on 5 February 2018).

⁴³ L.A. Bygrave, *Hardwiring Privacy* in THE OXFORD HANDBOOK OF LAW, REGULATION AND TECHNOLOGY 754, 755 (R. Brownsword, E. Scotford, and K. Yeung, eds., Oxford: Oxford University Press, 2016 [e-publication]; and 2017) argues, at 756, that, despite explicit legal backing, 'the privacy-hardwiring enterprise will continue to struggle to gain broad traction.' Most importantly, this is because this enterprise 'is at odds with powerful business and state interests, and simultaneously remains peripheral to the concerns of most consumers and engineers' (ibid). So far as the engineering community is concerned, see Adamantia Rachovitsa, 'Engineering and Lawyering Privacy by Design: Understanding Online Privacy both as a Technical and an International Human Rights Issue' (2016) 24 *International Journal of Law and Information Technology* 374.

to turn to the characteristics of the particular regulatory mind-sets that are disrupted and provoked by technological development.

III. THREE REGULATORY MIND-SETS: COHERENTIST, REGULATORY-INSTRUMENTALIST, AND TECHNOCRATIC

According to Edward Rubin, we live in the age of modern administrative states where the law is used ‘as a means of implementing the policies that [each particular state] adopts. The rules that are declared, and the statutes that enact them, have no necessary relationship with one another; they are all individual and separate acts of will’.⁴⁴ In other words,

Regulations enacted by administrative agencies that the legislature or elected chief executive has authorized are related to the authorizing statute, but have no necessary connection with each other or to regulations promulgated under a different exercise of legislative or executive authority.⁴⁵

In the modern administrative state, the ‘standard for judging the value of law is not whether it is coherent but rather whether it is effective, that is, effective in establishing and implementing the policy goals of the modern state.’⁴⁶ By contrast, the distinctive feature of ‘coherentism’ is the idea that law forms ‘a coherent system, a set of rules that are connected by some sort of logical relationship to each other’⁴⁷—or ‘a system of rules that fit together in a consistent logically elaborated pattern’.⁴⁸ Moreover, within the modern administrative state, the value of coherence itself is transformed: coherence, like the law, is viewed as ‘an instrumental device that is deployed only when it can be effective’.⁴⁹ In a concluding call to arms, Rubin insists that legal scholarship needs to ‘wake from its coherentist reveries’⁵⁰; and that legal scholars ‘need to relinquish their commitment to coherence and concern

⁴⁴ E.L. Rubin, *From Coherence to Effectiveness* in RETHINKING LEGAL SCHOLARSHIP 310, 311 (R. van Gestel *et al* eds., New York: Cambridge University Press, 2017).

⁴⁵ *Id.*, at 311.

⁴⁶ *Id.*, at 328.

⁴⁷ *Id.*, at 312.

⁴⁸ *Id.*, at 313.

⁴⁹ *Id.*, at 328.

⁵⁰ *Id.*, at 349; For scholarly concerns that include but also go beyond coherentism, see R. Brownsword, *Maps, Critiques, and Methodologies: Confessions of a Contract Lawyer* in METHODOLOGIES OF LEGAL RESEARCH 133 (M. van Hoecke ed., Oxford: Hart, 2011).

themselves with the effectiveness of law and its ability to achieve our democratically determined purposes'.⁵¹

There is much that we might want to say in response to Rubin's view. For example, we might want to say something about the relationship between regulatory effectiveness, regulatory economy, and regulatory efficiency—although, in my view, this would be little more than a relatively unimportant footnote.⁵² Far more importantly, we might wonder how regulatory legitimacy fits into this account and whether the effective realisation of democratically mandated purposes can take the full justificatory strain without support from, or a cross-checking by, some version of 'coherentism'.⁵³ For my purposes, however, we can draw on Rubin to construct two ideal-typical mind-sets in thinking about the way that the law should engage with new technologies and, more generally, about the reform and renewal of the law. One ideal-type, 'regulatory-instrumentalism', views legal rules as a means to implement whatever policy goals have been adopted by the State; the adequacy and utility of the law is to be assessed by its effectiveness in delivering these goals. The other ideal-type is 'coherentism', according to which the adequacy of the law is to be assessed by reference to the doctrinal consistency and integrity of its rules. Where 'regulatory-instrumentalism' informs a proposal for reform, the argument will be that some part of the law 'does not work' relative to desired policy goals. By contrast, where 'coherentism' informs a proposal for reform, the argument will be that there is a lack of clarity in the law or that there are internal inconsistencies or tensions within the law that need to be resolved.

Although Rubin does not suggest that the shift from a traditional coherentist to a regulatory-instrumentalist mind-set is associated with the emergence of technologies, it is of course precisely this shift that I am suggesting reflects the first technological disruption of the law. In this part of the article, we can say a bit more about both coherentist and regulatory-instrumentalist views before focusing on the technocratic mind-set that is distinctively

⁵¹ E.L. Rubin, *From Coherence to Effectiveness* in *RETHINKING LEGAL SCHOLARSHIP* 310, 350 (R. van Gestel *et al* eds., New York: Cambridge University Press, 2017); and, compare the seminal ideas in H. Collins, *REGULATING CONTRACTS* (Oxford: Oxford University Press, 1999).

⁵² Compare my (sceptical) remarks on this matter in R. Brownsword, *So What Does the World Need Now? Reflections on Regulating Technologies*, in *REGULATING TECHNOLOGIES* 23 (R. Brownsword and K. Yeung eds., Oxford: Hart, 2008).

⁵³ Compare my references to a 'new coherentism' in Part IV of this article; and, see R. Brownsword, *Regulatory Coherence—A European Challenge* in *VARIETIES OF EUROPEAN ECONOMIC LAW AND REGULATION: ESSAYS IN HONOUR OF HANS MICKLITZ* 235 (K. Purnhagen and P. Rott eds., Heidelberg: Springer, 2014).

provoked by the second disruption; and then we can begin to reflect on the question of which of these mind-sets should be engaged when.

A. Coherentist

It is axiomatic within coherentism that the law should be formally consistent; and, while there might be some confusion, uncertainty and inefficiency if legal rules are contradictory or in tension, the coherence of legal doctrine is typically viewed as desirable in and of itself.⁵⁴ However, coherentism also has a substantive dimension. Thus, in Rubin's account of coherentism, the law (when satisfying coherentist standards) not only displays an internal consistency and integrity, it also expresses and concretises higher 'natural law' principles, all this being distilled by an intellectual elite applying their rational wisdom.⁵⁵ Although, even now, we might detect traces of such top-down 'pre-modern' thinking (as Rubin puts it), this is not a necessary characteristic. Rather, coherentists draw on simple traditional principles that are generally judged to be both reasonable and workable. The law, on this view, is about responding to 'wrongs', whether by punishing wrongdoers or by compensating victims; it is about correction and rectification, and holding wrongdoers to account. In the field of transactions, there are echoes of this idea in the notion that the law of contract should be guided, as Lord Steyn has put it, by the simple ideal of fulfilling the expectations of honest and reasonable people;⁵⁶ and, in the field of interactions, it almost goes without saying that the law of tort should be guided by the standards and expectations of these same honest and reasonable people.

Anticipating the contrast between this coherentist mind-set and mind-sets that are more instrumental and/or technocratic, we should emphasise that the formal and substantive dimensions of coherentism betray little or no sense of the direction in which the law should be trying to move things. Coherentism looks up and down, backwards, and even sideways, but not forward. To be sure, there might be acts of reliance on coherentist confirmation of the legal position. However, coherentism is not directly instrumental; it is not about engineering change. Moreover, insofar as coherentists are

⁵⁴ The jurisprudence is replete with illustrations but *see, e.g.*, Arden LJ in *Stena Line Ltd. v. Merchant Navy Ratings Pension Fund Trustees Ltd.*, 2011 EWCA Civ 543 at [36]:

The internal coherence of the law is important because it enables the courts to identify the aims and values that underpin the law and to pursue those values and aims so as to achieve consistency in the structure of the law.

⁵⁵ E.L. Rubin, *From Coherence to Effectiveness* in RETHINKING LEGAL SCHOLARSHIP 310, 311 (R. van Gestel *et al* eds., New York: Cambridge University Press, 2017).

⁵⁶ Seminally, *see* J. Steyn, *Contract Law: Fulfilling the Reasonable Expectations of Honest Men*, 113 LAW QUARTERLY REVIEW 433 (1997).

focused on righting wrongs, their gaze is not on prevention and certainly not on the elimination of practical options.

There is one further important aspect of coherentist thinking, a feature that manifests itself quite regularly now that new technologies and their applications present themselves for classification and characterisation relative to established legal concepts and categories. Here, we find not only a coherentist focus on the recognised legal concepts, categories and classifications⁵⁷ but also a certain reluctance to abandon these concepts, categories and classifications with a view to contemplating a bespoke response. For example, rather than recognising new types of intellectual property, coherentists will prefer to tweak existing laws of patents and copyright.⁵⁸ Similarly, we will recall Lord Wilberforce's much-cited remarks on the heroic efforts made by the courts—confronted by modern forms of transport, various kinds of automation, and novel business practices—to force 'the facts to fit uneasily into the marked slots of offer, acceptance and consideration'⁵⁹ or whatever other traditional categories of the law of contract might be applicable. And, in transactions, this story continues; coherentism persists. So, for example, coherentists will want to classify e-mails as either instantaneous or non-instantaneous forms of communication (or transmission),⁶⁰ they will want to apply the standard formation template to online shopping sites, they will want to draw on traditional notions of agency in order to engage electronic agents and smart machines,⁶¹ and they will want to classify individual 'prosumers' and 'hobbyists' who buy and sell on new platforms (such as platforms that support trade in 3D printed goods) as either business sellers or consumers.⁶² As the infrastructure for transactions becomes ever more tech-

⁵⁷ See, e.g., the excellent analysis in S. Bayern *et al*, *Company Law and Autonomous Systems: A Blueprint for Lawyers, Entrepreneurs, and Regulators*, 9 HASTINGS SCIENCE AND TECHNOLOGY LAW JOURNAL 135 (2017), where company structures that are provided for in US, German, Swiss, and UK law are reviewed to see whether they might plausibly act as a host for autonomous systems that provide a service (such as file storage, file retrieval and metadata management).

⁵⁸ Compare the analysis of multi-media devices in T. Aplin, *COPYRIGHT LAW IN THE DIGITAL SOCIETY: THE CHALLENGES OF MULTIMEDIA* (Oxford: Hart, 2005).

⁵⁹ As Lord Wilberforce put it in *New Zealand Shipping Co. Ltd. v. A.M. Satterthwaite and Co. Ltd.*, 1975 AC 154, 167: (1974) 2 WLR 865.

⁶⁰ See, e.g., A. Murray, *Entering into Contracts Electronically: the Real WWW in LAW AND THE INTERNET: A FRAMEWORK FOR ELECTRONIC COMMERCE* 17 (L. Edwards and C. Waelde eds., Oxford: Hart, 2000); and E. Mik, *The Effectiveness of Acceptances Communicated by Electronic Means, Or – Does the Postal Acceptance Rule Apply to Email?*, 26 JOURNAL OF CONTRACT LAW 68 (2009) (concluding that such classificatory attempts should be abandoned).

⁶¹ Compare, e.g., E. Weitzenboeck, *Electronic Agents and the Formation of Contracts*, 9 INTERNATIONAL JOURNAL OF LAW AND INFORMATION TECHNOLOGY 204 (2001).

⁶² Compare e.g., C. Twigg-Flesner, *Conformity of 3D Prints—Can Current Sales Law Cope?* in DIGITAL REVOLUTION: CHALLENGES FOR CONTRACT LAW IN PRACTICE 35 (R.

nological, the tension between this strand of common law coherentism and regulatory-instrumentalism becomes all the more apparent.

B. Regulatory-Instrumentalist

‘Regulation’ is generally understood as a process of directing regulatees, monitoring and detecting deviation, and correcting for non-compliance, all of this relative to specified regulatory purposes. The regulatory mindset is, at all stages, instrumental and instrumentally rational. The question is: what works? When a regulatory intervention does not work, it is not enough to restore the status quo; rather, further regulatory measures should be taken, learning from previous experience, with a view to realising the regulatory purposes more effectively. Hence, the purpose of the criminal law is not simply to respond to wrongdoing (as corrective justice demands) but to reduce crime by adopting whatever measures of deterrence promise to work.⁶³ Similarly, in a safety-conscious community, the purpose of tort law is not simply to respond to wrongdoing but to deter practices and acts where agents could easily avoid creating risks of injury and damage. For regulatory-instrumentalists, the path of the law should be progressive: we should be getting better at regulating crime and improving levels of safety.⁶⁴

One of the striking features of the European Union has been the single market project, a project that the Commission has pursued in a spirit of conspicuous regulatory-instrumentalism. Here, the regulatory objectives are: (i) to remove obstacles to consumers shopping across historic borders; (ii) to remove obstacles to businesses (especially small businesses) trading across

Schulze and D. Staudenmayer eds., Baden-Baden: Nomos, 2016).

⁶³ Compare D. Garland, *THE CULTURE OF CONTROL: CRIME AND SOCIAL ORDER IN CONTEMPORARY SOCIETY* (Oxford: Oxford University Press, 2001); and A. Marks *et al*, *Automatic Justice? Technology, Crime, and Social Control* in *THE OXFORD HANDBOOK OF LAW, REGULATION AND TECHNOLOGY* 705 (R. Brownsword, E. Scotford, and K. Yeung, eds., Oxford: Oxford University Press, 2016 [e-publication]; and 2017).

⁶⁴ The parallel development of a risk-management ideology in both criminal law and tort is noted by M. Feeley and J. Simon, *Actuarial Justice: The Emerging New Criminal Law* in *THE FUTURES OF CRIMINOLOGY* 173 (David Nelken ed., London: Sage, 1994). At 186, Feeley and Simon say:

Although social utility analysis or actuarial thinking is commonplace enough in modern life, in recent years this mode of thinking has gained ascendancy in legal discourse, a system of reasoning that traditionally has employed the language of morality and focused on individuals. Thus, for instance, it is by now the conventional mode of reasoning in tort law. Traditional concerns with fault and negligence standards—which require a focus on the individual and concern with closely contextual causality—have given way to strict liability and no-fault. One sees this in both doctrines, and even more clearly in the social vision that constitutes the discourse about modern torts. The new doctrines ask, how do we ‘manage’ accidents and public safety. They employ the language of social utility and management, not individual responsibility.

historic borders; and (iii) to achieve a high level of consumer protection. In order to realise this project, it has been essential to channel the increasing number of member states towards convergent legal positions. Initially, minimum harmonisation Directives were employed, leaving it to member states to express the spirit and intent of Directives in their own doctrinal way. To this extent, a degree of divergence was tolerated in the way that the regional inputs were translated into national outputs that, in turn, might become the relevant legal material for interpretation and application. However, where the Commission needed a stronger steer, it could (and did) resort to the use of maximum harmonisation measures (restricting the scope for local glosses on the law); and, where Directives did not work, then Regulations could be used (a case in point being the recent GDPR)⁶⁵, leaving member states with even less room for local divergence.

As the single market project evolves into the digital Europe project, the Commission's regulatory-instrumentalist mind-set is perfectly clear. As the Commission puts it:

The pace of commercial and technological change due to digitalisation is very fast, not only in the EU, but worldwide. The EU needs to act now to ensure that business standards and consumer rights will be set according to common EU rules respecting a high-level of consumer protection and providing for a modern business friendly environment. It is of utmost necessity to create the framework allowing the benefits of digitalisation to materialise, so that EU businesses can become more competitive and consumers can have trust in high-level EU consumer protection standards. By acting now, the EU will set the policy trend and the standards according to which this important part of digitalisation will happen.⁶⁶

In this context, coherentist thoughts about tidying up and standardising the lexicon of the consumer *acquis*, or pushing ahead with a proposed Common European Sales Law,⁶⁷ or codifying European contract law drop down the list of priorities. For regulatory-instrumentalists, when we question

⁶⁵ Regulation (EU) 2016/679.

⁶⁶ European Commission, Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee, *Digital contracts for Europe—Unleashing the potential of e-commerce* COM(2015) 633 (Brussels, 9 December 2015), 7.

⁶⁷ Despite a considerable investment of legislative time, the proposal was quietly dropped at the end of 2014. This also, seemingly, signalled the end of the project on the Common Frame of Reference in which, for about a decade, there had been a huge investment of time and resource.

the fitness of the law, we are not asking whether legal doctrine is consistent, we are asking whether it is fit for delivering the regulatory purposes.

Lastly, I take it to be characteristic of the regulatory-instrumentalist mind-set that the thinking becomes much more risk-focused. In criminal law and in torts, the risks that need to be assessed and managed relate primarily to physical and psychological injury and to damage to property and reputation; in contract law, it is economic risks that are relevant. So, for example, we see in the development of product liability a scheme of acceptable risk management that responds to the circulation of products (such as cars or new drugs) that are beneficial but also potentially dangerous. However, this response is still in the form of a revised *rule* (it is not yet technocratic); and it is still in the nature of an *ex post* correction (it is not yet *ex ante* preventive). Nevertheless, it is only a short step from here to a greater investment in *ex ante* regulatory checks (for food and drugs, chemicals, and so on) and to the use of new technologies as preventive regulatory instruments. In other words, it is only a short step from risk-managing regulatory-instrumentalist thinking to a more technocratic mind-set.

C. Technocratic

As is well-known, there was a major debate in the United Kingdom at the time that seat belts were fitted in cars and it became a criminal offence to drive without engaging the belt. Tort law responded, too, by treating claimant drivers or passengers who failed to engage their seat belts as, in part, contributing to their injuries.⁶⁸ Critics saw this as a serious infringement of their liberty—namely, their option to drive with or without the seat belt engaged. Over time, though, motorists became enculturated into compliance. So far, we might say, so regulatory-instrumentalist.

Suppose, though, that motorists had not become enculturated into compliance. Given the difficulty of enforcing a rule requiring seat belts to be engaged, regulatory-instrumentalism might have taken a more technocratic turn. For example, there might have been a proposal to design vehicles so that cars were simply immobilised if seat belts were not worn. In the USA, where such a measure of technological management was indeed adopted before being rejected, the implications for liberty were acutely felt.⁶⁹ Although the (US) Department of Transportation estimated that the so-called interlock system would save 7,000 lives per annum and prevent 340,000 injuries, ‘the

⁶⁸ *Froom v. Butcher*, 1976 QB 286; (1975) 3 WLR 379.

⁶⁹ J.L. Mashaw and D.L. Harfst, *THE STRUGGLE FOR AUTO SAFETY* Chapter 7 (Cambridge, Mass.: Harvard University Press, 1990).

rhetoric of prudent paternalism was no match for visions of technology and “big brotherism” gone mad.⁷⁰ Taking stock of the legislative debates of the time, Jerry Mashaw and David Harfst remark:

Safety was important, but it did not always trump liberty. [In the safety lobby’s appeal to vaccines and guards on machines] the freedom fighters saw precisely the dangerous, progressive logic of regulation that they abhorred. The private passenger car was not a disease or a workplace, nor was it a common carrier. For Congress in 1974, it was a private space.⁷¹

Not only does technological management of this kind aspire to limit the practical options of motorists, including removing the real possibility of non-compliance with the law, there is a sense in which it supersedes the rules of law themselves.

Today, similar debates might be had about the use of mobile phones by motorists. There are clear and dramatic safety implications but many drivers persist in using their phones while they are in their cars. If we are to be technocratic in our approach, perhaps we might seek a design solution that disables phones within cars, or while the user is driving. However, once automated vehicles relieve ‘drivers’ of their safety responsibilities, it seems that the problem will drop away—rules that penalise humans who use their mobile phones while driving will become redundant; humans will simply be transported in vehicles and the one-time problem of driving while phoning will no longer be an issue.

So, unlike coherentists, technocrats are not concerned with doctrinal integrity and their focus is not on restoring the status quo prior to wrongdoing; and, unlike regulatory-instrumentalists who do view the law in a purposive way, technocrats—or, at any rate, those who are contemplating interventions at the hard end of the spectrum—are concerned with preventing or precluding wrongdoing and employing technological measures or solutions, rather than rules or standards, to achieve their objectives.

D. Which Mind-Set to Engage

Given that regulators might frame their thinking in very different ways, does it matter which mind-set they adopt; and, if so, which mind-set should they adopt? When and why should we think like coherentists, when like regulatory-instrumentalists, and when like technocrats?

⁷⁰ *Id.*, at 135.

⁷¹ *Id.*, at 140.

To illustrate the significance of the regulatory framing, consider the following hypothetical posed by John Frank Weaver:

[S]uppose the Aeon babysitting robot at Fukuoka Lucle mall in Japan is responsibly watching a child, but the child still manages to run out of the child-care area and trip an elderly woman. Should the parent[s] be liable for that kid's intentional tort?⁷²

If we respond to this question (of the parents' liability) with the mind-set of a coherentist, we are likely to be guided by traditional notions of fault, responsibility, causation, and corrective justice. On this view, liability would be assessed by reference to what communities judge to be fair, just and reasonable—and different communities might have different ideas about whether it would be fair, just and reasonable to hold the parents liable in the hypothetical circumstances. By contrast, if we respond like a regulatory-instrumentalist, the thinking is likely to be that before retailers, such as the shop at the mall, are to be licensed to introduce robot babysitters, and before parents are permitted to make use of robocarers, there needs to be a collectively agreed scheme of compensation should something 'go wrong'. On this view, the responsibilities and liabilities of the parents would be determined by the agreed terms of the risk management package. However, we might also imagine a third response, a response of a technocratic nature, seeking to design out the possibility of such an accident. Quite what measures of technological management might be suggested is anyone's guess—perhaps an invisible 'fence' at the edge of the care zone so that children (like supermarket trolleys or golf carts) simply could not stray beyond the limits. However, thinking about the puzzle in this way, the question would be entirely about designing the machines and the space in a way that (harmful) collisions between children and mall-goers simply could not happen.

Which of these responses is appropriate? On the face of it, coherentism belongs to relatively static and stable communities, not to the turbulent times of the Twenty-First Century. To assume that traditional legal frameworks enable regulators to ask the right questions and answer them in a rational way seems over-optimistic. If we reject coherentism, we will see regulatory-instrumentalism as a plausible default with the option of a technocratic resolution always to be considered.⁷³ However, there is a concern that regulatory-instrumentalism 'flattens' decision-making, reducing all conflicts to

⁷² J.F. Weaver, *ROBOTS ARE PEOPLE TOO* 89 (Santa Barbara, Ca: Praeger, 2014).

⁷³ For a discussion in point, see D.S. Wall, *CYBERCRIME* (Cambridge: Polity Press, 2007) where a number of strategies for dealing with 'spamming' are considered. As Wall says, if the choice is between ineffective legal rules and a technological fix (filters and the like), then most would go for the latter (at 201).

a balance of interests and replacing respect for fundamental values such as respect for human rights and human dignity with an all-purpose utilitarianism. Moreover, concerns of this kind are amplified by the prospect of the use of technological management.

If we are to get some critical distance on these questions, we need a sketch of the bigger picture of the responsibilities of regulators, including a view of where the red lines are drawn and what the priorities are. We can now turn to such matters.

IV. REGULATORY RESPONSIBILITIES AND REGULATORY RED LINES

In this Part of the article, I will present a sketch of the bigger picture of regulatory responsibilities, these responsibilities being ranked in three tiers of importance. At the first and most important tier, regulators have a 'stewardship' responsibility for maintaining the pre-conditions for human social existence, for any kind of human social community. I will call these conditions 'the commons'.⁷⁴ At the second tier, regulators have a responsibility to respect the fundamental values of a particular human social community, that is to say, the values that give that community its particular identity. At the third tier, regulators have a responsibility to seek out an acceptable balance of legitimate interests. The responsibilities at the first tier are cosmopolitan and non-negotiable (the red lines here are hard); the responsibilities at the second and third tiers are contingent, depending on the fundamental values and the interests recognised in each particular community. Any conflicts between these responsibilities are to be resolved by reference to the tiers of importance: responsibilities in a higher tier always outrank those in a lower tier.

In what follows, I speak briefly to each of these three tiers before returning to the question of which regulatory mind-set should be engaged.

A. The regulatory responsibility for the commons

The basic idea of the commons is that there is a set of conditions that sets the stage for any kind of human purposeful activity, whether individually or in groups or larger communities. These conditions do not privilege any particular individual, group or community and they do not privilege any

⁷⁴ Compare R. Brownsword, *Responsible Regulation: Prudence, Precaution and Stewardship*, 62 NORTHERN IRELAND LEGAL QUARTERLY 573 (2011).

particular activity, project or plan. These are conditions that are needed by each and every human agent irrespective of the particular way in which they want to operationalize their agency.

We might get to this idea by an *a priori* route that focuses on developing an understanding of what it is to view oneself as an agent (or human agent)⁷⁵; or, we might simply tease out the presuppositions of the standard demands that are made on regulators as we debate the governance framework or the social licence for new technologies. Taking this latter approach, we will note, first, that we expect regulators to be mindful that we, as humans, have certain biological needs and that there should be no encouragement for technologies that are dangerous in that they compromise the conditions for our very existence; secondly, we will note that we have a (self-interested) sense of which technological developments we would regard as beneficial (on the basis of which we will press regulators to support and prioritise such developments; and, conversely, to reject developments that we judge to be contrary to our self-interest); and, thirdly, we will note that, even where proposed technological developments are neither dangerous nor lacking utility, some will argue that they should be prohibited (or, at least, not encouraged)⁷⁶ because their development would be immoral.⁷⁷

If we build on this analysis, we will argue that the paramount responsibility for regulators (whether they otherwise think like coherentists, regulatory-instrumentalists, or technocrats) is to protect, preserve, and promote:

- the essential conditions for human existence (given human biological needs);
- the generic conditions for human agency and self-development; and,
- the essential conditions for the development and practice of moral agency.

These, it bears repeating, are imperatives for regulators in all regulatory spaces, whether international or national, public or private. Of course,

⁷⁵ Such a strategy, I suggest, can be found in the ‘Gewirthian’ tradition that originates in A. Gewirth, *REASON AND MORALITY* (Chicago: University of Chicago Press, 1978). For detailed analysis and defence of this strategy, see D. Beyleveld, *THE DIALECTICAL NECESSITY OF MORALITY* (Chicago: University of Chicago Press, 1991).

⁷⁶ Compare R. Brownsword, *Regulatory Coherence—A European Challenge* in *VARIETIES OF EUROPEAN ECONOMIC LAW AND REGULATION: ESSAYS IN HONOUR OF HANS MICKLITZ* 235 (K. Purnhagen and P. Rott eds., Heidelberg: Springer, 2014) for discussion of the CJEU’s decision and reasoning in Case C-34/10, *Oliver Brüstle v. Greenpeace e.V.* (Grand Chamber, 18 October 2011).

⁷⁷ Recall, e.g., F. Fukuyama, *OUR POSTHUMAN FUTURE* (London: Profile Books, 2002) for the argument that the development and application of modern biotechnologies, especially concerning human genetics, should not be permitted to compromise human dignity.

determining the nature of these conditions will not be a mechanical process and I do not assume that it will be without its points of controversy.⁷⁸ Nevertheless, let me give an indication of how I would understand the distinctive contribution of each segment of the commons.

In the first instance, regulators should take steps to protect, preserve and promote the natural ecosystem for human life.⁷⁹ At minimum, this entails that the physical well-being of humans must be secured; humans need oxygen, they need food and water, they need shelter, they need protection against contagious diseases, if they are sick they need whatever medical treatment is available, and they need to be protected against assaults by other humans or non-human beings. It follows that the intentional violation of such conditions is a crime against, not just the individual humans who are directly affected, but humanity itself.⁸⁰

Secondly, the conditions for meaningful self-development and agency need to be constructed (largely in the form of positive support and negative restriction): there needs to be sufficient trust and confidence in one's fellow agents, together with sufficient predictability to plan, so as to operate in a way that is interactive and purposeful rather than merely defensive. Let me suggest that the distinctive capacities of prospective agents include being able:

- to freely choose one's own ends, goals, purposes and so on ('to do one's own thing');
- to understand instrumental reason;
- to prescribe rules (for oneself and for others) and to be guided by rules (set by oneself or by others);
- to form a sense of one's own identity ('to be one's own person').

Accordingly, the essential conditions are those that support the exercise of these capacities.⁸¹ With existence secured, and under the right conditions,

⁷⁸ Moreover, even if it is agreed where the bottom lines are to be drawn, a community still has to decide how to handle proposals for uses of technologies that do not present a threat to any of the bottom line conditions.

⁷⁹ Compare, J. Rockström *et al*, *Planetary Boundaries: Exploring the Safe Operating Space for Humanity* 14 *ECOLOGY AND SOCIETY* 32 (2009), available at <http://www.ecologyandsociety.org/vol14/iss2/art32/> (Last accessed 14 November 2016); and, K. Raworth, *DOUGHNUT ECONOMICS* 43-53 (London: Random House Business Books, 2017).

⁸⁰ Compare R. Brownsword, *Crimes Against Humanity, Simple Crime, and Human Dignity* in B. van Beers, *et al* eds., *HUMANITY ACROSS INTERNATIONAL LAW AND BIOLAW* 87 (Cambridge University Press, 2014).

⁸¹ Compare the insightful analysis of the importance of such conditions in M. Brincker, *Privacy in Public and the Contextual Conditions of Agency* in *PRIVACY IN PUBLIC SPACE*

human life becomes an opportunity for agents to be who they want to be, to have the projects that they want to have, to form the relationships that they want, to pursue the interests that they choose to have and so on. In the twenty-first century, no other view of human potential and aspiration is plausible; in the twenty-first century, it is axiomatic that humans are prospective agents and that agents need to be free.

The gist of these agency conditions is nicely expressed in a recent paper from the Royal Society and British Academy where, in a discussion of data governance and privacy, we read that:

Future concerns will likely relate to the freedom and capacity to create conditions in which we can flourish as individuals; governance will determine the social, political, legal and moral infrastructure that gives each person a sphere of protection through which they can explore who they are, with whom they want to relate and how they want to understand themselves, free from intrusion or limitation of choice.⁸²

In this light, we can readily appreciate that—unlike, say, Margaret Atwood’s post-apocalyptic dystopia, *Oryx and Crake*⁸³—what is dystopian about George Orwell’s *1984*⁸⁴ and Aldous Huxley’s *Brave New World*⁸⁵ is not that human *existence* is compromised but that human *agency* is compromised.⁸⁶ We can appreciate too, that today’s data-veillance practices, as much as 1984’s surveillance, ‘may be doing less to deter destructive acts than [slowly to narrow] the range of tolerable thought and behaviour.’⁸⁷

Thirdly, where human agents have moral aspirations, the commons must secure the conditions for a moral community. Agents who reason impartially will understand that each human agent is a stakeholder in the commons that protects the essential conditions for human existence together with the generic conditions of agency; and that these conditions must, therefore, be respected. Beyond these conditions, the moral aspiration is to do the right thing relative not simply to one’s own interests but relative to the

64 (T. Timan *et al* eds., Cheltenham: Edward Elgar, 2017).

⁸² The Royal Society and British Academy, *CONNECTING DEBATES ON THE GOVERNANCE OF DATA AND ITS USES* 5 (London, December 2016).

⁸³ M. Atwood, *ORYX AND CRAKE* (London: Bloomsbury, 2003).

⁸⁴ G. Orwell, *1984* (London: Penguin Books, 1954) (first published 1949).

⁸⁵ A. Huxley, *BRAVE NEW WORLD* (London: Vintage Books, 2007) (first published 1932).

⁸⁶ To be sure, there might be some doubt about whether the regulation of particular acts should be treated as a matter of the existence conditions or the agency conditions. For present purposes, however, resolving such a doubt is not a high priority. The important question is whether we are dealing with a bottom-line condition.

⁸⁷ F. Pasquale, *THE BLACK BOX SOCIETY* 52 (Harvard University Press, 2015).

interests that other human agents might have. While respect for the commons' conditions is binding on all human agents, these conditions do not rule out the possibility of moral contestation and moral pluralism. Rather, these are pre-conditions for moral debate and discourse, giving each agent the opportunity to develop his or her own view of what is morally prohibited, permitted, or required in relation to those acts, activities and practices that are predicated on the existence of the commons.

B. The regulatory responsibility to respect the community's fundamental values

Beyond the fundamental stewardship responsibilities, regulators are also responsible for ensuring that the fundamental values of their particular community are respected. Just as each individual human agent has the capacity to develop their own distinctive identity, the same is true if we scale this up to communities of human agents. There are common needs but also distinctive identities.

From the middle of the Twentieth Century, many nation states have expressed their fundamental (constitutional) values in terms of respect for human rights and human dignity.⁸⁸ These values (most obviously the human right to life) clearly intersect with the commons conditions and there is much to debate about the nature of this relationship and the extent of any overlap—for example, if we understand the root idea of human dignity in terms of humans having the capacity freely to do the right thing for the right reason,⁸⁹ then human dignity reaches directly to the commons' conditions for moral agency.⁹⁰ However, those nation states that articulate their particular identities by the way in which they interpret their commitment to respect for human dignity are far from homogeneous. Whereas, in some communities, the emphasis of human dignity is on individual empowerment and autonomy, in others it is on constraints relating to the sanctity, non-commercialisation, non-commodification, and non-instrumentalisation of human life.⁹¹

⁸⁸ See R. Brownsword, *Human Dignity from a Legal Perspective* in *CAMBRIDGE HANDBOOK OF HUMAN DIGNITY 1* (M. Duwell *et al.*, eds., Cambridge: Cambridge University Press, 2014).

⁸⁹ For such a view, see Roger Brownsword, 'Human Dignity, Human Rights, and Simply Trying to Do the Right Thing' in Christopher McCrudden (ed), *Understanding Human Dignity* (Proceedings of the British Academy 192) (Oxford: The British Academy and Oxford University Press, 2013) 345.

⁹⁰ See, R. Brownsword, *From Erehwon to AlphaGo: For the Sake of Human Dignity Should We Destroy the Machines?*, 9 *LAW, INNOVATION AND TECHNOLOGY* 117 (2017).

⁹¹ See D. Beylveid and R. Brownsword, *HUMAN DIGNITY IN BIOETHICS AND BIOLAW* (Oxford: Oxford University Press, 2001); T. Caulfield and R. Brownsword, *Human Dignity: A Guide to Policy Making in the Biotechnology Era*, 7 *NATURE REVIEWS GENETICS* 72 (2006); and

These differences in emphasis mean that communities articulate in very different ways on a range of beginning of life and end of life questions as well as questions of human enhancement, and so on.

With the second kind of disruption to the regulatory mind-set, one question that should now be addressed is whether, and if so how far, a community sees itself as distinguished by its commitment to regulation by rule. In some smaller scale communities or self-regulating groups, there might be resistance to a technocratic approach because compliance that is guaranteed by technological means compromises the context for trust—this might be the position, for example, in some business communities (where self-enforcing transactional technologies, such as blockchain, are rejected).⁹² Or, again, a community might prefer to stick with regulation by rules because it values public participation in setting standards and is worried that this might be more difficult if the debate were to become technocratic.

If a community decides that it is generally happy with an approach that relies on technological features rather than rules, it then has to decide whether it is also happy for humans to be out of the loop. Where the technologies involve AI (as in anything from steering public buses to decisions made by the tax authorities), the ‘computer loop’ might be the only loop that there is. As Shawn Bayern and his co-authors note, this raises an urgent question, namely: ‘do we need to define essential tasks of the state that must be fulfilled by human beings under all circumstances?’⁹³ Furthermore, once a community is asking itself such questions, it will need to clarify its understanding of the relationship between humans and robots—in particular, whether it treats robots as having moral status, or legal personality, and the like.⁹⁴

It is, of course, essential that the fundamental values to which a particular community commits itself are consistent with (or cohere with) the commons conditions; and, if we are to talk about a new form of coherentism—as I will

R. Brownsword, *RIGHTS, REGULATION AND THE TECHNOLOGICAL REVOLUTION* (Oxford: Oxford University Press, 2008).

⁹² See, the excellent discussion in K.E.C. Levy, *Book-Smart, Not Street-Smart: Blockchain-Based Smart Contracts and The Social Workings of Law*, 3 *ENGAGING SCIENCE, TECHNOLOGY, AND SOCIETY* 1 (2017).

⁹³ S. Bayern *et al*, *Company Law and Autonomous Systems: A Blueprint for Lawyers, Entrepreneurs, and Regulators*, 9 *HASTINGS SCIENCE AND TECHNOLOGY LAW JOURNAL* 156 (2017).

⁹⁴ See, e.g., Bert-Jaap Koops *et al*, *Bridging the Accountability Gap: Rights for New Entities in the Information Society?*, 11 *MINNESOTA JOURNAL OF LAW, SCIENCE AND TECHNOLOGY* 497 (2010); and J.J. Bryson *et al*, *Of, for, and by the people: The legal lacuna of synthetic persons*, 25 *ARTIFICIAL INTELLIGENCE AND LAW* 273 (2017).

suggest we might—it should be focused in the first instance on ensuring that regulatory operations are so consistent.

C. The regulatory responsibility to seek an acceptable balance of interests

This takes us to the third tier of regulatory responsibility. As we have said, with the development of a regulatory-instrumentalist mind-set, we find that much of traditional tort and contract law is overtaken by an approach that seems to promote general policy objectives (such as supporting and encouraging beneficial innovation) while balancing this with countervailing interests. Given that different balances will appeal to different interest groups, finding an acceptable balance is a major challenge for regulators.

Today, we have the perfect example of this challenge in the debate about the liability (both criminal and civil) of Internet intermediaries for the unlawful content that they carry or host.⁹⁵ Should intermediaries be required to monitor content or simply act after the event by taking down offending content? In principle, we might argue that such intermediaries should be held strictly liable for any or some classes of illegal content; or that they should be liable if they fail to take reasonable care; or that they should be immunised against liability even though the content is illegal. If we take a position at the strict liability end of the range, we might worry that the liability regime is too burdensome to intermediaries and that on-line services will not expand in the way that we hope; but, if we take a position at the immunity end of the range, we might worry that this treats the Internet as an exception to the Rule of Law and is an open invitation for the illegal activities of copyright infringers, paedophiles, terrorists and so on. In practice, most legal systems balance these interests by taking a position that confers an immunity but only so long as the intermediaries do not have knowledge or notice of the illegal content. Predictably, now that the leading intermediaries are large US corporations with deep pockets, and not fledgling start-ups, many think that the time is ripe for the balance to be reviewed.⁹⁶ However,

⁹⁵ Almost by the day, the media carry pieces that further fuel and contribute to this debate: see, e.g., D. Aaronovitch, *Bringing law and order to digital Wild West* in THE TIMES 25, (4 January 2018); and E. Munn, *YouTube severs (some of) its ties with Logan Paul*, available at <http://www.alphr.com/life-culture/1008081/youtube-severs-some-of-its-ties-with-logan-paul> (Last accessed 11 January 2018).

⁹⁶ For a particularly compelling analysis, see M. Thompson, *Beyond Gatekeeping: the Normative Responsibility of Internet Intermediaries*, 18 VANDERBILT JOURNAL OF ENTERTAINMENT AND TECHNOLOGY LAW 783 (2016).

finding a balance that is generally acceptable, in both principle and practice, is another matter.⁹⁷

Where the content that is carried or hosted is perfectly lawful, we might think that there is no interest to set against its online presence. Indeed, we might think that, in a community that is fundamentally committed to freedom of expression, there are strong reasons for keeping such content available. However, there might be an interest, not in relation to the removal of the content, but in relation to the way in which search engines ‘advertise’ or ‘signpost’ or ‘direct towards’ the content at issue. In other words, there might be a ‘right to be forgotten’ of the kind upheld by the Court of Justice of the European Union (the CJEU) in the much-debated *Google Spain* case.⁹⁸

Here, reasoning in a coherentist way, the CJEU accepted that a right to be forgotten is implicit in the conjunction of Articles 7 (respect for private life) and 8 (protection of personal data) of the EU Charter of Fundamental Rights⁹⁹ together with Articles 12(b) and 14(a) of the Data Protection Directive¹⁰⁰—these provisions of the Directive concerning, respectively, the data subject’s right to obtain rectification, erasure or blocking where the processing of the data is not compliant with the Directive and the data subject’s right to object on ‘compelling legitimate grounds’ to the processing of the data which itself is ostensibly justified by reference to the legitimate interests of the controller or third parties. The significance of the newly recognised right to be forgotten is that a data subject who objects to certain personal data being flagged up where a search is made under that data subject’s name may require the link to be erased—in the *Google Spain* case itself, the information in question was an announcement made some 16 years earlier in a Spanish newspaper that identified the data subject in connection with a real estate auction that was related to attachment proceedings for the recovery of social security debts. Moreover, this right may be exercised even if the

⁹⁷ In the EU, there is also the question of whether national legislative initiatives—such as the recent German NetzDG, which is designed to encourage social networks to process complaints about hate speech and other criminal content more quickly and comprehensively—are compatible with the provisions of Directive 2000/31/EC on e-commerce: see, for discussion of this particular question, G. Spindler, *Internet Intermediary Liability Reloaded—The New German Act on Responsibility of Social Networks and its (In-) Compatibility With European Law*, available at <https://www.jipitec.eu/issues/jipitec-8-2-2017/4567> (Last accessed 5 February 2018).

⁹⁸ Case C-131/12, *Google Spain SL, Google Inc. v. Agencia Española de Protección de Datos (AEPD), Mario Costeja González* [2014] available at http://curia.europa.eu/juris/document/document_print.jsf?doclang=EN&docid=152065 (Last accessed 5 February 2018).

⁹⁹ Charter of Fundamental Rights of the European Union (2000/C 364/01) (18 December 2000).

¹⁰⁰ Directive 95/46/EC.

data to be forgotten is perfectly lawful and accurate and even if there is no evidence of prejudice to the data subject.

However, the judgment is riddled with references to the ‘balancing of interests’ leaving the precise basis of the right unclear. If the right is derived from Articles 7 and 8 of the Charter then, as the Court observes, it belongs to a privileged class of rights that ‘override, as a rule, not only the economic interests of the operator of the search engine but also the interest of the general public in finding that information upon a search relating to the data subject’s name’.¹⁰¹ In other words, it would only be other, conflicting, fundamental rights (such as the fundamental right to freedom of expression that is recognised by Article 11 of the Charter) that could be pleaded against such an overriding effect. Immediately after saying this, though, the court muddies the waters by suggesting that the right to be forgotten would not have overriding effect if ‘it appeared, *for particular reasons*, such as the role played by the data subject in public life, that the interference with his fundamental rights is justified by the preponderant interest of the general public in having, on account of inclusion in the list of results, access to the information in question’.¹⁰² Clearly, care needs to be taken that the only reasons that qualify as ‘particular reasons’ here are that fundamental rights are implicated. If, on the other hand, the right to be forgotten rests on the rights in Articles 12(b) and 14(a) of the Directive, it would not be privileged in the way that fundamental rights are and a general balancing of interests (seeking an acceptable or reasonable accommodation of relevant interests) would be appropriate. On this analysis, the particular reasons relied on against the right to be forgotten could be much broader—or, at any rate, this would be so unless we read the more particular provisions of Article 8 of the Charter as elevating the specific rights of the Directive to the status of fundamental rights.

Applying its principles to the case at hand, the Court held as follows:

As regards a situation such as that at issue in the main proceedings... it should be held that, having regard to the sensitivity for the data subject’s private life of the information contained in those announcements and to the fact that its initial publication had taken place 16 years earlier, the data subject establishes a right that that information should no longer be linked to his name by means of such a list. Accordingly, since in the case in point there do not appear to be particular reasons

¹⁰¹ Charter of Fundamental Rights of the European Union (2000/C 364/01) (18 December 2000) at para 97.

¹⁰² Charter of Fundamental Rights of the European Union (2000/C 364/01) (18 December 2000) at para 97 (emphasis added).

substantiating a preponderant interest of the public in having, in the context of such a search, access to that information, a matter which is, however, for the referring court to establish, the data subject may, by virtue of Article 12(b) and subparagraph (a) of the first paragraph of Article 14 of Directive 95/46, require those links to be removed from the list of results.¹⁰³

From a coherentist perspective, what is puzzling here is that fundamental rights (to privacy) are being mixed with rights (in the Directive) that are subject to balancing and that belong to a different class of interests.¹⁰⁴ Whereas, from a fundamental rights perspective, it makes no sense to think that the passage of 16 years is a relevant consideration, from a balancing perspective, the privacy-sensitive nature of the data has no privileged status.¹⁰⁵ Arguably, the Court is trying to strike some intermediate position between fundamental rights and simple balancing. What might this be?

In principle, a community might treat a right to be forgotten as: (i) a fundamental right that is necessarily privileged and overriding in relation to all non-fundamental rights (as a right that is constitutive of this particular community); or (ii) as an interest that is not protected as a fundamental right but which, in the general balancing of interests, has more weight (although still susceptible to being outweighed by the preponderance of interests); or (iii) as a simple legitimate interest to be balanced against other such interests. Arguably, *Google Spain* is an example of a community that, being uncertain about its priority of informational rights and interests, needs to place the right to be forgotten in category (ii). While such an ad hoc approach might offend coherentists, it fits well enough with a regulatory-instrumental mindset where there is uncertainty about the most acceptable balancing point. That said, if this is the nature of the exercise, we might think that it is better undertaken by the legislative rather than the judicial branch.¹⁰⁶

¹⁰³ Charter of Fundamental Rights of the European Union (2000/C 364/01) (18 December 2000) at para 98.

¹⁰⁴ Compare the insightful critique in E. Frantziou, *Further Developments in the Right to be Forgotten: The European Court of Justice's Judgment in Case C-131/12, Google Spain SL, Google Inc. v. Agencia Española de Protección de Datos*, 14 HUMAN RIGHTS LAW REVIEW 761, esp. at 768-769 (2014).

¹⁰⁵ Whether or not the elapse of time is a relevant consideration seems to depend on the particular facts of the case: see Article 29 Data Protection Working Party, *Guidelines on the Implementation of the Court of Justice of the European Union Judgment on "Google Spain and Inc v. Agencia Española de Protección de Datos (AEPD) and Mario Costeja González" C-131/32* (November 26, 2014) at 15-16 ('Depending on the facts of the case, information that was published a long time ago...might be less relevant [than] information that was published 1 year ago.').

¹⁰⁶ In Europe, Article 17 of the GDPR, Regulation (EU) 2016/679, now provides for a right to erasure with 'a right to be forgotten' placed alongside this in the heading to the Article.

D. Which regulatory mind-set should be engaged?

To repeat our earlier question but now in the light of the bigger picture of regulatory responsibilities, which mind-set should regulators engage?

Given that the paramount responsibility is to protect the commons, we might be concerned that, if regulators think in a traditional coherentist way, they might fail to take the necessary protective steps—steps that might involve new rules, or the use of measures of technological management, or both. This suggests that a regulatory-instrumentalist approach is a better default but it is only so if regulators are focused on the relevant risks—namely, the risks presented by technological development to the commons' conditions. Moreover, we might want to add that regulatory-instrumentalism, with this particular risk focus, is only a better default if it is applied with a suitably precautionary mentality. Regulators need to understand that compromising the commons is always the worst-case scenario.¹⁰⁷ Alongside such a default, a technocratic approach might well be appropriate. For example, if we believe that a rule-based approach cannot protect the planetary boundaries, then a geo-engineering approach might be the answer.¹⁰⁸ However, it needs to be borne in mind that, with a resort to technological management, there is potentially more than one kind of risk to the commons: an ineffective attempt to manage risks to the existence conditions might actually make things worse; and an effective intervention for the sake of the existence conditions might compromise the conditions for self-development and moral agency (because both autonomy and virtue presuppose a context in which one acts freely). Arguably, this invites the articulation of a 'new coherentism', reminding regulators of two things: first, that their most urgent regulatory focus should be on the commons conditions; and, secondly, that, whatever their interventions, and particularly where they take a technocratic approach, their acts must always be compatible with the preservation of the commons.

Whether this provision helps to clarify the law after the *Google Spain* case remains to be seen.

¹⁰⁷ Compare D. Beyleveld and R. Brownsword, *Complex Technology, Complex Calculations: Uses and Abuses of Precautionary Reasoning in Law* in *EVALUATING NEW TECHNOLOGIES: METHODOLOGICAL PROBLEMS FOR THE ETHICAL ASSESSMENT OF TECHNOLOGICAL DEVELOPMENTS* 175 (M. Duwell and P. Sollie eds., Dordrecht: Springer, 2009); and *Emerging Technologies, Extreme Uncertainty, and the Principle of Rational Precautionary Reasoning*, 4 *LAW INNOVATION AND TECHNOLOGY* 35 (2012).

¹⁰⁸ For discussion, see J. Reynolds, *Solar Climate Engineering, Law, and Regulation* in *THE OXFORD HANDBOOK OF LAW, REGULATION AND TECHNOLOGY* 799 (R. Brownsword, E. Scotford, and K. Yeung, eds., Oxford: Oxford University Press, 2016 [e-publication]; and 2017).

If the default for regulators is a regulatory-instrumental mind-set, then the next priority for regulators is to be mindful that they should act in ways that are consistent with the fundamental values that make the community the particular community that it is. As I have suggested, communities experiencing the second technological disruption should try to agree on the relevant principles for the use of technological measures. These principles together with the community's particular constitutive values will represent a key dimension of the local articulation of the Rule of Law. This invites an extension of new coherentism such that regulators check their actions for compatibility with the Rule of Law as articulated in the community.

Finally, in relation to the third tier of regulatory responsibility, in particular cases, there might well be some contestation about whether regulators should be trying to balance interests or apply (in a traditional coherentist way) settled rules, concepts, and classifications. However, if it is agreed that the case is one that calls for a balancing exercise, then the regulatory-instrumentalist default seems to be appropriate.

That said, these remarks might seem to be somewhat divorced from the way in which organised societies allocate particular regulatory responsibilities. Indeed, is it not a feature of the Rule of Law and democratic political arrangements that the Courts will settle disputes in accordance with established legal principles and that it is for the Legislature and the Executive to formulate and agree on public policies, plans and priorities? In other words, is it not the case that, while we expect judges and advocates in the Courts to reason like coherentists, we expect policy-making members of the Legislature and Executive to reason in a regulatory-instrumentalist way? To the extent that this is so, where in the regulatory array do we find the ultimate responsibility for stewardship of the commons and for the community's distinctive values? It is to these questions of institutional design and competence that we now turn.

V. INSTITUTIONAL ROLES AND RESPONSIBILITIES

In the late 1970s, when techniques for assisted conception were being developed and applied, but also being seriously questioned, the response of the UK government was to set up a Committee of Inquiry chaired by Mary Warnock. In 1984, the Committee's report (the Warnock Report) was published.¹⁰⁹ However, it was not until 1990, and after much debate

¹⁰⁹ REPORT OF THE COMMITTEE OF INQUIRY INTO HUMAN FERTILISATION AND EMBRYOLOGY (London: HMSO, Cm. 9314, 1984).

in Parliament, that the framework legislation, the Human Fertilisation and Embryology Act 1990, was enacted. This process, taking the best part of a decade, is regularly held up as an example of best practice when dealing with emerging technologies. Nevertheless, this methodology is not in any sense the standard operating procedure for engaging with new technologies—indeed, there is no such procedure.

The fact of the matter is that legal and regulatory responses to emerging technologies vary from one technology to another, from one legal system to another, and from one time to another. Sometimes, there is extensive public engagement, sometimes not. On occasion, special Commissions (such as the now defunct Human Genetics Commission in the UK) have been set up with a dedicated oversight remit; and there have been examples of standing technology foresight commissions (such as the US Office of Technology Assessment)¹¹⁰; but, often, there is nothing of this kind. Most importantly, questions about new technologies sometimes surface, first, in litigation (leaving it to the Courts to determine how to respond) and, at other times, they are presented to the legislature (as was the case with assisted conception).

With regard to the question of which regulatory body engages with new technologies and how, there can of course be some local agency features that shape the answers. Where, as in the United States, there is a particular regulatory array with each agency having its own remit, a new technology might be considered in just one lead agency or it might be assessed in several agencies.¹¹¹ Once again, there is a degree of happenstance about this. Nevertheless, in a preliminary way, we can make three general points.

First, if the question (such as that posed by a compensatory claim made by a claimant who alleges harm caused by a new technology) is put to the Courts, their responsibility for the integrity of the law will push them towards a coherentist assessment. Typically, courts are neither sufficiently resourced nor mandated to undertake a risk assessment let alone adopt a risk management strategy (unless the legislature has already put in place a scheme that delegates such a responsibility to the courts).¹¹²

¹¹⁰ On which, see B. Bimber, *THE POLITICS OF EXPERTISE IN CONGRESS* (Albany: State University of New York Press, 1996) charting the rise and fall of the Office and drawing out some important tensions between ‘neutrality’ and ‘politicisation’ in the work of such agencies.

¹¹¹ Compare, A.C. Lin, *Size Matters: Regulating Nanotechnology*, 31 *HARVARD ENVIRONMENTAL LAW REVIEW* 349 (2007).

¹¹² Perhaps we should view Patent Offices in this light. In the 1980s, there were major decisions to be made about the patentability of biotechnological products and processes, models of which could not be brought into the Office to demonstrate how they worked and which also raised complex moral issues. For extended discussion, see A. Pottage and B.

Secondly, if the question finds its way into the legislative arena, it is much more likely that politicians will engage with it in a regulatory-instrumentalist way; and, once the possibility of technological measures gets onto the radar, it is much more likely that (as with institutions in the EU) we will see a more technocratic mind-set.

Thirdly, if leaving so much to chance seems unsatisfactory, then it is arguable that there needs to be a body that is charged with undertaking the preliminary engagement with new technologies. The remit and challenge for such a body would be to ensure that there is no harm to the commons; to try to channel such technologies to our most urgent needs (relative to the commons); and, to help each community to address the question of the kind of society that it distinctively wants to be—doing all that, moreover, in a context of rapid social and technological change. As Wendell Wallach rightly insists:

Bowing to political and economic imperatives is not sufficient. Nor is it acceptable to defer to the mechanistic unfolding of technological possibilities. In a democratic society, we—the public—should give approval to the futures being created. At this critical juncture in history, an informed conversation must take place before we can properly give our assent or dissent.¹¹³

Granted, the notion that we can build agencies that are fit for such purposes might be an impossible dream. Nevertheless, I join those who argue that this is the right time to set up a suitably constituted body¹¹⁴—possibly along the lines of the Centre for Data Ethics and Innovation (to set standards for the ethical use of AI and data) as announced by the UK government in late 2017¹¹⁵—that would underline our responsibilities for the commons as well as facilitating the development of each community’s regulatory and social licence for these technologies.¹¹⁶

Sherman, *FIGURES OF INVENTION: A HISTORY OF MODERN PATENT LAW* (Oxford: Oxford University Press, 2010); and, on the moral dimension of these debates, see D. Beyleveld and R. Brownsword, *MICE, MORALITY AND PATENTS* (London: Common Law Institute of Intellectual Property, 1993).

¹¹³ See, W. Wallach, *A DANGEROUS MASTER IO* (Basic Books, 2015).

¹¹⁴ Amongst many matters in this paper that invite further discussion, the composition of such a Commission invites debate. See, too, W. Wallach, *A DANGEROUS MASTER* Chapters 14-15 (Basic Books, 2015).

¹¹⁵ See *Autumn Budget 2017: 25 things you need to know* (H.M. Treasury, 22 November 2017) point 16: available at <https://www.gov.uk/government/news/autumn-budget-2017-25-things-you-need-to-know> (Last accessed 25 November 2017).

¹¹⁶ Compare G. Mulgan’s proposal for the establishment of a Machine Intelligence Commission in *A machine intelligence commission for the UK* (22 February 2016) available at <http://www.nesta.org.uk/blog/machine-intelligence-commission-uk> (Last accessed

In the light of this, consider briefly the much-debated question of who should be liable for what if there are accidents that involve autonomous vehicles. It goes without saying that it makes little sense to try, in a coherentist way, to apply the principles for judging the negligence of human drivers to questions of liability concerning vehicles in which there is no human in control and where the nature of the technology militates against simple causal accounts when things ‘go wrong’. Yet, if these questions are taken up in the courts, we must expect that judges (reasoning like coherentists) will try to apply notions of a reasonable standard of care, proximate cause, and so on, to responsibility for very complex technological failures.¹¹⁷ Indeed, when Joshua Brown was killed while driving his Tesla S car in autopilot mode,¹¹⁸ Tesla (presumably anticipating litigation or a discourse of fault and responsibility) were quick to highlight the safety record of their cars, to suggest that drivers of their cars needed to remain alert, and to deny that they themselves were careless in any way. By contrast, if regulators in a legislative setting approach the question of liability and compensation with a risk-management mind-set, they will not need to chase after questions of fault—or, at any rate, as in the draft UK legislation (the Automated and Electric Vehicles Bill), insurance and compensation will come first with insurers of automated vehicles then able to pursue existing (fault-based) common law claims. In this way, the challenge will be to articulate the most acceptable (and financially workable) compensatory arrangements that accommodate the interest in transport innovation with the interest in the safety of passengers and pedestrians. As Jonathan Morgan argues, the better way of determining the liability arrangements for autonomous vehicles is surely not by litigation but ‘for regulators to make the relevant choices of public policy openly after suitable democratic discussion of which robotics applications to allow and which to stimulate, which applications to discourage and which to prohibit’.¹¹⁹ Even better, in my view, regulators should make these choices after an independent emerging technologies body (of the kind that we do not, but should, have) has informed and stimulated public debate.

11 December 2016); O. Buston et al, *An Intelligent Future? Maximising the Opportunities and Minimising the Risks of Artificial Intelligence in the UK* (Future Advocacy, London, October 2016) (proposing a Standing Commission on AI to examine the social, ethical, and legal implications of recent and potential developments in AI); HC Science and Technology Committee, *Robotics and Artificial Intelligence* HC 145 2016-17.

¹¹⁷ I take it that, if autonomous vehicles have to be at least as safe as driven vehicles, there would be a difficulty in presenting them as ‘dangerous’ in a way that would get a product liability claim to first base.

¹¹⁸ Reported at <https://www.theguardian.com/technology/2016/jun/30/tesla-autopilot-death-self-driving-car-elon-musk> (Last accessed 14 November 2017).

¹¹⁹ J. Morgan, *Torts and Technology*, in *THE OXFORD HANDBOOK OF LAW, REGULATION AND TECHNOLOGY* 539 (R. Brownsword, E. Scotford, and K. Yeung, eds., Oxford: Oxford University Press, 2016 [e-publication]; and 2017).

VI. CONCLUSION

In this article, I have sketched two modes of technological disruption, impacting on both the substance of legal rules and the form of regulation, and generating, in turn, three mind-sets—coherentist, regulatory-instrumentalist, and technocratic—that may manifest themselves in regulatory discourse and debates. In order to gain some critical distance in relation to these mind-sets, I have also sketched a scheme of regulatory responsibilities that makes the protection of the commons the top priority and, at the same time, I have indicated some questions that arise from the standard division of regulatory labour between the different branches of government.

On the cusp of an era of technological management, the bearing of the regulatory mind-sets on the replacement, refinement, and revision of legal rules is significant, possibly critical. For example, to the extent that the technocratic mind-set dominates, we can expect rules to be replaced and rendered redundant; to the extent that regulatory-instrumentalism dominates coherentism, we can expect new rules to be adopted in place of older traditional rules; and, to the extent that coherentism persists, we can expect there to be some tweaking of traditional rules and concepts to accommodate new technologies as well as resistance to both regulatory-instrumentalism and technocracy.

The bearing of these mind-sets is critical, too, in relation to the discharge of regulatory responsibilities. Regulators, as stewards for the commons, need to be able to think through the regulatory noise to frame questions in the right way and to respond in ways that are rationally defensible. However, even if they are clear-headed, regulators might find that they are constrained by the role that they have been assigned in the institutional array. In an age of smart machines, our institutional design needs also to be intelligent and flexible.

That said, the reception of new technologies is likely to differ from one place to another. The interaction between global and local politics is hard to predict. Technological management might not be the only game in town; there are likely to be several voices in the regulatory discourses; and, we should not assume that the technocratic approach will be universally acceptable.

Nevertheless, unless we follow the example of Samuel Butler's eponymous Erewhonians,¹²⁰ who thought it appropriate to punish those who fall ill

¹²⁰ S. Butler, *EREWHON*, first published 1872 available at www.planetebook.com (Last accessed 3 February 2017).

while sympathising with those who commit crimes, and who destroyed their machines, human agents will co-exist and evolve with their technologies. In the regulatory sphere, the direction of travel, I have suggested, is towards technological management; but, so long as the regulatory mind-set is divided in the way that I have sketched, so long as regulators are unclear about their stewardship responsibilities, and so long as regulators are constrained by their institutional position, the future of legal rules is unpredictable. Some rules will be replaced; others will be revised; and others will be renewed; but when, where, and how precisely this will happen is impossible to predict.

Finally, should we judge that the disruption of legal and regulatory thought has been a good or a bad thing? No doubt, some have benefited and others have lost as a result of particular legal responses; but, I have no idea whether all things considered this has been a good or bad thing. Still, if the latest disruptions mean that regulators become more focused on the significance of the commons conditions, and if a new coherentism—elaborated by the courts as well as by independent stewards—crystallises to express this focus, then that surely would be no bad thing.

INFRASTRUCTURE INNOVATION IN INDIA: WHAT CAN BE INFERRED FROM EU REGULATION?

Serge J.H. Gijrath¹ (Leiden University/C-Legal)

ABSTRACT *This article assesses the innovation policy objectives underlying the proposed EU Telecom Single Market (TSM) regulation considering disruptive technological developments and asks what the regulator in India can infer from such regulation. The paper explores the network operator's dilemma of how to deal with investments in a time where fundamental innovation comes from outside, and the regulator's dilemma of how to improve the conditions for access to the operators' networks and safeguard a level playing field. The measures with respect to two technological developments: the deployment of 5G and the goal to ensure very high-speed broadband access in the EU have been analysed. Thought is given to the effectiveness of imposing active and passive infrastructure arrangements. Should private law prevail over market regulation? A mix of regulatory measures is considered.*

JEL codes: [TBA]

Key words: Infrastructure; innovation; interoperability; law and technology; Telecom Single Market proposal; 5G frequencies; broadband access; incentive regulation; private law contracts; deregulation.

Infrastructure Innovation in India: What can be inferred from EU regulation?

¹ Endowed professor of telecommunications and ICT law, elaw@Leiden, and attorney-at-law in private practice – active for clients in the IT, media and electronic communications sector, including ECN operators and IT suppliers.

I. REGULATORY DILEMMAS

A. Infrastructure Innovation in India and the Telecoms Single Market Proposal

Where disruptive technologies change the way people live, work, and socialize, the robustness of communications infrastructure becomes a key policy consideration in European and other markets, especially those that are not fully competitive yet.² Following the take-off of new services, such as the Internet of Things (IoT) and Machine to Machine (M2M) communications on a global scale, the demand for broadband and mobile transmission is likely to require additional network capacity and innovative infrastructure specifications to support these new technologies.³ Economic analysis has shown a robust growth in telecommunications networks in India over the past decades.⁴ This growth was due, amongst others, to applying a successful mix of regulation and policy initiatives.⁵ India's planning focuses upon policies that promote technological innovation and global competitiveness. As Gopalakrishnan, S., and Dasgupta, J. put it, "India's dominance in innovation capacity has not been mere coincidence. It is a result of the gradually increasing focus of its policy regime, a focus that has moved from science to technology and on to innovation and entrepreneurship and supported by years of planning and implementation."⁶ In the advent of 5G and mobile/fixed telecommunications, India may face different challenges than Europe, for instance, in terms of the size of the territory, economic growth, population, and technology innovation. The political make-up of India is also different from the EU. But, there is a connection between telecommunications infrastructure investments and economic growth.⁷ This may be a rea-

² McKinsey Global Institute, *Disruptive technologies: Advances that will transform life, business and the global economy* (May 2013).

³ T.U. Delft & T.N.O., *Steps Towards a Truly Internal Market for e-Communications, 2015* (TNO, TU Delft. 2015).

⁴ V. Sridhar, *THE TELECOM REVOLUTION IN INDIA: TECHNOLOGY, REGULATION, AND POLICY* (Oxford University Press, 2015); M.R. Narayana, *Telecommunications services and economic growth: Evidence from India*, 35(2) TELECOMMUNICATIONS POLICY 115 (2011).

⁵ See, S. Gopalakrishnan and J. Dasgupta, *Policies to drive innovation in India* in FINANCING ENTREPRENEURSHIP AND INNOVATION IN EMERGING MARKETS, (L. Casanova *et al* ed(s), Elsevier Inc., 2018); <https://doi.org/10.1016/B978-0-12-804025-6.00005-8>, adapted from an earlier version which appeared in the *Global Innovation Index 2015: Effective Innovation Policies for Development*, Chapter 8, 121–130 (WIPO, Geneva, 2015).

⁶ For an analysis of innovation policy in India over the past decades, see S. Gopalakrishnan and J. Dasgupta, *Policies to drive innovation in India* in FINANCING ENTREPRENEURSHIP AND INNOVATION IN EMERGING MARKETS, 118-120 (L. Casanova *et al* ed(s), 2018).

⁷ For an extensive analysis of this link, see K.S. Shridhar and V. Shridhar, *Telecommunications infrastructure and economic growth: evidence from developing countries*, 7(2) APPLIED

son why the Commission of the European Union (EU) is concerned with the competitiveness of the European companies, in comparison with companies in India, and other lesser regulated, bigger markets – such as China,⁸ and the United States.

Although the political make-up of India and the EU is different, some parallels may be drawn from the approaches in regulating infrastructure innovation policy. This article is not meant to compare the different policies of India versus the EU. Rather, it asks the question of what the Indian telecoms regulator can infer from the EU approach. For this reason, this article discusses the proposed EU regulation for the Telecoms Single Market (TSM) in terms of how it services innovation in the telecommunications industries.

The EU's Digital Single Market (DSM) Package is aimed at regulating of digital platforms to improve the Union's competitiveness in the globalised economy.⁹ The recast proposal for a European Communications Code is one of the key regulatory initiatives of the DSM strategy.¹⁰ Just as is the case in India, the TSM Proposal attempts to strike a balance between the interests of electronic communications networks (ECN) operators, electronic communications services (ECS) providers, and end-users. One of the EU's aims is to simplify the existing regulatory framework (also known as the new regulatory framework (NRF)), by bringing seven EU directives together in one electronic communications code.¹¹ This is not a form of deregulation, but rather a form of re-organization. Overall, the proposal aims at combining the repeal of parts of the NRF with the introduction of new industry-directed cluster regulation. The TSM Proposal has gone through several phases in the legislative process; the initial proposal – known as the draft Connected Continent Regulation – dates to November 2013; it never materialized. The recast proposal dates from September 2016. At the time of closing of this contribution (February 2018), it was not yet known whether the Council would adopt the recast proposal. In comparison with the Connected Continent Proposal, the TSM Proposal is more forward-looking. The Commission signals numerous

ECONOMETRICS AND INTERNATIONAL DEVELOPMENT 37, 37-56 (2007).

⁸ M.R. Ward and S. Zeng, 40(2-3) TELECOMMUNICATIONS POLICY 89, 89-101 (2016).

⁹ TNO *et al*, *Digital Platforms: an analytical framework for identifying and evaluating policy options* (2015).

¹⁰ ('TSM Proposal 2016'); see also: G. Amendola *et al*, *Re-thinking the EU telecom regulation*, 93(1) DIGIWORLD ECONOMIC JOURNAL 17, 17-35 (2014).

¹¹ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *Regulatory Fitness and Performance (REFIT): Results and Next Steps*, COM (2013) 685 final, Brussels, 2 October 2013 (REFIT 2013).

developments in the period up until 2020.¹² The Commission focuses on achieving better access to very high-speed broadband networks and the most advanced spectrum, including their rollout. The Commission is also looking for a way to mirror financial instruments – for instance, the amounts that parties interested in obtaining spectrum must pay – with the requirement for all stakeholders to be more innovative.¹³ *Prima facie*, this seems sensible, but – different from India – the preferred allocation mechanism for frequency licences is based on auction procedures in all EU countries. Auctions tend to drive up investment costs. The financial instruments hardly are aimed at enabling innovation. The TSM Proposal emphasizes ‘commercial’ innovation that will push the demand for services over very high-speed broadband networks;¹⁴ increased competition at the local level as a result of the activation of smaller frequency cells, that will enable more intricate networks;¹⁵ the improvement of the existing instruments for EU spectrum policy;¹⁶ and the separation in market analysis of ‘*wholesale only models*.¹⁷ Next to regulation, EU funding is made available to support the rollout of cross-border networks. Horizon 2020 (H2020) is the Commission’s workplan to achieve smart and sustainable growth.¹⁸ H2020 offers a host of subsidies to market parties in terms of network improvement.¹⁹ It includes a strong emphasis on

¹² Such as: (i) the ongoing transition from traditional telecommunications infrastructure to an all-IP environment; (ii) the technical possibilities offered by new and improved underlying infrastructure, which supports almost unlimited transmission capacity of fibre networks; (iii) the continuous convergence between fixed and mobile networks, which will lead eventually to seamless service provision to end-users, wherever they are and no matter what terminal equipment they use; and (iv) the development of innovative technical network management, with the advent of Software Defined Networks (SDN) and Network Function Virtualization (NFV). SDN and NFV will be discussed below. In short, SDN enables access of third parties to network control functions, whereas these third parties continue to control their own physical and virtual core network elements. NFV enables that certain network functionality can be translated into software, which can run on cheaper, generic, hardware; P. Alexiades and T. Shortall, *The Advent of 5G: Should Technological Evolution Lead to Regulatory Revolution?*, 3 COMPETITION POLICY INTERNATIONAL ANTITRUST CHRONICLE (2016); see also TSM Proposal 2016, p. 1.

¹³ The Commission wants “to ensure optimal use of resources, fees should reflect the economic and technical situation of the market concerned as well as any other significant factor determining their value. At the same time, fees should be set in a manner that enables innovation in the provision of networks and services as well as competition in the market. [...]” TSM Proposal 2016, consideration 26.

¹⁴ REFIT 2013 and Impact Assessment, part 1/3, p. 19.

¹⁵ *Id.*, at part 1/3, p. 24.

¹⁶ *Id.*, at part 1/3, p. 101.

¹⁷ *Id.*, at part 1/3, p. 77.

¹⁸ Horizon 2020, 2017, *Work Programme 2018-2020 available at* http://ec.europa.eu/programmes/horizon2020/sites/horizon2020/files/stratprog_overarching_version_for_publication.pdf.

¹⁹ WP2018-2020.

stimulating research and ‘innovation activities’, including on telecommunications issues.²⁰

Typical for the EU’s policy to harmonize rules across the Union, the Commission’s institutional approach is to continue letting national regulatory authorities (NRAs) in the EU Member States apply the (new) rules, whilst strengthening the NRAs’ powers. It is interesting to see whether a form of regulation by independent regulatory authorities could become a part of the Indian approach to infrastructure innovation policy and regulation.

B. Research question and approach

The question is to what extent a mix of deregulation and cluster regulation will improve the competitiveness of telcos and OTTs on the global telecoms markets? The research attempted to define what mix of regulatory measures could be employed to stimulate innovation and safeguard interoperability in the European electronic communications sector in the next years of services transition. A sub-question is whether there is room for incentive regulation that will stimulate innovation, or whether deregulation is more appropriate in the transition period.²¹ The desired output needs to be based upon different regulatory tools that could complement or supplement existing measures to safeguard competition:

- In paragraph 2, regulation as a tool to stimulate innovation will be explored. The TSM Proposal, driven by rapidly involving technological developments, results in effective and sustainable regulation.²² Dilemmas of stakeholders – regulators, incumbents and new entrants – are also discussed.
- When contemplating regulatory models, it must be considered that contracts at the wholesale level remain a practical form of self-regulation (paragraph 3). This paragraph includes a short discussion of cases, notable agreements on infrastructure sharing, and long-term cooperation.
- Paragraph 4 contains a synthesis and a few recommendations.

²⁰ M. Granieri and A. Renda, *Innovation Law and Policy in the European Union: Towards Horizon 2020* (Springer, 2012); European Commission, *A guide to ICT-related activities in WP2018-20*, 2017.

²¹ The research focuses on analysis of the legislative framework and proposed regulation; it includes studying economic analysis and a few informal empirical discussions with stakeholders who remain anonymous.

²² S.J.H. Gijrath and J.M. Smits, *European Contract Law in View of Technical and Economic Regulation* in *THE FUTURE OF EUROPEAN CONTRACT LAW*, 53 (K. Boele-Woelki, and W. Grosheide ed(s)., Deventer, Wolters Kluwer, 2007).

II. REGULATION AS A TOOL TO STIMULATE INNOVATION AND SAFEGUARD INTEROPERABILITY

This chapter discusses: shifting regulatory perspectives (2.1), price cap regulation versus incentive regulation (2.2), subsidization innovation (2.3), incentive regulation versus deregulation (2.4), and the options for a smarter mix of regulation (2.5).

A. Shifting regulatory perspectives

The emphasis of regulation often lies on intervening in harmful situations.²³ Often, regulation is aimed predominantly at restricting anti-competitive behaviour. Such regulation is designed to prevent the occurrence of undesirable activities – in the telecoms sector activities to create barriers to entry and predatory pricing. Roughly, the European rules consist of two possible ways of imposing price measures on access.²⁴ The first way is cost-based pricing – which may be subjected to many different models to determine the cost-base calculation method. The underlying thinking is to evaluate what would be the cost for a new entrant to build an alternative network to be able to supply similar services.²⁵ It remains to be seen whether innovation can be regulated as an element of price cap regulation. But, there is a second way of intervening that has a link – albeit weak – with innovation: the NRA can also impose an obligation on the regulated ECN operator to charge ‘reasonable’ prices.²⁶ As such, price cap regulation may already incentivize cost reduction measures and replacement investments by the ECN operators. But what about innovation regulation per se?²⁷

Before discussing this second way of regulation as a tool to stimulate innovation (2.1.3 – 2.1.5), a glance will be cast at the dilemmas that ECN operators (2.1.1) and the regulator (2.1.2) are facing in times of disruption.

²³ Organisation for Economic Cooperation and Development, FRASCATI MANUAL, PROPOSED STANDARD PRACTICE FOR SURVEYS AND RESEARCH AND EXPERIMENTAL DEVELOPMENT, (6th edn., OECD Publishing, 2002); B.F. Mooij, *Dynamic Efficiency Concerns in EU Competition Law: What role is awarded to innovation under the EU’s antitrust rules?*, JUR-4IERSCRI Master Paper (B.F. Mooij, 2014).

²⁴ R. Baldwin *et al*, UNDERSTANDING REGULATION, 461 (2nd edn., Oxford University Press, 2012).

²⁵ J.A. Hauge and D.E.M. Sappington, *Pricing in Network Industries* in OXFORD HANDBOOK OF REGULATION, 462-499 (R. Baldwin *et al* ed(s), Oxford University Press, 2010).

²⁶ *Id.*, at 462.

²⁷ A. Butenko and P. Larouche, *Regulation for Innovativeness or Regulation of Innovation?*, TILEC Discussion Paper, DP 2015-007.

i. The operator's dilemma

The electronic communications sector is atypical as it is subject to specific characteristics that pose recurring significant investment issues. Following various periods of market liberalization, regulated ECN operators – especially those with SMP – may be turning into gatekeepers of networks at the wholesale level. An example is the need to determine and achieve optimum interoperability levels as wholesale markets' requirements change over time. Investments made in the ECNs may be lost because of having to adapt to these technological advances that keep coming from the outside. Generally, ECN operators will exhibit economies of scale, which will persist over a wide range of output caused by their customers' needs. However, their business models are increasingly being challenged by the OTTs.

There is a tension between the gatekeepers' capacity to innovate incrementally, and the game changers' ability to innovate more fundamentally.²⁸ The ECN operators need to facilitate the processing of growing data streams, enabled by innovative applications developed and marketed by the OTTs. But possible additional income because of increasing data processing, does not, necessarily, yield sufficient revenue to stimulate the ECN operators to invest substantially in infrastructure innovation. This then causes a risk of lumpiness of investments by the operators.²⁹ The sunk costs resulting from investments in infrastructure imply risks associated with the real options the operator has.³⁰ The operator's dilemma is how to strike the balance between network capacity shortages and excess capacity, and how to avoid unnecessary duplicate investments. Moreover, it is difficult for the ECN operators to predict the long-term durability of their investments, where regulatory intervention could result in price cap regulation, thus making their investments less tenable.

The interest of ECN operators to get clarity about the regulatory horizon is evident. They need to know: is the sunset in sight, or should they expect continuity of *ex-ante* intervention and asymmetric regulation? Price-cap regulation could 'stimulate' the ECN operator to maintain a lower network quality as a substitute for price increases that would normally result from the investments made. Price-cap regulation would be a negative consideration

²⁸ M. Cave, *Encouraging Infrastructure Competition Via the Ladder of Investment*, 30(3-4) TELECOMMUNICATIONS POLICY 223, 223-237 (2006).

²⁹ I. Vogelsang, *Incentive Regulation, Investments and Technological Change* in REGULATION AND THE PERFORMANCE OF COMMUNICATIONS AND INFORMATION NETWORKS, I (G.R. Faulhaber *et al* ed(s), 2012).

³⁰ *Id.*, at 11-19ff. Many of the economic aspects discussed in this paper emanate from Vogelsang 2012. I am indebted to his clear views on how economic aspects can influence a regulator's choices in terms of dealing with technological change.

where the operator's investment would surpass the acceptable benchmark – and thus result in less or no profits.³¹ Because prices are often determined after the investments have been made, the desire to impose price caps and enforce lower prices thus creates an ex-post conflict with the ex-ante desire to stimulate innovative investments.³²

ii. The regulator's dilemma

The regulatory climate will require a careful weighing of the factors that are influenced by the industry-specific features, firm behaviour, and regulatory incentives.³³ In a time where the Commission wants to steer towards more convergence between fixed and mobile infrastructure, it must be observed that the impact of regulation on fixed ECN operators is rather different from the impact on mobile ECN operators. Fixed ECN operators still are subject to stronger regulatory scrutiny than mobile operators. Unlike the case of regulating fixed networks, ex-ante market regulation of mobile ECN operators is less likely to occur. This is due to the circumstance that (most) mobile players are not considered to have SMP (a past exception being the market for mobile terminating tariffs). However, national governments are likely to attempt generating or imposing very substantial fees on the mobile operators who acquire new frequency licences. Whereas mobile ECN providers operate under a fixed term frequency licence, once an ECN or a cable operator has obtained a registration or licence to operate in the EU, there is no pre-determined end date or life span for exploitation of such registration/licence.

The fixed operator's administrative fee is significantly lower than the price of a frequency lot – and the differences between NRA administration fees depend on the same factors, notably, turn-over. Besides, special conditions are hardly ever imposed on fixed operators at the issue of the registration/licence.

Still, irrespective of the shorter life-cycle of radio frequencies' licences, it appears that mobile ECN operators are more inclined than fixed operators to make innovative network investments that they can write off during the licence term. The fixed term entails that mobile ECN operators need to

³¹ J. Kwoka, *Investment Adequacy under Incentive Regulation*, (Working Paper No. 09-001, Department of Economics, Northeastern University, 2009).

³² See D. Brito *et al*, *Can Two-Part Tariffs Promote Efficient Investment on Next Generation Networks?*, Mimeo 2008 (Brito *et al*, 2008); S.J.H. Gijrath, *Telecommunications Law in the Digital Age 3.0: Interoperability, Innovation, Internationalisation & an Imploding Soufflé*, inaugural speech, 2014 (S.J.H. Gijrath, 2014), and Granieri, M., Renda, A. 2012.

³³ H. Gruber and P. Koutroumpis, *Competition enhancing regulation and diffusion of innovation: the case of broadband networks*, 43(2) JOURNAL OF REGULATORY ECONOMICS 168, 169 (2013).

replace or modify their mobile radio access network (RAN) equipment every time they acquire a licence to use a new generation of frequencies. It should also be kept in mind that, contrary to the procedures used for registering fixed operators or permitting them to enter the market, the government agency that allocates the frequency licence has the option to attach special conditions to the exploitation of the frequency licence (see below).

Since the emphasis on asymmetric regulation on fixed ECN operators is likely to decrease over the coming years, the Commission is looking for another way to steer the innovation it desires so much. Again, this highlights the regulator's dilemma on how to deal with asymmetry of information and the need to safeguard a level playing field, as expressed by the Commission.³⁴ A more lenient approach, considering the rise of innovative services competition at the retail level, could lead to symmetric regulation.³⁵

iii. Innovation regulation

The Commission wants to improve the conditions for access to financial sources for research and innovation purposes³⁶ and provide assurance that innovative ideas could be turned into products and services that create growth and jobs.³⁷ These are broad and generic objectives. I will look at these from the perspective of infrastructure competition, meaning that I am focusing more on regulation for innovativeness rather than on regulation of innovation.³⁸ There is a material side to translating the policy objectives into regulation – what type of behaviour does the Commission wish to regulate or deregulate; and an institutional side – which agencies

³⁴ *"In services, competition between local providers of electronic communications services that bundle network access with services and global providers of services over the top of the networks reinforces the right of the EU to act to ensure a level playing field."* TSM Proposal 2016, p. 15.

³⁵ In the current era, a differently balanced market regulation is becoming a major policy concern: "[...] *Disruptive innovations, while very convenient and financially beneficial to end users, bring the need to analyse their impact on existing competition conditions and possible distortive effects stemming from differentiated regulatory treatment, as well as the adequacy of existing regulation in a changed environment.*" Impact Assessment Part 1/3, p. 28.

³⁶ *Europe 2020: A Strategy for smart, sustainable, and inclusive growth*, COM (2010), 2020; and Commission Communication *Europe 2020 Flagship Innovation Union*, COM (2010) 546, 6 (Commission Communication 2010).

³⁷ See also Commission Communication: *An Investment Plan for Europe*, COM (2014) 903 final (Commission Communication 2014).

³⁸ See also the interesting perspective of L.B. Moses, *How to Think about Law, Regulation and Technology, Problems with "Technology as a Regulatory Target"* available at <http://dx.doi.org/10.5235/17579961.5.1.1> (Bennet Moses 2013); P. Larouche and A. de Streel, *An Integrated Regulatory Framework for Digital Networks and Services*, CERRE Policy Report, 27 January 2016 (P. Larouche, A. De Streel, 2016).

should supervise and stimulate such behaviour. There is a marked lack of considering how innovation within the EU can be stimulated. The Impact Analysis of the TSM Proposal reiterates that infrastructure competition and innovation are important driving forces for economic growth in the coming years. However, the Proposal lacks an in-depth analysis on whether the investments that must be made by both the fixed and mobile ECN operators in their infrastructure in the coming years include the cost of fundamental innovation, i.e., for the construction and roll-out of Next Generation Networks (NGN), or whether the investments will focus on funding incremental innovation, i.e., for the maintenance and updating of network protocols and equipment.³⁹ This makes it difficult to consider the actual legal impact of the proposed regulation.⁴⁰

On the material side, the supplementary documents to the TSM Proposal show that the Commission struggles in dealing with innovation that comes from within (incumbents) or from outside OTT players, including companies with innovative mobile offers from India. One of the regulator's dilemmas is that the costs made to maintain the gatekeeper's network are relatively transparent but the costs made for fundamental innovation are not. Asymmetry of information between the regulator and the incumbent operators remains a prevailing problem, hence, probably, the focus on incumbents rather than OTTs. Whether a fixed or mobile ECN operator is subject to market regulation or not, it must decide on investing in infrastructure to ensure its networks adapt flexibly to customer demand. The ECN operator has information regarding technical specifications at its disposal, which may put it at a competitive advantage. It has a menu of choice on how to configure its network. It may have a head start where it can weigh the different risks and, thus, different outcomes it may expect. It is an important economic question in the debate about how to optimize investments in ECNs – especially the non-core intelligent elements – by operators who are still subject to market regulation. Especially the highly important investments in NGN should be subject to scrutiny as the cost will be difficult to plan and the level of intervention is unknown to the operator.⁴¹

iv. Which regulatory tools are effective?

The TSM Proposal attempts to map the economic and social impact of the regulatory tools it prescribes. The Proposal also presents a host of options

³⁹ A. Butenko and P. Larouche, *Regulation for Innovativeness or Regulation of Innovation?*, TILEC Discussion Paper, DP 2015-007.

⁴⁰ As can be seen in REFIT 2013.

⁴¹ M. Arve and G. Zwart, *Optimal Procurement and Investment in New Technologies under Uncertainty*, TILEC DISCUSSION PAPER, DP 2014-028.

for innovation regulation.⁴² Any chosen mix of regulatory tools is likely to have profound effects on investment,⁴³ which is ultimately necessary to enable end-users to adopt innovations.⁴⁴ Innovation in the rapidly changing electronic communications markets goes beyond product innovation.

At the basic level, the available toolkit leaves the following options: (i) the repeal (parts of) the NRF; or, conversely, (ii) the enhanced application, re-interpretation and/or stricter enforcement of the NRF; or (iii) the imposition of renewed and directed regulatory instruments.⁴⁵

At the institutional level, the TSM Proposal is aimed at bestowing the execution of policy goals more on the NRAs. Article 3, second paragraph, of the recast TSM Proposal emphasizes four tasks for the NRAs: (i) the – already existing task of – stimulation of competition in the electronic communications markets should be focused more on the stimulation of efficient competition at the infrastructure level; (ii) the stimulation of access to and take-up of very high speed broadband networks by all EU citizens and companies;⁴⁶ (iii) the contribution of the further development of the internal market through the removal of the remaining obstacles and the creation of convergent conditions for the investment in and the delivery of electronic communications networks, associated facilities and services; which goal shall be achieved through the development of *common regulations and predictable regulatory methods*, which serve the effective, efficient and coordinated use of spectrum, open innovation, the establishment and development of trans-European networks, the availability of interoperability of pan-European services and end-to-end connectivity; and (iv) the assurance that EU citizens will take up the widespread high fixed and mobile capacity and the underlying ECS, and realization of the maximal advantages in terms of choice, price, and quality.

The TSM Proposal also seems to factor in that the differentiation between fixed and mobile infrastructure becomes less visible. It is unclear what the effect of that is for infrastructure regulation.

⁴² TSM Proposal 2016, 121ff.

⁴³ G. Guthrie, *Regulating infrastructure: The impact on risk and investment*, 44(4) JOURNAL OF ECONOMIC LITERATURE 925, 925-972 (2006).

⁴⁴ H. Gruber and P. Koutroumpis, *Competition enhancing regulation and diffusion of innovation: the case of broadband networks*, 43(2) JOURNAL OF REGULATORY ECONOMICS 168, 169 (2013). Gruber, H., Koutroumpis, P. 2012.

⁴⁵ TNO, TU Delft, 2015.

⁴⁶ See: *Support for the preparation of an impact assessment to accompany an EU initiative on reducing the costs of high-speed broadband infrastructure deployment* (SMART 2012/0013) (Analysys Mason, 2013).

B. From price cap to incentive regulation?

Some authors consider the current EU framework a “regulatory distortion of competition”, which inhibits investments.⁴⁷ They point out that regulatory distortion has three causes:

- (i) The inability of ECN operators (they seem to refer to incumbents) to make a fair return, which return, according to the authors, is needed to fund further network investments. This inability to be profitable is made worse by an uneven playing field with the entry on the market of game changers: the OTTs who mostly come from outside the EU and are not subject to any form of ex-ante regulation.⁴⁸ According to these authors, asymmetric regulation could well miss the mark in achieving the goals of better end-user services;
- (ii) The mandated inefficiencies in the mobile communications market. This has a lot to do with the prices realized in the allocation of spectrum, which are so high that these costs may have a negative impact on the speed of the 4G long term evolution (‘LTE’) and 5G rollouts. This does not benefit end-users. Both economists and the Commission argue that barriers to entering already fragmented mobile markets are a problem too;⁴⁹ and
- (iii) The lack of a harmonized EU approach, according to them, is an issue as well. Here the authors seem to refer to different access conditions across the EU.

The third argument is not very convincing. At least, the Commission is very much concentrating on harmonization measures. About the challenges of making investments, these authors conclude that a shift at the policy level towards measures that reinvigorate investments is much needed.⁵⁰ Would the solution also point at turning the level playing field approach upside down? Should NRAs have an eye for the challenges that these gatekeepers face from

⁴⁷ A-M Allouët *et al*, *Achieving a Level Playing Field between the Players of the Internet Value Chain*, 93(1) Communications & Strategies 17-34 (2014); W.D. Bock *et al*, *Reforming Europe’s Telecoms Regulation to Enable the Digital Single Market*, 93(1) Communications & Strategies 17-34 (2014); in: G. Amendola *et al*, *Re-thinking the EU telecom regulation*, DIGIWORLD ECONOMIC JOURNAL 17-35 (2014); Boston Consulting Group, *Reforming Europe’s Telecoms Regulation to Enable the Digital Single Market*, report for ETNO 2012 (Boston Consulting Group 2012).

⁴⁸ Deloitte and Touche, *Will 4G further disrupt telecoms markets? Opportunities and threats for incumbent players*, D&T, COMPUTER WORLD (Deloitte and Touche 2014).

⁴⁹ W.D. Bock *et al*, *Reforming Europe’s Telecoms Regulation to Enable the Digital Single Market*, 93(1) Communications & Strategies 24-25 (2014).

⁵⁰ *Id.*, at 27.

the game changers?⁵¹ According to some, the answer should be positive. The justification for intervention is that the past measures to ensure network capacity and better QoS have come at a significant cost to the gatekeepers. To some extent, the ECN operators facilitate the provision of innovative services of the game changers, who do not have to make network investments and are able to minimize the cost of access with the help of the current regulatory framework. Some argue that the disruption caused by OTTs is the new imbalance that distorts the level playing field.⁵² Their solution seems to be: no more price cap regulation – at least not in relation to services offered with the help of innovative investments.⁵³ Although the critics of price regulation do not really address the possibility of being made subject to a “reasonable price” regulation, it can be inferred from their arguments that their preference is for no more price regulation at all on ECN operators. The proponents of no regulation argue that such absence would, by default, function as an incentive to free financial means to innovate. An alternative to a regulatory holiday would be for the EU to make available more special funds to ECN operators to enhance or even fundamentally improve their network infrastructure. An example is the already mentioned H2O2O program.⁵⁴

Incentive regulation could serve to stimulate a regulated ECN operator to make more fundamental innovative investments in its network to solve the bottlenecks in the transmission of data. As such, these operators could anticipate alternative investments by game changers in complementary infrastructure if they feel they can do this better, quicker and/or more (cost-) effectively. Increased competition would lead to lower prices and increased demand for the ECNs. Thus, the value of the network is safeguarded. Increased competition could stimulate innovation in terms of investment to solve bottlenecks, by both the gatekeepers and the game changers. An example is service providers developing alternative by-pass infrastructure.

⁵¹ *Id.*, at 21.

⁵² A-M Allouët *et al*, *Achieving a Level Playing Field between the Players of the Internet Value Chain*, 93(1) Communications & Strategies 17-34 (2014).

⁵³ W.D. Bock *et al*, *Reforming Europe’s Telecoms Regulation to Enable the Digital Single Market*, 93(1) Communications & Strategies 27-30 (2014); The gatekeepers must be allowed to “set different prices for their services to develop innovative network management solutions so they can offer differentiated, value-adding services, while maintaining a non-discriminatory approach”.

⁵⁴ EU subsidies by their nature do not fall under the state aid provisions of Articles 107-109 TFEU simply because these provisions apply to the Member States offering such aid, and not to the Commission; cf. Commission Communication 2010.

C. Subsidization of innovation?

It makes sense for all ECN operators to become global frontrunners in terms of network convergence in a future where IoT and M2M are to become a part of daily life. This paragraph discusses briefly the investments in very high-speed broadband networks (also known as NGN), which may be a marked difference in comparison with India.

The Commission remains determined to continue its support of ECN investments in NGN to pursue its desire for sustainable job growth in the EU. The Commission has launched various initiatives providing subsidies to support the rollout and deployment of NGN across the EU, especially where such would enhance interoperability of such networks. The basis for this initiative can be traced back to H2020. The subsidization of very high-speed broadband networks may be used by the Commission to promote and enhance the so desired IP connectivity of the EU citizens and companies. However, funds are limited, and the outcome of subsidization is uncertain. The actual execution is a matter of interested parties actively knowing and pursuing announcements of financial aid.

The EU subsidies programs are not always easy to access. It is not entirely clear from the assessments so far, what the results have been so far. Nor is there enough data to determine what subsidies will be or have been effective.⁵⁵ As pointed out, there is a clear downside for the gatekeepers when only the fundamental innovators are given access to or benefit from government funds to innovate. Such an approach would entail the risk that the game changers are in a better position to profit from subsidized innovation at the expense of the ECN operators.

What subsidies could be granted to operators for the deployment of NGN in the context of 5G convergence? Even if the Commission succeeds in better coordination of frequency allocation procedures, the actual deployment of 5G and broadband networks remains a matter of national law. H2020 appears less focused on supporting 5G research. Rather, there is a steady flow of money towards parties who investigate better security measures.

Another area of material concern to the Commission is the lack of access to networks in rural areas in the EU.⁵⁶ The Communications that

⁵⁵ European Ideas Network, *Overall Assessment of the Communication from the Commission, Europe 2020, a Strategy for smart, sustainable and inclusive growth*, (2010); H2020 2017; *Taking stock of the Europe 2020 strategy for smart, sustainable and inclusive growth* and 3 annexes, COM (2014), 130 final/2 (Commission Communication 2014-2017).

⁵⁶ TSM Proposal 2016.

accompany the 2014 Regulation⁵⁷ contain the conditions under which aid to parties wishing to roll-out very high-speed networks may be justified.⁵⁸ Moreover, the conditions for subsidies appear to have a geographical scope, *i.e.*, national aid may be granted to ensure that EU citizens in rural areas will not be prevented from access to NGN (these are called ‘white’ areas, as opposed to ‘black’ areas where NGNs are active – black areas state aid will not be permitted).⁵⁹ The conditions formulated for aid also contain circular reasoning and assessment. The money spent on research must bring significant improvements in terms of network capacity, the speed of communication, and innovation. What would be the most reliable benchmark to assess actual results for NGN improvements? This is a difficult hurdle for agencies granting subsidies. NGN specific subsidies could ring-fence the freedom of the recipient operators or construction firms to make choices necessary in catering for the consequences of innovative technological changes to the accompanying specifications of very high-speed broadband networks. The TSM Proposal does not consider how subsidies for NGN technological innovation in the electronic communications sector could be designed better. The Proposal is focused on market regulation in a different universe than the H2020 environment. The power of an incentive is related closely to the risk that the operator must bear. With Vogelsang, I agree that the non-committed regulator should better consider what different forms of incentive regulation could be applied. Soft profit-sharing regulation could include a softer approach to what (excess) profits an ECN operator, who *does* invest heavily in fundamental innovation, could keep. Such an approach would still preserve the extent to which the regulated operator would remain a claimant of residual profits. Conversely, according to Vogelsang, more profit sharing could also reduce incentives to invest. He also believes that asymmetric network sharing that favours the regulated operator will not work. Simply because the operator would be incentivized to overinvest as there would be a much lower risk in terms of ex-post price regulation. In his analysis, cost-reducing incentives should be deemed largely independent of the price-cap levels, so that investment incentives would be safeguarded.⁶⁰

⁵⁷ *EU Competition law Rules applicable to State Aid*, http://ec.europa.eu/competition/state_aid/legislation/compilation/index_en.html, 2014 (Handbook 2014).

⁵⁸ Commission Communication 2014-2017; *see also* Commission Recommendation on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU), *OJ EU L* 251/13, 21.09.2013 (Commission Recommendation 2013).

⁵⁹ Commission Regulation (EU) No 651/2014.

⁶⁰ I. Vogelsang, *Incentive Regulation, Investments and Technological Change* in *REGULATION AND THE PERFORMANCE OF COMMUNICATIONS AND INFORMATION NETWORKS, 1* (G.R. Faulhaber *et al* ed(s), 2012).

D. From incentive regulation to deregulation?

Case law developments suggest that the Commission may hinge more on relying upon the market investor principle: less subsidization *and* less regulatory intervention.⁶¹ Deregulation does not mean further liberalization of NGN per se. In the EU, less intervention and more reliance on the market investor principle is likely to be supplemented by the harmonization of NGN QoS in the Member States.

The choice of regulatory instruments creates timing issues. It is difficult for a regulator to warrant that incentive regulation could serve to lengthen the regulatory commitment period necessary for the successful grant and implementation of incentives. Vogelsang points out that, from an economic perspective, making such a commitment for the full-time horizon of infrastructure or innovation investments is impossible for an ECN operator. The compatibility of incentive subsidies that aim at stimulating efficient investments could become uncertain. It is exactly for this reason that any form of incentive regulation for innovative network investments requires periodic reviews and, possibly, interim modification. This may be difficult to achieve and the choice for the type of regulation also creates governance issues, as reasonable market expectations need to be honoured.⁶² From an administrative law perspective, regulation must be non-discriminatory, predictable, precise, and sustainable, and it makes sense if other countries adopt such principles. But, it will be challenging to create a meaningful governance framework for incentive regulation.⁶³ Besides, it is difficult to see how the benefits for society that may come from incentive regulation could surpass the benefits from innovation in deregulated markets.

To a large extent, the criteria for scoping the legal aspects of subsidizing innovation are dependent on economic analysis based on the rate-of-return of investments made.

By the spring of 2018, the provisions in the TSM Proposal concerning the Commission's plans to coordinate the timings and conditions for the frequency allocation procedures in the Member States appeared to be in dire straits.⁶⁴ Innovation as a policy goal of the allocation of the 5G spectrum

⁶¹ European Commission v. France and Orange on the application of the market investor principle as regards the participation of France in Orange, Case C-486/15 P, 2013 (ECJ 2013).

⁶² G.E. Marchant *et al*, INNOVATIVE GOVERNANCE MODELS FOR EMERGING TECHNOLOGIES, (Edward Elgar Publishing, Cheltenham, 2013).

⁶³ *Id.*

⁶⁴ The legislative procedure is complex and long. In 2018 the status was that the proposal was going to a trialogue, which includes feedback from the European Parliament. *See* also the

comes to the fore. The Member States must describe their innovation goals in a clear manner in the allocation instrument; where possible, the responsible Minister must also calculate in advance the cost of such measures both at the national and the EU level.⁶⁵ With this sub-clause, the Commission orders the Member States to include measures to promote innovation and business improvements. The power to include specific measures in the licensing process is left to the Member States' government agencies in charge of 5G allocation. Since the NRAs are supposed to be independent agencies from the issuing ministry, the question is why the Commission leaves the stimulation of innovation for mobile networks to the national governments. In all likelihood, the reason is instrumental: only a national government is competent to issue specific regulations together with the rules for frequency allocation and subsequent licences.⁶⁶ From a contract law perspective, this is an interesting option, but it leaves little room for negotiation since it is the issuing agency that decides the terms of the licence single-handedly.

III. SMARTER REGULATION: A MENU FOR CHOICE

A. The benefits from smarter regulation

Where ECN must be reconfigured to enable and support technological innovations, such as IoT, M2M, and the digital transformation of different industries, in my view, this should go hand in hand with increased certainty on regulation of market parties in the IoT and M2M value chains; the reduction of heterogeneity in regulation in favour of start-ups; the improvement of connectivity for SIM-based M2M services; the increase of confidence in information and network security as well as privacy; a faster adoption of 5G and ubiquitous roll-out of very high-speed networks both directly to the

requirements laid out by the Bureau Européen des Unions de Consommateurs, *European Electronic Communications Code, BEUC key demands for trilogue negotiations on consumer protection*, (2017). This paper also brings in regulatory concerns as regard data security and personal data protection.

⁶⁵ Art. 54, TSM Proposal 2016.

⁶⁶ An example of imposing innovation through the process of allocating a frequency licence occurred in the Netherlands in 2011 and again in 2017. The Minister in charge of the allocation and renewal of licences for commercial radio frequencies required the licence holders to safeguard that digital radio reception (DAB+) would become available throughout the Netherlands. The Minister wanted the licence holders to invest in digital radio in addition to their continued analogue wireless broadcast. However, this approach also had a downside, which the Minister did not investigate *a priori*. The digitization requirement could serve as an unassailable hurdle for new entrants to a very competitive market with an atypical business model. Commercial radio stations generate nearly all their income through advertising deals.

home and to street cabinets. This should also safeguard a sustainable backbone, which is required for many IoT and M2M applications. Moreover, there are many technical reports that underline that the 5G rollout must go together with investments in upgrades of the mobile network *and* fixed infrastructure. But there is no position yet on whether the ECN licence holders should finance both.

This synthesis contains a few remarks on the Commission's reasoning and its menu for choice in terms of policy, and the effective governance of innovation in electronic communications markets and what India's regulator could infer from this in terms of promoting infrastructure innovation.

i. A policy menu for choice

It appears that the Commission, considering the diverging aims and goals attached to technological innovation, finds that more delegation to the NRAs, combined with a mix of measures and means is likely to yield the best results for effective intervention. This is not an issue for a federal state with national policy objectives for infrastructure, such as India. The stimulation of access to very high-speed broadband networks is a policy goal and not a means per se that NRAs can apply pro-actively.

The case of India is very different from the EU. It is clear from the analysis of the TSM Proposal that the policy goal of innovation could be anchored more securely in the law. But the question as to how is difficult to answer and so it may be hard to infer a sustainable regulatory approach from the EU.

This paper asked what type of regulation could be a suitable instrument to further stimulate innovation. Having looked at available regulatory tools, the shifting regulatory perspectives, possible side-effects, two proposals for regulating network levels for services interoperability, subsidies, standardization, and self-regulation, the general feeling is that a fresh approach is required. Moreover, given that the law simply cannot keep up with the speed of technological change, more flexibility is needed. This may be an area that India's regulator could explore.

Although often market players propagate stable and sustainable regulation, the menu of choice in times of rapid technological changes may boil down to mixing different approaches to create the best regulatory cocktail. An example of mixed regulation could be the provision of incentives for the parties who obtain 5G licences and who are under a rollout obligation for new infrastructure. Such incentives could be subject to symmetric and

clearer access rights and obligations to enable the provision of innovative services over such (possibly even partially shared) infrastructure.

By mixing the regulatory approaches, it is probably easier to achieve a balance between the need for investments incentives, whilst maintaining the level playing field. It seems that both gatekeepers and game changers would benefit from such a mixed *and* intermediate regulatory approach. When done properly, intermediate regulation can be equal to incentive regulation, which is usually based on a mix of cost reduction and efficient pricing. Moreover, regulators should ask whether negative side effects of interoperability of networks, such as possible network congestion and increased risks for network integrity and security, are a part of the game. If so, this justifies an approach that is not solely concerned with safeguarding competition and enforcing competition law but is also concerned with protecting end-users' interests better. An option for the regulator could be to make temporary compensatory adjustments.⁶⁷ There we agree that 'incentive-mitigation' such as some form of subsidy or adjustments to the tightness of regulation, even for a limited period, could be necessary and effective.⁶⁸

In the transition period, if no rollout incentives are available, an asymmetric regulatory holiday could well be considered as a part of the mix.

The regulator should explain why and how the governance and enforcement measures it expects support innovation.⁶⁹ Perhaps it would be a good idea to investigate further that in what manner the specialized regulatory agencies can act pro-actively to stimulate technological innovation. Flexibility and openness in their governance models must be improved to enable the NRAs to better deal with the developments on an increasingly dynamic playing field. Perhaps such an overall body in the vein of the Federal Communications Commission (FCC) could serve to ensure the quality of market regulation.

Looking backwards and forward, a key issue is how the regulator can ensure that governance structures are in place. Such structures should monitor effectively not only where the money goes, but also whether the ensuing investments indeed result in reaching the goals of cooperation initiatives. What is needed to make a governance structure efficient? There must be a fair and transparent process for decision making, for instance, on incentive

⁶⁷ I. Vogelsang, *Incentive Regulation, Investments and Technological Change* in REGULATION AND THE PERFORMANCE OF COMMUNICATIONS AND INFORMATION NETWORKS, 19 (G.R. Faulhaber *et al* eds., 2012).

⁶⁸ As discussed, *supra*, para. 2.3.

⁶⁹ Impact Assessment, part 3/3, p. 383.

regulation. The recast TSM Proposal aims at coordinating the diverse practices for network innovation in the Member States by standardising the conditions for frequency allocation in the Member States. But, there is no political consensus in the EU on the coordination of 5G allocation.⁷⁰ Hence, it does not make sense to place all cards on harmonization of 5G regulation to stimulate innovation. One lesson from this is that it makes sense for a national or a federal regulator to be predictable when it comes to timing, allocation method, and – in particular regarding innovation policy – notice to market parties on what their licence obligations will prescribe in terms of investment and/or sourcing obligations.

Catering for network reliability cannot solely be a task for gatekeepers. Although no one will argue that the liberalization of electronic communications should be undone, to put the onus for network reliability predominantly on the sitting ECN operators probably misses the mark. Network reliability and security remain a government task and a joint responsibility. Game changers, who do not operate their own networks, have an interest in ensuring that data traffic is as hassle-free and as safe as possible. Current regulation on network and information security should be taken into account when considering how to best promote infrastructure competition and innovation.

The considerations to the recast TSM Proposal glorify innovation; yet, innovation hardly forms part of the legal provisions. It is self-evident that innovation is the key driver of economic growth. But, hollow considerations to regulatory proposals do not really provide meaningful guidance to interested and affected parties.⁷¹ What is the Commission telling the governments, the markets, and the end-users when the policy goal of innovation is not supported by clearly described, concrete, measurable and enforceable terms? Surely, India's regulator can infer from this lack of depth that it can translate its policy objectives for the coming years more concretely and, if necessary, anchor them in forward-looking regulation. An important precondition for effective intervention is that the regulator must be equipped to anticipate economic and social effects of business models that are required to constant adaptation to fast going technological and market developments.

⁷⁰ ECJ, Case C-687/15 (Commission/Council) on the competencies with regard to the ITU spectrum policy, 25 October 2017, ECLI:EU:C:2017:803.

⁷¹ *cf.* Commission Recommendation 2013, Recital 4.

DUAL CAPACITY OF ADVOCATES: IMPLICATIONS FOR IP LAW FIRMS

Arpan Banerjee & Manasi Chaudhari***

ABSTRACT *Due to the global nature of intellectual property (IP) infringements, a fair number of plaintiffs in Indian IP cases turn out to be foreign entities with no offices or agents in India. Such entities often appoint partners of law firms as their constituted attorneys. However, Indian law prohibits an advocate from acting in the dual capacity of a lawyer and client's representative. In this article, we discuss the law on the subject, including case law involving IP law firms, and interview leading IP law firms to understand their practices. We suggest strategies which law firms can use to skirt the dual capacity issue, such as appointing non-advocates as constituted attorneys.*

I. INTRODUCTION

In 1991, India ushered in economic liberalisation by relaxing limits on Foreign Direct Investment (FDI). Today, FDI is permitted in most sectors of the Indian economy without prior government approval. Nevertheless, several large multinational corporations (MNCs) still do not operate in India. One reason is that a few key sectors, such as single-brand retail, aviation,

* Assistant Professor, Assistant Dean and Executive Director, Centre for IP & Technology Law, Jindal Global Law School (on research leave); Scientia Doctoral Scholar, University of New South Wales, Sydney.

** Advocate, High Court of Judicature at Hyderabad. The authors wish to thank the individuals who granted them interviews.

and construction, were opened up to 100 percent FDI only very recently.¹ Another is that in sectors where FDI is allowed without restrictions, many MNCs have preferred to invest in China or the ASEAN region, as they are perceived as providing a friendlier environment to foreign investors.² For instance, despite no ostensible regulatory impediments and the promise of a large middle-class consumer market, Burger King launched its first outlet in India as late as 2014,³ while Kia Motors will launch its first car in India only in 2019.⁴

Given the global nature of IP infringements, many large MNCs with no presence in India have found their rights being infringed in the country. This is especially true in the context of trademark infringement. For example, IKEA, whose entry to India was restricted until recently due to FDI limits in retail, is reportedly battling against numerous usurpers of its mark in India, including an entity that has obtained a trademark registration for IKEA.⁵ Furthermore, even corporations confined to a small number of jurisdictions, or even a single jurisdiction, have sued in India for passing off and/or trademark infringement. Examples include the Las Vegas Sands casino group,⁶ the British low-cost carrier EasyJet,⁷ and Jane Norman, a mid-sized clothing

¹ K.R. Srivats, *Cabinet Okays 100% FDI in Single Brand Retail via Automatic Route*, BUSINESS LINE (January 10, 2018), available at <https://www.thehindubusinessline.com/economy/policy/cabinet-okays-100-fdi-in-single-brand-retail-via-automatic-route/article10023519.ece> (Last visited on February 21, 2018).

² Economic Growth Center, Yale University, *Export Growth in India: Has FDI Played a Role*, (2000), available at <https://ageconsearch.umn.edu/bitstream/28372/1/dp000816.pdf> (Last visited on March 31, 2018); Center for Globalization and Sustainable Development, Columbia University, *Multinational Companies and Foreign Direct Investment in China and India*, (2004), available at https://academiccommons.columbia.edu/download/fedora_content/download/ac:188194/content/bajpai_mncs_china_india_2004_2.pdf (Last visited on March 31, 2018).

³ V.S. Pinto, *Burger King readies India Launch*, BUSINESS STANDARD (September 22, 2014), available at http://www.business-standard.com/article/companies/burger-king-readies-india-launch-114092100813_1.html (Last visited on February 21, 2018).

⁴ C.H.R.S. Sarma, *Kia Motors to Release First Car from AP Plant by March 2019*, BUSINESS LINE (February 21, 2018), available at <https://www.thehindubusinessline.com/companies/kia-motors-to-release-first-car-from-ap-plant-by-march-2019/article22816130.ece> (Last visited on February 21, 2018).

⁵ S. Mitra and S.D. Gupta, *IKEA Stares at Trademark Hurdle*, BUSINESS STANDARD (January 29, 2013), available at http://www.business-standard.com/article/companies/ikea-stares-at-trademark-hurdle-113011100112_1.html (Last visited on February 21, 2018); When IKEA wanted to enter the Indian market, it found that there were already 3 Indian companies who were using the brand name 'IKEA,' and one of them had also registered the trademark for IKEA in India.

⁶ Las Vegas Sands Corp. v. Bhasin Infotech & Infrastructure (P) Ltd., 2012 SCC OnLine Del 3336: (2012) 51 PTC 260.

⁷ Easygroup IP Licensing Ltd. v. Easyjet Aviation Services (P) Ltd., 2013 SCC OnLine Del 3181: (2013) 55 PTC 485.

retailer little known outside the UK, which was the victim of a massive counterfeiting racket spanning across India.⁸

Thus, in contrast with some other areas of legal practice, it is not unusual for plaintiffs in IP cases to be entities with no links to India. For such entities, legal representation becomes an important preliminary issue. Such entities usually prefer to appoint their lawyers as their constituted attorneys through a power of attorney, rather than entrust the task to unknown third parties. Naturally, this makes it easy for documents being filed before the court, such as affidavits and undertakings, to be signed and processed quickly. However, rules framed by the Bar Council of India prohibit an advocate from acting or pleading in any matter in which he or she is “pecuniarily interested”.⁹ Our article examines the hazards posed by this bar on ‘dual capacity’ — a seemingly innocuous rule, but one that has been used against some of India’s most well-known IP law firms by creating preliminary issues regarding the maintainability of IP infringement suits.

In part I of our article, we discuss a leading decision regarding this provision. In part II, we discuss how this decision has affected IP law firms. Here, we discuss findings of interviews with some of India’s leading IP law firms, which we approached to inquire about their practices. We conclude by suggesting strategies which law firms can use to skirt the dual capacity issue, such as appointing non-advocates as constituted attorneys.

II. LAW ON DUAL CAPACITY

From a pragmatic perspective, it is arguable that the practice of an advocate acting in the additional capacity of a constituted attorney is not necessarily an unconscionable breach of ethics. In many situations, it is impractical to expect a litigant with no presence in India to entrust the responsibility of acting as a constituted attorney to an unknown third party, not least because of the possibility of sensitive commercial information being compromised. The possibility of the litigant directly signing documents and dispatching them to India may be too expensive and time-consuming. Following the liberalisation of the Indian economy, many partners of law firms thus began to act in a dual capacity. However, in *ONGC v. Offshore Enterprises Inc.*,¹⁰ the Bombay High Court struck down this practice.

⁸ *Jane Norman Ltd. v. Jane Norman Retail (P) Ltd.*, 2014 SCC OnLine Del 3047.

⁹ Rule 9, Bar Council of India Rules, 1975.

¹⁰ *ONGC v. Offshore Enterprises Inc.*, 1992 SCC OnLine Bom 497: AIR 1993 Bom 217 (“ONGC”).

In *ONGC*, the partners of a law firm representing one of the parties had filed affidavits in the court in the capacity of constituted attorneys. The Bombay Incorporated Law Society and the Bar Council of Maharashtra and Goa both made submissions to the court on the matter, the former seeking a “middle ground” allowing dual capacity in a limited sphere, and the latter opposing it completely.¹¹ The court ultimately agreed with the Bar Council of Maharashtra and Goa. It held that a constituted attorney is “merely entitled to ‘act’ and ‘appear’ for a party and has no right to ‘plead’ in a court”.¹² The court observed:

It is unfortunate that a totally wrong practice has grown up in our Court where one or the other partner of a solicitors’ firm signs pleadings and affidavits on behalf of a foreign client in pursuance of authorisation contained in the power of attorney and the same firm of Advocates/Solicitors acts, appears and pleads in a professional capacity.¹³

The court laid down, *inter alia*, the following two principles:

- (a) An Advocate is not entitled to act in a professional capacity as well as constituted attorney of a party in the same matter or cause. An Advocate cannot combine the two roles. If a firm of Advocates is appointed as Advocates by a Suitor, none of the partners of the Advocates’ firm can act as recognised agents in pursuance of a power of attorney concerning the same cause.
- (b) The existing practice followed by the firm of advocates/solicitors/attorneys, particularly in case of non-resident clients combining the two roles, is opposed to law and is required to be discontinued forthwith.¹⁴

The court also blocked the possibility of law firms bypassing the ruling by naming one partner or associate in the *vakalatnama* and another in the client’s power of attorney.¹⁵ The court remarked: “It is not sufficient that an Advocate acts impartially. It is also necessary that the Advocate must always

¹¹ *ONGC v. Offshore Enterprises Inc.*, 1992 SCC OnLine Bom 497: AIR 1993 Bom 217.

¹² *ONGC v. Offshore Enterprises Inc.*, 1992 SCC OnLine Bom 497: AIR 1993 Bom 217.

¹³ *ONGC v. Offshore Enterprises Inc.*, 1992 SCC OnLine Bom 497: AIR 1993 Bom 217.

¹⁴ *ONGC v. Offshore Enterprises Inc.*, 1992 SCC OnLine Bom 497: AIR 1993 Bom 217.

¹⁵ *ONGC v. Offshore Enterprises Inc.*, 1992 SCC OnLine Bom 497: AIR 1993 Bom 217 (stating: “It makes no difference that the power of attorney is executed in favour of one or other partner of the firm of the Advocate and the litigation is in fact conducted by another partner of the advocate’s firm. If the *vakalatnama* is executed by a client in favour of a firm of advocates it follows that all the partners of the said firm are engaged as Advocates by the client concerned. Each and every partner of Advocates’ firm is enjoined to act in such cases in professional capacity or no other capacity”).

appear to act impartially.”¹⁶ Here, it can be contended that the court’s view was in accordance with the provisions of the Indian Partnership Act of 1932, which states that every partner is an agent of a partnership firm, and his or her acts are binding upon the firm.¹⁷

The court’s ruling has since been followed by other High Courts, including another bench of the Bombay High Court¹⁸ and the Calcutta High Court.¹⁹ In an IP law context, the dual capacity issue has arisen in multiple IP infringement cases, discussed in the next section.

III. IMPLICATIONS FOR IP FIRMS

In at least five reported IP cases heard by High Courts, the defendants in question raised objections concerning dual capacity. In most of the cases, the plaintiffs appeared to have a strong case with respect to the question of IP infringement, thus suggesting that the defendants used the issue of dual capacity as a stalling tactic.

In the first of the five cases, Columbia Pictures, based in the US, sued the Indian cable operator, Siti Cable, for copyright infringement, for allegedly showing their films without a licence. Siti Cable contended that Columbia Pictures’ constituted attorney was an advocate in the law firm engaged by it (which happens to be one of India’s top IP law firms). A single-judge bench of the Delhi High Court rejected Columbia’s plaint and dismissed the suit. Applying the ratio of *ONGC*, the judge held that the firm’s practice of acting in a dual capacity was “opposed to law”.²⁰ A two-judge bench of the Delhi High Court reversed the order, on the technicality that Columbia’s constituted attorney, although an advocate, was not a part of the firm but was only “associating with” the firm “in some legal work on a case to case basis”.²¹ Thus, the constituted attorney of the firm and the partner of the firm, who was engaged as Columbia’s advocate, were performing two separate roles.²²

¹⁶ *ONGC v. Offshore Enterprises Inc.*, 1992 SCC OnLine Bom 497; AIR 1993 Bom 217.

¹⁷ Sec. 18, Indian Partnership Act, 1932 (stating: “Subject to the provisions of this Act, a partner is the agent of the firm for the purposes of the business of the firm.”).

¹⁸ *BBN (UK) Ltd. v. Janardan Mohandas Rajan Pillai*, 1993 SCC OnLine Bom 17; (1993) 3 Bom CR 228.

¹⁹ *Veer Probhu Mktg. Ltd. v. National Supply Corpn.*, 2005 SCC OnLine Cal 558; AIR 2006 Cal 301.

²⁰ *Columbia Pictures Industries Inc. v. Siti Cable Network Ltd.*, 2001 SCC OnLine Del 359; 2001 PTC 319 (“*Columbia Pictures*”).

²¹ *Columbia Pictures Industries Inc. v. Siti Cable Network Ltd.*, 2001 SCC OnLine Del 359; 2001 PTC 319.

²² *Columbia Pictures Industries Inc. v. Siti Cable Network Ltd.*, 2001 SCC OnLine Del 359; 2001 PTC 319.

The court also observed that the law firm in question, although styled as a law firm and perceived to be one, was actually structured as a sole proprietorship. Thus, the Indian Partnership Act and the ratio of *ONGC* did not apply to the firm.²³ The court clarified that it had “no quarrel with the legal proposition enumerated in” *ONGC*.²⁴

In the second case, the same law firm and the constituted attorney were once again involved. Here, Time Warner, based in the US, sued shopkeepers in Delhi’s infamous Palika Bazaar for allegedly selling pirated copies of their films.²⁵ The defendants raised the same objection that Siti Cable had done in *Columbia Pictures*. Once again, the Delhi High Court upheld the power of attorney issued by Time Warner, on the same grounds.²⁶ The court further held that even if the defendants’ objection was found to be valid, it would at most be a “mere case of irregularity which can be subsequently corrected”.²⁷

In the third case, Jolen, a US-based cosmetics company, filed a suit for passing off and copyright infringement (in its logo) against an Indian defendant.²⁸ The defendant had appointed an advocate as its constituted attorney. The Madras High Court held that the power of attorney appointing the advocate was valid, as he was not acting in the capacity of an advocate.²⁹ The court observed that “if an advocate is appointed to act as Power of Attorney Agent”, it is permitted “so long as there is no conflict of interest in the discharge of his professional duty and his duty as Power of Attorney Agent”.³⁰

In the fourth case, Montblanc, based in Germany, sued multiple defendants alleging trade mark infringement and passing off over the manufacture and sale of certain pens. Initially, Montblanc’s constituted attorney was a partner in a reputed full-service law firm advising it, although she did not plead herself. The Delhi High Court refused to lift an interim injunction against the defendants merely on account of what the court felt was an

²³ *Columbia Pictures Industries Inc. v. Siti Cable Network Ltd.*, 2001 SCC OnLine Del 359; 2001 PTC 319.

²⁴ *Columbia Pictures Industries Inc. v. Siti Cable Network Ltd.*, 2001 SCC OnLine Del 359; 2001 PTC 319.

²⁵ *Time Warner Entertainment Co. LP v. Harbhajan Singh*, 2005 SCC OnLine Del 1157; (2005) 31 PTC 668 (“*Time Warner*”).

²⁶ *Time Warner Entertainment Co. LP v. Harbhajan Singh*, 2005 SCC OnLine Del 1157; (2005) 31 PTC 668.

²⁷ *Time Warner Entertainment Co. LP v. Harbhajan Singh*, 2005 SCC OnLine Del 1157; (2005) 31 PTC 668.

²⁸ *Jolen Inc. v. Shobanlal Jain*, 2004 SCC OnLine Mad 883; (2005) 30 PTC 385 (“*Jolen*”).

²⁹ *Jolen Inc. v. Shobanlal Jain*, 2004 SCC OnLine Mad 883; (2005) 30 PTC 385.

³⁰ *Jolen Inc. v. Shobanlal Jain*, 2004 SCC OnLine Mad 883; (2005) 30 PTC 385.

alleged “technical irregularity” that was anyways rectifiable.³¹ Montblanc later appointed another person (a non-advocate not working with the law firm) as its constituted attorney.³² Nevertheless, the defendants continued to raise objections, and (somewhat cheekily) complained to the Bar Council against the law firm partner, alleging moral turpitude. Frustratingly for Montblanc, the case dragged on for over six years, despite a Supreme Court order directing its speedy disposal.³³

The last of the five cases was an IP infringement case involving a British oil and gas company. The defendant raised objections over the plaintiff’s lawyers (belonging to a top IP law firm) also acting as constituted attorneys.³⁴ The Delhi High Court, while referring to *ONGC* and *Columbia Pictures*, reiterated that law was a noble profession and that “it would be professional misconduct if a lawyer were to don two hats at the same time”.³⁵ The court further stated that foreign companies must respect the laws of India and refrain from appointing law firms as their constituted attorneys.³⁶ However, the court dismissed the defendants’ plea on maintainability of the suit. The court held that dual capacity is a mixed question of law and fact, and cannot be raised at the appellate stage, which the defendants were doing.³⁷

In most of the cases discussed above, the plaintiffs were fortunate to have evaded the dual capacity hurdle using various procedural and technical defences. However, as courts have repeatedly upheld the decision in *ONGC*, in a more appropriate case, these defences may not apply and a court may return the suit. Furthermore, in *Columbia Pictures* and *Mont Blanc*, the dual capacity issue clearly delayed the case and resulted in additional hearings, presumably resulting in additional costs. Do lawyers at IP law firms then still persist with dual capacity roles? Or, do they work around the problem by approaching advocates who are not a part to the firm to act as constituted attorneys (like in *Columbia Pictures*, *Time Warner*, and *Jolen*), or even non-advocates (like in *Mont Blanc*)? To gain a sense of prevailing

³¹ *Mont Blanc Simplo-Gmbh v. New Delhi Stationery Mart*, 2009 SCC OnLine Del 2423: (2009) 41 PTC 555 (“*Mont Blanc*”).

³² *Add Corpn. Ltd. v. Montblanc Simplo-Gmbh*, IA No. 3418 of 2009, decided on 16-9-2010 (Del) (UR).

³³ *Add Corpn. Ltd. v. Montblanc Simplo-Gmbh*, SLP (C) No. 17111-17112 of 2009, decided on 23-7-2010 (SC) (UR).

³⁴ *Baker Oil Tools (India) (P) Ltd. v. Baker Hughes Ltd.*, 2011 SCC OnLine Del 2567: (2011) 47 PTC 296 (“*Baker Oil*”).

³⁵ *Baker Oil Tools (India) (P) Ltd. v. Baker Hughes Ltd.*, 2011 SCC OnLine Del 2567: (2011) 47 PTC 296.

³⁶ *Baker Oil Tools (India) (P) Ltd. v. Baker Hughes Ltd.*, 2011 SCC OnLine Del 2567: (2011) 47 PTC 296.

³⁷ *Baker Oil Tools (India) (P) Ltd. v. Baker Hughes Ltd.*, 2011 SCC OnLine Del 2567: (2011) 47 PTC 296.

practices, we interviewed lawyers at four of India's leading IP law firms and one renowned full-service law firm with a strong IP department. All the five firms represent a large number of MNCs and entities based overseas. Collectively, the firms have represented clients in disputes in courts across India.

Firm A informed us that their overseas clients, if unable to find an agent in India, sign both the *vakalatnama* and the power of attorney (appointing constituted attorneys) in the name of the firm's partners and associates. Thus, the firm's lawyers clearly act in a dual capacity in certain cases. In contrast, Firm B told us that it follows a strict policy of avoiding dual capacity. Firm B ensures that a power of attorney is not executed in the name of its lawyers and that a constituted attorney is not named in the *vakalatnama* as the advocate. Firm C told us that it varies its practice, usually based on the needs of the client. In some situations, the power of attorney names partners or associates of the firm as constituted attorneys, and the *vakalatnama* contains the same names. In other situations, dual capacity is avoided. Firm D informed us that it is extremely careful about avoiding dual capacity. The firm ensures that the constituted attorney is always a non-advocate. This may be someone recommended by the client or if the client has no reliable contact in India, a clerk or secretary working at the firm. The firm ensures that even an advocate unrelated to the firm is not appointed a constituted attorney. Firm E gave us a similar answer.

If our small but formidable sample is an indication, there is no consistency in practice across law firms. Some (perhaps most) firms scrupulously avoid creating dual capacity for their lawyers, but others do not. With respect to the latter approach, a few relevant factors should be mentioned which also arose in the course of our interviews. First, in straightforward piracy and counterfeiting cases, the defendants are typically small traders against whom orders are often passed *ex parte*. These defendants frequently choose not to appeal against orders. In such cases, the odds of a dual capacity-objection being raised are probably slim. Second, many cases of dual capacity probably go unnoticed by defendants, possibly because most small traders do not engage lawyers of high quality. Third, in some cases, the nature of the infringement is immediate and needs to be stopped urgently such as the online piracy of a current film, or impending pirated streaming of a live television programme, or a fly-by-night trademark counterfeiting racket. Here, some overseas clients may simply not have enough time to arrange a reliable third party to act as a constituted attorney and request their lawyer to do so. Fourth, many clients may be very uncomfortable sharing sensitive commercial information with a third party and request their lawyers to act in a

dual capacity even if advised against the risks of such a strategy. We must also add that we are not certain if some of the firms we spoke to are actually sole proprietorships, which style themselves as law firms and nominally designate certain experienced lawyers as “partners”.

IV. CONCLUSION

This article has dealt with a fairly dry procedural topic, but one with important implications for IP practitioners. Of the precedents we have discussed, none really proved to be fatal for plaintiffs. The only adverse order was perhaps that of the single-judge bench in *Columbia Pictures*, which too was reversed on appeal. Nevertheless, as mentioned earlier, the dual capacity issue did lead to additional delays and litigation costs, and, in a more appropriate case, can seriously prejudice an otherwise strong claim for IP infringement. In India, where defendants routinely use procedural laws to delay cases, dual capacity is a potential minefield that can and should be avoided — even in cases where sole proprietorships are involved. Law firms can easily avoid dual capacity by entrusting non-advocates within the firm to act as constituted attorneys, as Firms *D* and *E* do. Other than secretaries and clerks, many IP law firms also hire scientific and technical experts, without law degrees, as patent agents (in India, non-advocates with science degrees are eligible to appear for the patent agent examination). Thus, there seems little reason for IP law firms to persist with creating dual capacity roles for their lawyers.

DIVERSITY IN INTELLECTUAL PROPERTY: IDENTITIES, INTERESTS, AND INTERSECTIONS

Wei jie Huang & Yahong Li***

Intellectual Property (IP) seems to be inherently incompatible with diversity. From the transnational perspective, IP has long been regarded as a tool for promoting international trade. Under the pressure of developed countries, which are also IP exporters, “*minimum standards*” were incorporated into the international IP regime despite the opposition of developing countries, making IP regime more uniform and homogenous than ever before (p.xvii). In regard of the domestic market, IP has been considered as a property right mechanism that allocates exclusive rights to singular persons to maximize the efficiency of exploitation.¹ Except for rare cases, IP law establishes the sovereignty of the IP owners without taking the interests of non-owners into account.² IP law seems to ignore the concerns and interests of different stakeholders, whether they are the less developed countries or the less privileged groups (p.xviii). Can a relatively homogeneous and exclusive property regime include diversity as one of its objectives? Or in other words, can, and if yes how, IP norms be used to protect and promote diversity? By collecting the thought-provoking research results of scholars of diverse backgrounds, the editors of *Diversity in Intellectual Property*, Irene Calboli and Srividhya Ragavan, have done an impressive job in bridging the two contradictory themes in a refreshing way.

* PhD candidate, the University of Hong Kong, and currently a Fulbright Researcher at the School of Law, University of California, Berkeley.

** Associate Professor, Director of LLM Program in Information Technology and Intellectual Property Law, the University of Hong Kong.

¹ See L. Ray Patterson and S.W. Lindberg, *THE NATURE OF COPYRIGHT: A LAW OF USERS' RIGHTS*, 25 (University of Georgia Press edn., 1991).

² See Niva Elkin-Koren, *Tailoring Copyright to Social Production*, 12 *THEORETICAL INQUIRIES IN LAW* 309, 338 (2011).

This book provides its readers with an assortment of enlightening and groundbreaking research, whose authors themselves come from varied backgrounds and adopt different interdisciplinary methodologies, such as law and economics analysis, comparative cultural and religious study, and the feminist approach. This suggests that an ambitious theme of diversity and IP can be comprehensively addressed from diverse facets, from international IP regimes to national laws, and from legislation making to legal interpretation. A wide spectrum of interests are covered, including those of developed and developing countries, mainstream and underground economies, able-bodied and disabled people, female and male creators, biotech and creative industries, western and Asian religions, modern intellectual property and traditional cultural heritage, as well as the different perspectives of IP holders, transformative users and end users. Thanks to Irene Calboli and Srividhya Ragavan's extraordinary editorship, the 23 chapters are categorized into six appealing sub themes, which makes reading and comprehension much easier.

In addition to the theme-based trajectory provided in the table of contents, this book also follows a problem-solving logic— first, by identifying the areas where the current IP regime undermines diversity and then, finding solutions for the same (p.7). As for the first step, the book argues that the current IP regime does consider some diversity elements, however limited they are, because diversity is a significant concern even from the perspective of promotion of social creation and innovation. For instance, the disparagement clause and functionality doctrine in trademark law work against immorality, scandalousness, disparagement and anti-competition. However, these doctrines can only prohibit the registration but not the use of such trademarks, which strongly limit their efficacy towards promoting diversity-related interests (Chapter 5 & 20). The fair use doctrine and the protection for the disabled in national and international copyright laws have also been mentioned in several chapters as being diversity-related rules. However, the uncertain legal status of fair use and the non-binding nature of the norms on protecting the minorities seriously limit their scope of application (Chapter 2, 14 & 19). For instance, protection for geographical indications and traditional knowledge acknowledged by most national and international IP laws is concerned with cultural distinctiveness and diversity. However, the characteristics of these cultural expressions are incompatible with fundamental IP concepts such as original creation and private property, and thus raise the question about the form of protection that can be extended (Chapter 1, 21, 22 & 23).

Regardless of the areas where diversity-related interests have already been addressed, many ‘minority groups’ such as female authors, indigenous people, and developing countries are still in urgent need of IP protection (Chapter 13, 17 & 23), and this is what diversity in this book is about—the diversity of IP creators and holders who come from diversified backgrounds (p.1). But some authors actually do mention the diversity of subject matters and appeal for heterogeneous protection. For instance, Doris Long points out that consumers’ demands for access to movies and music “*raise distinctly different economic and social justification issues than demands for similar access to computer operating software or smartphone technologies*”, and calls for a rethink of the current one-size-fits-all approach (Chapter 3).

The solutions to the diversity problem, which are scattered in different chapters of the book, justify why diversity should be promoted and *how* it should be protected. The need for addressing diversity-related interests in the IP regime can be mainly attributed to digital technology and the Internet. Digital technology enables the expression of intellectual products to be completely independent of any specific physical carrier, so that intellectual products can be created and distributed at zero marginal cost.³ Internet significantly reduces the communication costs and creates a large number of decentralized and non-hierarchical communities that have heterogeneous demands for intellectual products. This is what Chris Anderson called “*the long tail market*”.⁴ All diversified kinds of intellectual products have their markets, no matter how “*niche*” they are. In addition to creating a decentralized free market, the Internet and digital technologies facilitate IP transactions through more sophisticated and individualized models of compensation. Creators can maximize their producer surplus by using complete price discrimination while consumers can get access to desirable content with the costs being shared by third-party intermediaries such as Internet Service Providers (ISPs) and advertising agencies. Simply put, every deviant demand can be satisfied, which provides the prerequisite of promoting diversity (Chapter 3).

While addressing the root-cause of the ‘diversity problem’, this book identifies that the fundamental reason for the lack of diversity in the current IP regime is that the IP law was traditionally framed from an essentially Romantic aestheticism standpoint. As Carys Craig points out, Romantic aestheticism only recognizes the achievements of an individual male and

³ See Jeremy Rifkin, *THE ZERO MARGINAL COST SOCIETY: THE INTERNET OF THINGS, THE COLLABORATIVE COMMONS, AND THE ECLIPSE OF CAPITALISM*, 18 (2014).

⁴ See Chris Anderson, *THE LONG TAIL: WHY THE FUTURE OF BUSINESS IS SELLING LESS OF MORE*, 3 (2006).

therefore is characterized by “*the-man-and-his-work*” (p.282). Various theme-based parts in this book have actually presented imperative inspirations to incorporate diversity-concerned values into IP laws. Different religious doctrines including Christianity, Confucianism, and Hinduism, as well as various theories such as feminism, help to introduce the merit of collaboration and sharing into the Romantic model, thereby, gradually opening the door for recognizing female authors and indigenous people as IP holders.

In addition to the diversity of IP holders, the diversity of IP subject matters is also discussed, one way of which is adopting heterogeneous models of compensation. For instance, medicine for diabetes is more likely subject to compulsory licenses while medicine offering cosmetic enhancements is likely subject to injunctions. Patented software whose owner has already received adequate compensation in the original country is more readily defensible by international exhaustion than patented drugs that still cannot recover the investment. In the area of copyright, operating software and smartphone technology are more likely to be compensated by compulsory licensing while music, films, or video games could be compensated by accurate micropayments and post-production royalty stream (Chapter 3). Pornographic works should receive less economic incentives for creation and distribution than non-pornographic works. In the field of trademark, disparaging trademarks can get out of the list of national trademark law and be protected only by the common law (Chapter 5 & 16).

Heterogeneity raises a deeper question about the limits of what Max Weber termed as “*formal rationality*.”⁵ According to Weber, the transformation from substantive rationality to formal rationality signifies the modernization of law since the formally rational law can be calculated and managed by bureaucratic hierarchies in the capitalist society.⁶ In other words, formal rationality helps to tailor law to the modern world; a world that aims at increasing efficiency and promoting social production under a standardized criterion. However, with the widening scope of stakeholders with heterogeneous interests, the formally rational rules can no longer be used to accommodate the increasing types of diversified non-monetary values. In this day and age, substantial rational considerations such as diversity, morality, and equity should also be re-incorporated into the IP regimes, which is what this book argues. How can the law remain autonomous and independent while in the meantime also avoid undermining diversified interests? This book argues for the usage of innovative judicial interpretation, to battle this

⁵ See Max Weber, *ECONOMY AND SOCIETY: AN OUTLINE OF INTERPRETIVE SOCIOLOGY*, 3 (1978).

⁶ *Ibid.*, at 25.

apparent conundrum. Compared to direct legal reforms, judicial interpretation is a more flexible, progressive, and moderate approach “*toward a fuller appreciation and acceptance of diversity*” (p.2). Accordingly, Yogesh Pai suggests changing the IP regime from a rule-based to a principle-based system so as to leave more room for legal interpretation (Chapter 4).

Judicial application of the diversity approach in individual cases is more flexible but may lead to a collision of different principles as well as a conflict between principles and rules. At present, utilitarian theory and Locke’s labor theory are the two most prevailing justifications for government intervention in the free market. IP rights function as incentives for future creation and innovation under the utilitarian approach, and the rewards for intellectual labor under the Lockean theory. Though the editors of this book claim at the very beginning that the diversity approach complements rather than contradict other traditional IP theories, diversification does not always necessarily equate to the maximization of social welfare or the recognition of creators’ intellectual labor. Sometimes the diversity concern may mitigate the net social value or underestimate creator’s contribution because some minority groups are given more benefits than they can get in the marketplace. How to deal with the collisions of diversity theory, utilitarianism theory, labor theory and even the human right to free speech is a question that this book unfortunately overlooks or oversimplifies in its discussion. According to Robert Alexy, a well-established jurist and a legal philosopher, the priority relations between the principles are not absolute but only conditional or relative.⁷ Imagine we are facing two conflicting principles, principle 1 (P1) and principle 2 (P2). The operative facts of case one may satisfy the condition to have P1 prior to P2 while case two may have the condition that supports P2 prior to P1.⁸ Therefore, no assumption can be made that the diversity principle proposed by this book will overwhelm other IP principles and policies in all cases.

As the current IP rules are mainly founded on utilitarian principles or Locke’s labor theory,⁹ collisions may occur not only between different principles but also between principles and rules. Some authors of this book claim that the diversity principle should directly be applied to IP cases and prevail over the written rules. However, the case quoted in support of this argument, *Qualitex Co. v. Jacobson Products Co. Inc.*,¹⁰ where the defendant sued to invalidate the plaintiff’s trademark with the reason of avoiding

⁷ See Robert Alexy, *On the structure of legal principles*, 13 *RATIO JURIS* 294, 297 (2000).

⁸ *Id.*

⁹ See Peter Drahos, *A PHILOSOPHY OF INTELLECTUAL PROPERTY*, 23 (1996).

¹⁰ 1995 SCC OnLine US SC 28: 131 L Ed 2d 248: 514 US 159 (1995).

anti-competition, took a more moderate stand. The U.S. Supreme Court noted that “*unless there is some special reason that convincingly militates against the use of color alone as a trademark, trademark law would protect Qualitex’s use of the green-gold color on its press pads*” (Chapter 20). In this case, the Supreme Court presented the same opinion as Robert Alexy who argued that strict conditions should be satisfied for a principle to take priority over a rule if collisions were involved. The P₁ not only needs to be measured with the P₂ that supports the rule but also with some “*formal principles*” including the principle that “*the rules established by a proper authority must be observed*” and that “*there is no reason to deviate from the consistent legal practice*”.¹¹ Sufficient grounds should be provided for the diversity principle to prevail over specific IP rules, which therefore calls for a fact-intensive inquiry.

For instance, in the *Qualitex* case, P₁ is a diversity-related principle of encouraging competition. The conflicting rule is that a distinctive mark can be registered which is supported by P₂, the principle of private autonomy, that private parties can use any mark they wish to compete in the market as long as it does not violate the prohibitive provisions of law. Thus P₁ does not significantly weigh over P₂, let alone considering the formal principles. However, the less distinctive the mark is, the less priority the rule and P₂ will have over P₁. Also, if the mark is functional, in terms that it is essential to the use or purpose of the good, the decision may be less favorable to the trademark holder because P₁ gains weight as the functionality of the mark increases. To estimate the collision between the diversity principle and the conflicting rules is actually a matter of balancing between different factors in individual cases, as in determining the collision between different principles.¹² However, in order to weigh over conflicting rules, the diversity principle should be more sufficiently grounded than to prevail over conflicting principles.

In closing, *Diversity in Intellectual Property* brings a refreshing insight into the jurisprudence of IP by regarding IP as an ongoing and collaborative process that involves multiple stakeholders such as creators, users and intermediaries. It breaks the barrier of the sovereignty built on Romantic authorship and shifts the private property paradigm into a collaborative discourse. In the Internet era where technological and social development enables anyone, whether wealthy or poor, educated or undereducated, able-bodied or disabled, male or female; to create, share and exploit intellectual products,

¹¹ See Robert Alexy, *On the structure of legal principles*, 13 *RATIO JURIS* 294, 300 (2000).

¹² See R. Alexy, *Formal Principles: Some Replies to Critics*, 12 *INTERNATIONAL JOURNAL OF CONSTITUTIONAL LAW* 511, 513 (2014).

diversity is an inevitable trend. In order to secure the merits of diversity and achieve substantive equality between different groups of stakeholders, future research can put more focus on how to deal with the collisions between different IP justifications, and how to make a heterogeneous model that sophisticatedly caters to the requirement of diversified IP beneficiaries and different subject categories.

INFORMATION ABOUT THE JOURNAL

The *Indian Journal of Law and Technology* (ISSN 0973-0362) is an academic journal, edited and published annually by students of the National Law School of India University, Bangalore, India. All content carried by the Journal is peer-reviewed except for special comments and editorial notes. The Journal comprises:

- the Board of Advisory Editors, consisting of professionals and academicians pre-eminent in the field of law and technology, which provides strategic guidance to the Journal;
- the Article Review Board, a panel of external peer-reviewers;
- the Editorial Board, consisting of students of the National Law School of India University, which is responsible for selecting and editing all content as well as contributing occasional editorial notes;

OPEN ACCESS POLICY

The *Indian Journal of Law and Technology* is a completely open access academic journal.

- Archives of the journal, including the current issue are available online with full access to abstracts and articles at no cost.
- Please visit the website of the Indian Journal of Law and Technology at "<http://www.ijlt.in>" to get additional information and to access the archives of previous volumes.

INFORMATION FOR CONTRIBUTORS

The Indian Journal of Law and Technology seeks to publish articles, book reviews, comments and essays on topics relating to the interface of law and technology, particularly those with a developing world perspective.

MODE OF SUBMISSION

Submissions can be in electronic form or in hard copy form. However, submissions in electronic form are strongly encouraged in order to expedite

the submission review process. Please address submissions in electronic form to the Chief Editor of the Indian Journal of Law and Technology at “ijltedit@gmail.com”.

REGULAR SUBMISSION REVIEW

The Journal shall communicate an acknowledgement to all authors shortly after the receipt of their submissions. The preliminary review of the submissions shall be completed within four weeks of receipt in usual circumstances. The submissions that are initially accepted shall be blind-refereed by the Article Review Board. The Journal shall make due efforts to complete the entire peer-review process within a reasonable time frame. The Journal shall notify the authors about the exact status of the peer-review process as required.

EXPEDITED SUBMISSION REVIEW

This option is available to those authors who have received an offer of publication from another journal for their submissions. The authors may request an expedited submission review. However, the decision to grant an expedited submission review shall remain at the discretion of the Editorial Board. Please note that requests for an expedited submission review can only be made in relation to submissions in electronic form. All such requests must be accompanied by the following details:

- Name(s) of the author(s) and contact details;
- Title of the submission;
- Details about the journal(s) which has/have offered to publish the submission;
- Whether the offer is conditional or unconditional and, if the offer is conditional, then what conditions are required to be met for final acceptance;
- The date(s) on which the offer(s) expire(s).

The Journal shall make due efforts to accommodate the existing offer(s) and applicable deadline(s). However, upon an offer of publication pursuant to the

expedited submission review, the authors shall have to communicate their decision within five calendar days of the notification or the offer. If there is no response, then the journal shall have the discretion to withdraw the offer.

SUBMISSION REQUIREMENTS

- All submissions must be accompanied by:
 - (1) a covering letter mentioning the name(s) of the author(s), the title of the submission and appropriate contact details.
 - (2) the résumé(s)/curriculum vitae(s) of the author(s).
 - (3) an abstract of not more than 200 words describing the submission.
- All submissions in electronic form should be made in the Microsoft Word file format (.doc or .docx) or in the OpenDocument Text file format (.odt).
- All text and citations must conform to a comprehensive and uniform system of citation. The journal employs footnotes as the method of citation.
- No biographical information or references, including the name(s) of the author(s), affiliation(s) and acknowledgements should be included in the text of the submission, the file name or the document properties. All such information can be provided in the covering letter.
- The Journal encourages the use of gender-neutral language in submissions.
- The Journal shall be edited and published according to the orthographical and grammatical rules of Indian English that is based on British English. Therefore, submissions in American English shall be modified accordingly. The Journal encourages authors to use British English in their submissions in order to expedite the editing process.
- The authors are required to obtain written permission for the use of any copyrighted material in the submission and communicate the same to the Journal. The copyrighted material could include tables, charts, graphs, illustrations, photographs, etc. according to applicable laws.

COPYRIGHT

The selected authors shall grant a licence to edit and publish their submissions to the Journal but shall retain the copyright in their submissions. The aforementioned licence shall be modelled as per a standard author agreement provided by the Journal to the selected authors.

DISCLAIMER

The opinions expressed in this journal are those of the respective authors and not of the Journal or other persons associated with it.

PERMISSIONS

Please contact the Chief Editor of the Indian Journal of Law and Technology for permission to reprint material published in the Indian Journal of Law and Technology.

SUBSCRIPTION GUIDELINES

Subscription:

Subscription (inclusive of shipping) of the IJLT is as follows:

TYPE OF SUBSCRIPTION	BI-ANNUAL
Hard Copy	₹ 900
E-copy	₹ 900

To subscribe, a draft of the requisite amount in favour of 'Eastern Book Company' payable at Lucknow, must be sent along with the completed subscription form, to:

Eastern Book Company,

34, Lalbagh, Lucknow-226001, India

Tel.: +91 9935096000, +91 522 4033600 (30 lines)

Please allow for 4-6 weeks for delivery of the journal in hard copy.

All subscription enquiries may be sent to subscriptions@ebc-india.com

To subscribe to the e-copy version visit www.ebcwebstore.com

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission.

The published works in this issue may be reproduced and distributed, in whole or in part, by nonprofit institutions for educational and research purposes provided that such use is duly acknowledged.



IJLT

THE INDIAN JOURNAL OF
LAW AND TECHNOLOGY

Volume 14 | Issue 1 | 2018

SUBSCRIPTION FORM

Please enter/renew my subscription for the items circled below:

TYPE OF SUBSCRIPTION	BI-ANNUAL
Hard Copy	₹ 900
E-copy	₹ 900

Mailing Details:

NAME _____

ORGANISATION _____

DRAFT No. _____

DRAWN ON _____

FOR RS. _____ (in favour of EASTERN BOOK COMPANY)

ADDRESS _____

TEL: _____

EMAIL: _____

Attach attested photocopy of Photo ID of institution to avail Law Student/Teacher subscription.



