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www.script-ed.org
editors.scripted@ed.ac.uk
@scripted_jrnl

Cover image

Moneta imaginaria

Israel Cedillo Lazcano

Gasparo Scaruffi presented the idea for a global monetary standard in his work *L'alitinonfo* (1582), with the aim of standardising the numerous coinages then circulating around medieval Europe. This idea was structured around a concept known as "moneta imaginaria", which represented a stable value relation between gold, silver, and copper and which all the currencies were expected to follow. Since the 2008 publication of Satoshi Nakamoto's "Bitcoin: A Peer-to-Peer Electronic Cash System" – the "modern" version of John Law's *Money and Trade Considered* (1705) – we have witnessed the emergence of numerous arguments claiming that Bitcoin has the potential to become a universal means of payment. Here, I wanted to show, with one picture, how we have tried (and in most cases failed) both to define money and to make it uniform through various instruments, laws, and technologies.

Issue contents

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Editorial

Jiahong Chen, Annie Sorbie,** Giorgos Vrakas****

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* Editor-in-Chief, *SCRIPTed*, j.chen@ed.ac.uk
** Managing Editor, *SCRIPTed*, annie.sorbie@ed.ac.uk
*** Executive Editor, *SCRIPTed*, giorgos.vrakas@ed.ac.uk

This summer issue of *SCRIPTed* marks the beginning of the fifteenth volume of our journal. We are delighted to present a collection of high-quality, fully peer-reviewed articles from across the range of information technology, intellectual property, and medical law. Also included is an equally diverse set of book reviews that will provide our readers with lots of ideas on what to add to their reading lists.

In the first article, Laurence Diver carries out a critical interdisciplinary exploration of the theories of affordance and technological mediation, and their relation to law. The article explains how existing theories in the legal literature — which offer accounts both of the evolution of law as a result of the affordances of the script, and of law as an affordance *per se* — are subject to certain normative and definitional limitations. Based on these findings, the article suggests an alternative approach that maintains the user-artefact relational structure of those theories, thereby casting the law as the user of digital artefacts.

Another article featuring IT law discusses the topical GDPR, with a particular focus on the new right to data portability. Helena Ursic questions the ways in which the data protection objectives of such a right can be achieved through the exercise of the right. Following a historical and doctrinal analysis of the right to data portability, the author identifies four gateways through which protection of personal data can be improved with this right: control, (re)use, transparency, and equality. Despite these promises, however, it is argued that the realisation of the right's potential will depend on a series of regulatory efforts in terms of interpretation and enforcement of the law.

In the field of IP law, the article by Eugene C. Lim deals with the highly controversial issue of the tension between authors' and users' rights in the context of non-commercial user-generated content. The piece conducts a comparative investigation of Canada and the UK, the resulting analysis of which reveals that while Canadian law provides certain statutory defences to the user

of copyrighted works against infringement claims based on the author's economic rights, such defences are vulnerable to moral rights claims. For this reason the author goes on to explore the extent to which Canadian copyright law might learn from the UK experience.

For readers interested in medical law, this issue includes an article on the Taiwan Biobank, by Shawn H.E. Harmon, Shang-Yung Yen, and Shu-Mei Tang, in which the authors outline how the Biobank was established and how its governance has evolved over time. Two perspectives are adopted to present the developments surrounding the Biobank, focusing respectively on substantive concerns (autonomy and ethnicity) and procedural safeguards (transparency and governance).

We are also pleased to share some news regarding the operation of *SCRIPTed*, as well as the composition of the editorial board. In line with our commitment to knowledge exchange and open access, we have updated our copyright policy to clarify further our policy regarding the use of materials for self-archival purposes. Additionally, we would like to welcome Giorgos Vrakas to the editorial management team, taking up a position as our Executive Editor.

As always, we pride ourselves on *SCRIPTed*'s continuing status as a high-quality, open-access, and interdisciplinary journal. We hope you enjoy issue 15:1 and look forward to hearing your feedback.

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Law as a User: Design, Affordance, and the Technological Mediation of Norms

*Laurence Diver**

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Abstract

Technology law scholars have recently started to consider the theories of affordance and technological mediation, imported from the fields of psychology, human-computer interaction (HCI), and science and technology studies (STS). These theories have been used both as a means of explaining how the law has developed, and more recently in attempts to cast the law *per se* as an affordance. This exploratory paper summarises the two theories, before considering these applications from a critical perspective, noting certain deficiencies with respect to potential normative application and definitional clarity, respectively. It then posits that in applying them in the legal context we should seek to retain the relational user-artefact structure around which they were originally conceived, with the law cast as the user of the artefact, from which it seeks certain features or outcomes. This approach is effective for three reasons. Firstly, it acknowledges the power imbalance between law and architecture, where the former is manifestly subject to the decisions, made by designers, which mediate and transform the substance of the legal norms they instantiate in technological artefacts. Secondly, from an analytical perspective, it can help avoid some of the conceptual and definitional problems evident in the nascent legal literature on affordance. Lastly, approaching designers on

their own terms can foster better critical evaluation of their activities during the design process, potentially leading to more effective 'compliance by design' where the course of the law's mediation by technological artefacts can be better anticipated and guided by legislators, regulators, and legal practitioners.

Keywords
affordance, technological mediation, postphenomenology, legal theory, compliance by design, legal design

* University of Edinburgh School of Law, Edinburgh, Scotland, laurence.diver@ed.ac.uk

For what is law with respect to the computer if not a user itself?[1]

1 Introduction

Technology law scholars have recently started to consider the theories of affordance and technological mediation. This is a welcome development, showing a sensitivity to the inherently cross-disciplinary nature of both normative and positive enquiries into technology regulation. These theories have been used to explain how the technologies which embody law have affected its development, and more recently in attempts to cast the law as an affordance *per se*. The success of these approaches has been mixed. Controversies in the literature on affordance theory around definitional clarity and breadth of application are apt to be repeated in the legal sphere if the concept is not used with care.

In an effort to avoid some of these problems, this exploratory paper contributes to the burgeoning legal literature in this area whilst remaining faithful to the two theories' origins in the world of material artefacts and their design. The locus of the enquiry is the field of 'compliance by design', which is concerned with ensuring the design of technical architectures is faithful to, or *isomorphic* with, legal and regulatory norms.[2] A major issue is how, as non-lawyers, designers can integrate an appropriate sensitivity to the law within their processes. The concept of affordance already has a significant presence in the design sphere, so its consideration from a legal perspective might suggest one

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1 Cornelia Vismann and Markus Krajewski, "Computer Juridisms" [2007] *Grey Room* 90-109, p. 101.

2 For a discussion of the concept of isomorphism, or "well defined correspondence" between the legal and technological domains, see Trevor Bench-Capon and Frans Coenen, "Isomorphism and Legal Knowledge Based Systems" (1992) 1 *Artificial Intelligence and Law* 65-86.

mechanism by which this challenge could be met: if lawyers adopt design language and concepts in their critiques of technological artefacts, we might move a step towards bridging the gap between these separate but fundamentally intertwined worlds.

The paper builds on Mireille Hildebrandt's work on "legal protection by design", in her discussion of which she refers only in passing to "detecting, configuring or designing affordances that are compatible with specific legal norms".[3] Here I sustain the focus on the concepts of affordance and mediation, taking it beyond Hildebrandt's seminal analysis of the technological embodiment of law and the increasing threat it poses to legality.

I begin by summarising affordance theory and technological mediation with a view to avoiding the definitional confusion that has been evident in the legal treatment of these concepts – if they are to provide a fruitful means of interfacing between the worlds of design and law, clarity from the outset is a necessity. In light of that analysis, I then consider how code is both more, and less, than law. This leads me to the first argument of the paper: that code's characteristics render law merely a user of technological artefacts. From that perspective, we can come full circle to an understanding of law which fits into the relational analytical framework of affordance and mediation theory, asking what it is that a particular technological artefact affords (or should afford) the law-as-(mere)-user when it mediates the operation of the latter through the materialities of its architecture.

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[3] Mireille Hildebrandt, *Smart Technologies and the End(s) of Law* (London: Edward Elgar Publishing, 2015), p. 218.

2 Affordance

The facilitation of a particular action or behaviour by an artefact's design to a particular user is known as an 'affordance'. The concept was originally developed in the late 1960s by the perceptual psychologist James Gibson, who defined affordance as what an artefact "*offers* the animal, what it *provides* or *furnishes*, either for good or ill."[4] It was later developed and introduced into the design sphere by Donald Norman, who defines it as "a relationship between the properties of an object and the capabilities of the agent that determine just how the object could possibly be used."[5] Individual affordances can be both positive and negative, which is to say beneficial and injurious to the user,[6] each to varying degrees. Gibson is careful to avoid the value judgements suggested by the terms "positive" and "negative", stating instead that such descriptions can be applied objectively if "their meanings are pinned down to biological and behavioural facts". So, for example, a fire can afford both the warmth that is necessary to life, but it can also afford burning, which implies injury and, potentially, death.[7] The extent of the benefit or injury will depend on the user in question. Affordances are therefore not objective physical properties of the artefact, but rather they arise on-the-fly through the relationship between it and a particular user, as governed by those properties. Gibson illustrates this relationship through the examination of a hypothetical walking surface:

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4 James Gibson, *The Ecological Approach to Visual Perception* (Classic Edition, New York: Psychology Press, 2015), p. 119 (emphasis supplied). The concept originated in Gibson's *The Senses Considered as Perceptual Systems* (Boston, Mass.: Houghton Mifflin, 1966).

5 Donald Norman, *The Design of Everyday Things* (Cambridge, Mass.: MIT Press, 2013), p. 11.

6 Although Gibson was concerned with organisms generally (see the quote *infra*), humans are the agents with which I am concerned, and so I hereafter I use the term 'users'.

7 Gibson, *supra* n. 4, pp. 128–129.

> Note that the four properties listed – horizontal, flat, extended, and rigid – would be *physical* properties of a surface if they were measured with the scales and standard units of physics. As an affordance of support for a species of animal, however, they have to be measured *relative to the animal*. They are unique for that animal. They are not just abstract physical properties. They have unity relative to the posture and behaviour of the animal being considered. So an affordance cannot be measured as we measure in physics.[8]

Thus, a surface that *affords* support to a domestic cat (it is "walk-on-able"[9]) may or may not do the same to an adult elephant; the particular mix of physical properties and the size and weight of both animals will determine which animal is afforded what capabilities. It can be seen, then, how the concept highlights the inherent and simultaneous objectivity and subjectivity of an artefact's potential effects in the world. As Norman puts it,

> [t]he presence of an affordance is jointly determined by the qualities of the object and the abilities of the agent that is interacting. This relational definition of affordance gives considerable difficulty to many people. We are used to thinking that properties are associated with objects. But affordance is not a property. *An affordance is a relationship.* Whether an affordance exists depends on the properties of both the object and the agent.[10]

Importantly, an affordance need not be perceived in order to exist; it is an objective fact about how the properties of the artefact and the user relate to one

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8 *Ibid.*, p. 120 (emphasis supplied).
9 *Ibid.*, p. 119.
10 Norman, *supra* n. 5, p. 11 (my emphasis).

another.[11] Affordances are potentials that may not be within the user's awareness and may never be realised, but nevertheless the relationship is always present and ready to be acted upon for as long as the properties necessary for it obtain in both the artefact and the user.[12]

This is what Norman has subsequently referred to as *real*, as opposed to *perceived*, affordances.[13] For example, a particular fruit may afford nutrition to a particular species of animal, but if the animal is unaware of this the relationship will never be fulfilled, despite its extant potentiality. Perceived affordances are those which the user 'picks up on', which, as the example just given demonstrates, do not necessarily represent the full range of relationships that exist between her and the artefact in question. The distinction is important in the online context because, as Norman puts it, "in graphical, screen-based interfaces, the designer primarily can control only perceived affordances [because] the computer system already comes with built-in physical [i.e. real] affordances".[14] Although Norman is not approaching the question primarily with the underlying instrumentality of software (as opposed to visual) design in mind, his comment hints at an important truth about the power of the designer to control users'

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[11] *Ibid.*, p. 13. In an interesting discussion of robotics and artefact-artefact affordances, Maier and Fadel discuss how non-organic agents can be afforded support by a surface, without 'knowing' (perceiving) it. See Jonathan Maier and George Fadel, "Affordance-Based Methods for Design", *Proceedings of the 2003 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference* (Chicago, Illinois: The American Society of Mechanical Engineers, 2003), p. 2.

[12] See Peter Nagy and Gina Neff, "Imagined Affordance: Reconstructing a Keyword for Communication Theory" (2015) 1 *Social Media + Society* 1-9, p. 3, and Samer Faraj and Bijan Azad, "The Materiality of Technology: An Affordance Perspective" in Paul Leonardi, Bonnie Nardi and Jannis Kallinikos (eds.), *Materiality and Organizing: Social Interaction in a Technological World* (Oxford: OUP, 2012), pp. 250–251.

[13] Donald Norman, "Affordance, Conventions, and Design" (1999) 6 *Interactions* 38-43.

[14] *Ibid.*, p. 39. The potential discrepancy between real and perceived affordances is perhaps even more marked in the screen-less devices that are proliferating as part of the Internet of Things.

perceptions through the choices they make when they constitute the interface. The corollary of this is that in controlling those surface perceptions of what is possible, other underlying, or *real*, affordances can be hidden from sight (for example the ability to view and alter source code, or to submit fake details to a registration system), or their hypothetical, imagined possibility supressed altogether (for example where users accept the default settings of a technical artefact without enquiring as to how the available options might better suit their preferences or interests[15]).

2.1 Disaffordance

This notion of the positivity or negativity of affordances discussed above refers to the outcome occasioned by the affordance. This should be distinguished from both (i) the objective fact that interaction is prevented and the relationship therefore does not exist, in what Norman terms an "anti-affordance",[16] and (ii) the subjective misapprehension as to the existence of that relationship, where the user misinterprets the information she is receiving and believes there to be a relationship between herself and the artefact when in fact there is none (or not the one she believes there to be). Both Gibson and Norman provide the example of a glass pane covering an opening, which gives the user the erroneous impression of the affordance of passage, while the other (Norman's "anti-affordance") points simply to the objective fact that there is no such affordance, whether the user is aware of this or not.[17]

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15 Jay Kesan and Rajiv Shah, "Setting Software Defaults: Perspectives from Law, Computer Science and Behavioral Economics" (2006) 82 *Notre Dame Law Review* 583-634.

16 Norman, *supra* n. 5, p. 11.

17 Gibson, *supra* n. 4, pp. 133–134; Norman, *supra* n. 5, pp. 11–12.

Interaction designer Dan Lockton draws on Lawrence Lessig's discussion of "architectures of control"[18] to take the notion of anti-affordances further, adding the element of intention that is absent in Norman's discussion. Lockton defines "architectures of control" as

> features, structures or methods of operation designed into any planned system with which a user interacts, which are intended to enforce or restrict certain user behaviour.[19]

Lockton discusses disaffordance in the context of DRM, including the Sony BMG scandal of the mid-2000s, which of course animated a great deal of legally-relevant scholarship.[20] This topic will be returned to below in part 5.2.

Re-iterating the original definition, Gibson's negative affordance is concerned with the 'ill' that is offered, provided, or furnished by the artefact. Norman's anti-affordance is concerned with the *bare fact* of the absence of a particular offering, provision, or furnishing by the artefact. Lockton, however, is interested less in the *ex post* outcome of the affordance's operation *per se*, focusing instead on the *ex ante* intent behind the design. 'Positive' and 'negative' in this sense are not a Gibsonian judgement of the quality of the outcome, but rather an assessment of the behaviour(s) that the affordance enables or restricts. It is 'positivity' in the juristic sense of referring to an extant rule: what is *ex ante* permitted versus what is not. For Lockton, this sense of 'negative' is thus about

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18 Lawrence Lessig, *Code: Version 2.0* (New York: Basic Books, 2006), ch. 4.

19 Dan Lockton, "Architectures of Control in Product Design" [2006] *Engineering Designer: The Journal of the Institution of Engineering Designers* 28-31.

20 See for example Deirdre Mulligan and Aaron Perzanowski, "The Magnificence of the Disaster: Reconstructing the Sony BMG Rootkit Incident" (2007) 22 *Berkeley Technology Law Journal* 1157-1232; J. Alex Halderman and Edward Felten, "Lessons from the Sony CD DRM Episode" [2006] *15th USENIX Security Symposium* 77-92.

the *engineering of obedience*.[21] He suggests the term 'disaffordance' to describe these constraints, which he defines as "either products with functionality deliberately removed… or with the functionality deliberately hidden or obscured to reduce users' ability to use the product in certain ways, or a combination of the two."[22] Thus, disaffordances are intentional and strategic, as opposed to inadvertent or the result of incompetent design. There is therefore a value judgement attached to them in a way which Gibson explicitly, and Norman implicitly, avoid. Although the term 'disaffordance' has gained only modest traction, it is instructive in encapsulating the idea of how an artefact can conceal, discourage, or forbid the possibility of certain behaviours as a result of design decisions.[23]

The idea of there being a spectrum of behavioural possibilities or limitations fits with recent work on affordance theory done by sociologists Jenny Davis and James Chouinard. Their framework of six "affordance mechanisms" aims to cut through a definitional confusion in the literature,[24] resulting perhaps from the abstractness of the original theory and its tendency to promote binary

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21 Dan Lockton, "Disaffordances and Engineering Obedience" (2006), available at http://architectures.danlockton.co.uk/2006/10/22/disaffordances-and-engineering-obedience/ (accessed 3 February 2018).

22 *Ibid.*

23 See *ibid.* D.E. Wittkower makes a similar point, written from the perspective of avoiding unethical discrimination in design. See D.E. Wittkower, "Principles of Anti-Discriminatory Design", *2016 IEEE International Symposium on Ethics in Engineering, Science and Technology (ETHICS)* (IEEE, 2016), p. 2. For a discussion of disaffordances in the robotics context, see Mohan Sridharan and Ben Meadows, "Towards an Architecture for Discovering Domain Dynamics: Affordances, Causal Laws, and Executability Conditions", *International Workshop on Planning and Robotics (PlanRob) at the International Conference on Automated Planning and Scheduling (ICAPS)* (Pittsburgh: Association for the Advancement of Artificial Intelligence, 2017). James Gee discusses disaffordance in the context of video game worlds, noting how they are designed explicitly with particular mixes of affordance and disaffordance in mind, vis-à-vis the player's avatar. See James Gee, "Pleasure, Learning, Video Games, and Life: The Projective Stance" (2005) 2 *E-Learning and Digital Media* 211-223, p. 212.

24 Jenny Davis and James Chouinard, "Theorizing Affordances: From Request to Refuse" (2016) 36(4) *Bulletin of Science, Technology & Society* 241-248.

thinking which may have enabled subsequent scholarship to add unhelpful texture to the concept. Although Davis and Chouinard concede that this confusion has led to suggestions that the concept has lost any intellectual value it might have had,[25] I share their optimism that it might still assist us in analysing artefacts and their material relationality.[26] This is perhaps especially true in the legal sphere, where its application is almost entirely novel and where there might therefore be useful insights to be gained.[27] Indeed, the contribution of those authors seems a particularly apt mechanism for applying the theory anew, since it cuts through the definitional uncertainty in the literature to provide what they suggest is a "nuanced and dynamic model" that can facilitate "complex analyses of subject-artifact relationships".[28]

The framework Davis and Chouinard develop posits that affordance exists on a spectrum, where any given example is not a singular binary fact but rather operates by degree. They give the example of a set of stairs which can afford easy or difficult climbing depending on the angle of their construction. This is in opposition to the 'classic' concept of affordance, which would have it

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25 See, for example, Martin Oliver, "The Problem with Affordance" (2005) 2 *E-Learning and Digital Media* 402-413.

26 Davis and Chouinard, *supra* n. 24, p. 241.

27 Hildebrandt notes that Ryan Calo is "one of the very few lawyers who has written about law in terms of affordances". See Mireille Hildebrandt, "Law As an Affordance: The Devil Is in the Vanishing Point(s)" (2017) 4(1) *Critical Analysis of Law* 116-128, p. 121. Calo in turn cites Hildebrandt's work (referenced here *et passim*) and Julie Cohen's book *Configuring the Networked Self: Law, Code, and the Play of Everyday Practice* (New Haven, Conn.: Yale University Press, 2012) as two lone examples of the use of affordance theory in a legal context where there is otherwise "next to no mention of Gibson". See his "Can Americans Resist Surveillance?" (2016) 83 *The University of Chicago Law Review* 23-43, p. 29. Indeed, a search conducted at the time of writing uncovered almost nothing in the legal literature beyond that published by the above scholars. One notable exception is Ronald Leenes, "Framing Techno-Regulation: An Exploration of State and Non-State Regulation by Technology" (2011) 5 *Legisprudence* 143-169.

28 Davis and Chouinard, *supra* n. 24, p. 241.

that the stairs either simply do or do not afford climbing for a particular user.[29] Davis and Chouinard suggest that affordances can be characterised as one of six mechanisms: request, demand, allow, encourage, discourage, and refuse. One can see how these mechanisms enforce the idea of relationships, which Norman noted caused such difficulty. Adding one of these modifiers adds useful depth to the bare concept of affordance, enabling a more intuitive understanding of a given user-artefact relationship. Returning the example of stairs mentioned above, they *allow* the able-bodied to climb, *discourage* careless climbing (if they are particularly steep), and *refuse* climbing to those who are wheelchair-bound. Here we get an immediate sense of three normative affordance relationships that exist between the artefact and three hypothetical classes of user.

Considered through these affordance mechanisms, it becomes easier to discern the particular makeup of a given artefact's set of affordance relationships. One can appreciate more easily the affordances and disaffordances of a particular artefact vis-à-vis a particular user, when one asks the questions in turn: "what does it allow?", "what is it encouraging?", etcetera. When taken together, the bundle of affordance relationships so identified, we can begin to answer a broader question: how does the technological artefact mediate reality for its user? This is the question that the field of postphenomenology is fundamentally concerned with. Both Hildebrandt and fellow technology law scholar Julie Cohen consider postphenomenology in their analyses. The former is concerned mainly with the role of "technological normativity" in the evolutionary embodiment of law,[30] and the latter with the situatedness of users vis-à-vis their understanding of the networked environments they inhabit.[31] Here I adopt a 'compliance by

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[29] Davis and Chouinard characterise this as a "false binary". See *ibid.*, p. 242.

[30] Mireille Hildebrandt, "Legal and Technological Normativity: More (and Less) than Twin Sisters" (2008) 12 *Techné: Research in Philosophy and Technology* 169-183, p. 177 *et seq*.

[31] Cohen, *Configuring the Networked Self*, *supra* n. 27, pp. 48–49.

design' perspective, from which I will cast the law-system[32] as the 'user', and the substantive law as the 'reality' which that user wishes to access and oversee. The over-arching question then becomes: how does the technological artefact mediate the substantive law from the perspective of the law-system? Before moving to that discussion, I set out the salient elements of the postphenomenological view of technological mediation.

3 Technological mediation

Postphenomenology is an area of science and technology studies (STS) which explores the relationships between individuals and artefacts, with an emphasis on the materiality of artefacts *per se* and not just as elements that are subsumed in a broader, non-technological (social) assemblage.[33] Peter-Paul Verbeek directs his enquiry at "the role played by specific technologies in specific contexts",[34] asking what the effects are of their materiality. Drawing on Martin Heidegger, Don Ihde, Bruno Latour, and Albert Borgmann, Verbeek's work deepens our understanding of the normative role of technologies as mediators of the relationships between humans and reality, rather than as either wholly neutral or wholly deterministic. Those relationships are split into those of perception (what the user *thinks* she can do with the artefact) and those of action (what she can *actually* do with it). Technological mediation is the ongoing construction and manipulation of these two relationships by and through artefacts, the result of

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[32] I borrow this term from Aernout Schmidt, "Radbruch in Cyberspace: About Law-System Quality and ICT Innovation" (2009) 3 *Masaryk University Journal of Law and Technology* 195-218, because it evokes not a monolithic 'law' but rather a complex made up of discrete parts, evolving in relation to one another. From a compliance perspective such a holistic view is of course a normative, if aspirational, goal.

[33] Peter-Paul Verbeek, *What Things Do: Philosophical Reflections on Technology, Agency, and Design* (Pennsylvania: Penn State Press, 2005), p. 68. For a definition of postphenomenology, see ch. 3 of the same volume.

[34] *Ibid*., p. 7.

which is, as postphenomenological thought has it, the co-constitution of reality. The user and the artefact, in bringing together their particular characteristics, constitute a new reality through their relationship. One can see the parallels with the theory of affordances; indeed, affordances are the individual building blocks that, taken in aggregate, make up the totality of technological mediation between a particular artefact and a particular user.[35] We can conceptualise the relationship as in Figure 1 below, where the user's experience of reality is an output of the mediating function TM().

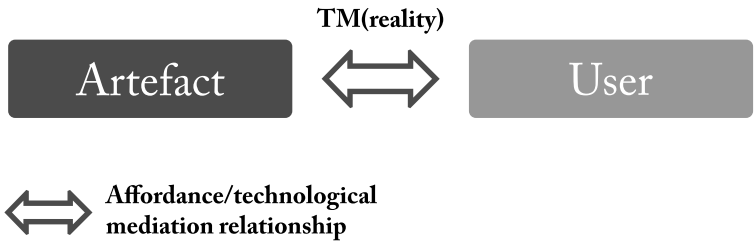

Figure 1. Artefact ↔ User relationship of technological mediation

3.1 Transformations

The user's experience of reality is transformed by these mediating relationships. The technological mediation of *perception* amplifies or reduces what can be comprehended of reality, while the technological mediation of *action* invites or inhibits behaviour. In both cases these mediations constitute transformations of reality as it is understood by the user, demonstrating what Verbeek calls "an important aspect of the non-neutrality of technology".[36]

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[35] Asle Kiran and Peter-Paul Verbeek, "Trusting Our Selves to Technology" (2010) 23 *Knowledge, Technology & Policy* 409-427.

[36] Verbeek, *supra* n. 33, p. 131. Regarding terminology, Verbeek speaks of perception being 'transformed', while Latour talks of action being 'translated' – see Bruno Latour, "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts" in Wiebe Bijker and John Law (eds.), *Shaping Technology/Building Society: Studies in Sociotechnical Change* (Cambridge, Mass.: MIT Press, 1992), p. 174 and *et passim*. For an influential discussion of translation in

Some examples serve to illustrate the concept. First, Ihde contrasts the technological mediation of a fountain pen and of a word processor.[37] The former imposes a slower style that inclines the writer towards taking time and considering her sentences before putting pen to paper, while the latter permits something closer to the speed of the spoken word, with additional facilities that allow for the composition to be edited, moved around, and refactored efficiently and easily. Neither the pen nor the word processor *determine* the mode of writing – both enable writing that is anywhere between slow and considered, and fast and careless – but their respective intentionalities "*promote* or *evoke* a distinct way of writing."[38] Towards the more overtly political end of the mediation spectrum, Verbeek provides an evocative example, describing how the mayor of the Romanian city of Cluj sought to have the rakes of municipal employees shortened so that they could no longer lean against them, thus discouraging "laziness". In Verbeek's description of the situation, "[t]he rake *mediates* the relation between the workers and the public gardens; it is not merely a means but plays an active role in the way this relation takes shape."[39] Langdon Winner's discussion of Robert Moses' bridges on Long Island suggests a similar politicisation of artefacts – in that case, the bridges were reportedly designed intentionally to be too low for public transport to pass beneath them, thus

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Actor Network Theory, see Michel Callon, "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay" (1984) 32 *The Sociological Review* 196-233. For my purposes, the difference in terminology is not materially relevant, hence the use of 'transformations'.

37 Don Ihde, *Technology and the Lifeworld: From Garden to Earth* (Bloomington, In.: Indiana University Press, 1990), p. 141 *et seq*.

38 Verbeek, *supra* n. 33, pp. 114–115 (emphasis supplied). There is an interesting contrast here with Ost's "word processor" model of law-making, whereby the copy/paste paradigm of electronic text has accelerated the proliferation of norms. For an English discussion see Florian Martin-Bariteau, "The Matrix of Law: From Paper, to Word Processing, to Wiki" (2014) 19 *Lex Electronica* 1-23.

39 Verbeek, *supra* n. 33, p. 115 (emphasis supplied).

preventing those reliant on public transport (which at the time meant to a disproportionate degree racial minorities and those in poverty) from accessing the public beaches which the roads that ran under the bridges led to.[40] The connection with disaffordance ("architectures of control" and the "engineering of obedience") is clear. This politicisation demonstrates how design can be infused with moral purpose, what Ihde terms *technological intentionality*, discussed next.

3.2 Technological intentionality

According to postphenomenology, technological intentionality has two senses. The first is the 'intention' (program of action, in Latour's language) inscribed into the artefact by its designer: Moses' bridges *intend* to prevent access by public transport vehicles and their passengers to public beaches; the shortened rake handles *intend* to prevent relaxed leaning; word processors *intend* the efficient and fast (re-)composition of texts. This first sense refers to "a certain directionality, inclination or trajectory that shapes the ways in which [artefacts] are used."[41]

The second, hermeneutic, sense is more holistic. It points to how the human-world relationship is mediated by the artefact, and is concerned with the idea that humans and their worlds are co-constitutive. The individual's sense of her own agency, and of the possibilities in the world which that agency can interact with, are mediated by the artefact, thus blurring the line between

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40 Langdon Winner, "Do Artifacts Have Politics?" [1980] *Daedalus* 121-136. Although Winner's account of the Long Island bridges has been challenged, his example nevertheless effectively demonstrates the concept.

41 Verbeek, *supra* n. 33, p. 114.

subjectivity and objectivity.[42] When she sets out to achieve something, her perception of what she can do and what the world permits are mediated by the artefact, and thus so too are her understanding of her self and her world co-constituted through the lens of that mediation.[43] 'The world' here is not an external truth; rather it is constituted by the particular individual who lives in it, as she is by it. The operation is mutual and bi-directional – she makes her world and her world makes her, and that 'making' is nudged this way or that by the technological mediation of artefacts. As Verbeek puts it, "[w]hat humans are and what their world is receive their form by artifactual mediation… [h]umans and the world they experience are the *products* of technological mediation, and not just the poles between which the mediation plays itself out."[44] We can gain a better understanding of the structure and effects of an artefact by considering it from a relational, rather than merely a functional, perspective. Affordance and mediation provide tools to help achieve this.[45]

3.3 Affordance and mediation

One can appreciate how the concept of technological mediation relates to affordance.[46] Both real and perceived affordances are evidence of the second

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42 Shedding the 'modern' dichotomy of subject/object is a prime goal of postphenomenology and of Actor Network Theory. See *ibid.*, p. 161 *et seq*. See also Faraj and Azad, *supra* n. 12, pp. 237–238. Again, parallels with affordance theory arise: Gibson explains that "an affordance is neither an objective property nor a subjective property; or it is both if you like". See Gibson, *supra* n. 4, p. 121.

43 Verbeek, *supra* n. 33, p. 116. This echoes Julie Cohen's suggestion that "as we struggle to shape our technologies and configure our artifacts, they also and quite literally configure us". See Cohen, *Configuring the Networked Self*, *supra* n. 27, p. 27.

44 Verbeek, *supra* n. 33, p. 130.

45 Maier and Fadel discuss the deficiencies of 'functional' theories of design, and how a 'relational', or affordance-based, theory, is more apt to explain the structure and effects of an artefact. See Jonathan Maier and Georges Fadel, "Affordance Based Design: A Relational Theory for Design" (2009) 20 *Research in Engineering Design* 13-27.

46 See Kiran and Verbeek, *supra* n. 35.

(hermeneutic) form of technological intentionality, where the artefact mediates the individual's understanding of what she can do in the world as she perceives it. Real (dis)affordances are also, of course, the bread and butter of the first form of technological intentionality: to inscribe a particular course of action in the artefact it must afford that course of action for a particular user or class of users; similarly, to *pro*scribe a particular course of action, the designer must disafford it for a particular user or class of users, as with the Long Island bridges or the shortened rake handles. The existence of an affordance is an objective fact about the relationship between a particular artefact and individual in a particular context, which when taken in aggregate with any other (dis)affordance results in a particular normative assemblage of technological mediation. And, as discussed above, affordances are not fixed attributes of an artefact, rather they come about as relations between particular artefacts and particular individuals in particular contexts. The affordance is an extant fact while it persists, but affordances change and mutate constantly in response to the evolution of their various ingredients.

This connects closely with the second postphenomenological sense of intentionality which speaks to the co-constituting relation between the individual and the artefact.[47] Thus, affordances can be seen as the underlying building blocks of mediation; they are one way of thinking about and labelling the 'scripts' which, through their translating mechanism, come together in aggregate to make up the mediating power of the artefact in the co-constitutive relationship between the user and the world. Whereas affordances are neutral facts, when they come together in this way they gain normative significance when considered through the postphenomenological lens of technological mediation.

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[47] *Ibid.*, p. 415 *et seq*.

4 Law and affordances

Recent work bringing affordance and postphenomenological theory into the legal sphere represents a welcome development in technology law scholarship, demonstrating a greater willingness to interface with other disciplines in the pursuit of better understanding and normative outcomes. As Julie Cohen has stated, "one cannot explain how code regulates – and, critically, how it comes to regulate one way or another – without harnessing the insights of STS."[48]

4.1 Law as an affordance *per se*

In a recent article on United States government surveillance, Ryan Calo seeks to cast law itself as an affordance, along with politics, technological architecture, and social norms. He pushes the concept directly into the legal sphere thus:

> …the law itself represents a set of affordances. Individuals or groups can turn to the law for recourse or find themselves at risk because others have done so. Legal affordances have the same basic features that I have already described. You can realize or fail to realize that you have recourse at law. You can think that you have recourse at law but be wrong. And, of particular interest to this Essay, not every person has the same legal affordances, even when a violation of law has clearly occurred.[49]

In the same paper, he applies the theory to the market, architecture (the technological section), and norms. Those conversant in the literature on software regulation will immediately recognise the four Lessigian "regulatory modalities"

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[48] Cohen, *Configuring the Networked Self*, *supra* n. 27, p. 27.
[49] Calo, "Can Americans Resist Surveillance?", *supra* n. 27, p. 29.

in the way Calo groups his consideration of affordances.[50] It is not clear why he does so, especially since Calo himself agrees that the four modalities are limited, and that "obviously missing are many other means of action and expression, such as art, protest, civil disobedience, and education".[51] If we are to adopt STS perspectives in our consideration of how software regulates, as Cohen suggests we should, it is incumbent that we cast off the liberal lens of the New Chicago School, and instead adopt not just agnostic perspectives on sources of regulation but also ones which are sensitive to context and the situatedness of the actors involved.[52] This is the aim of theories of technology, including affordances, actor network theory (ANT), and postphenomenology, which seek to identify the actual material effects of artefacts in particular contexts, eschewing any overarching ideological viewpoint.[53]

Although Calo is explicitly concerned with the law *per se* as an affordance, rather than with what technological artefacts afford it (as is the approach of this paper), it is nonetheless instructive to consider his analysis. Unfortunately, he runs almost immediately into a methodological obstacle. Discussing the courts, he suggests that "in theory, then, courts afford individuals and groups a number of ways to challenge surveillance."[54] To query properly what a court affords, at a level which means more than simply "provide", would require in-depth analysis across many fields of enquiry – not just the substance of the norms being litigated in that court, but also for example economic considerations (the socioeconomic

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50 Lawrence Lessig, 'The New Chicago School' (1998) 27 *The Journal of Legal Studies* 661-691. The four regulatory modalities are most famously set out in Lessig's *Code and Other Laws of Cyberspace* (New York, N.Y.: Basic Books, 1999) and its second edition *Code: Version 2.0* (New York, N.Y.: Basic Books, 2006), ch. 7.

51 Calo, "Can Americans Resist Surveillance?", *supra* n. 27, pp. 30–31.

52 Cohen, *Configuring the Networked Self*, *supra* n. 27, p. 12 *et seq*. See also Julie Cohen, "The Regulatory State in the Information Age" (2016) 17 *Theoretical Inquiries in Law* 369-414.

53 Faraj and Azad take the affordance approach to technological materiality (*supra* n. 12).

54 Calo, "Can Americans Resist Surveillance?", *supra* n. 27, p. 34.

status of the litigants and how this impacts on their ability to access justice), legal anthropology (how institutions and processes of governance affect court procedure and citizens' (dis)incentives to litigate), and architecture (the design of the court's buildings and technical infrastructure and how these affect the mental and physical state of the litigants and their lawyers, in turn affecting the ability of those concerned to present their cases in as effective a way as possible). Each of these is itself a potentially deep and rich enquiry, involving multiple overlapping and contingent affordances and mediations, each shifting according to the particular characteristics of the litigants in question. In short, the claim that "courts afford ways to challenge surveillance" seems both to oversimplify the deeply complex, situated, and contingent realities of such institutions, and to deprive the concept of affordance of substantive analytical content.[55]

Calo later suggests that "we all wind up with the affordances of the accused criminal, who is in certain respects our lowest common denominator."[56] This would seem to demonstrate some of the definitional confusion referred to by Davis and Chouinard, discussed above in part 2.1. Although Calo's ordinary meaning is clear, from the perspective of affordance theory it is not clear who is affording what to whom in this context. We have seen that affordances (and technological mediation more generally) are concerned principally with relationships. The affordance is a relationship between an artefact and an organism (a user). It may also exist between two people, or between two artefacts. In Calo's example, does the criminal accused afford every individual in the

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[55] As Faraj and Azad suggest, "the affordance perspective is less about intuitive design and more about recognizing the unexpected, situated, and emergent actions that actors may want to engage in with their devices". This would seem to imply the need for a more nuanced treatment of the relationship between an artefact and a user than that which Calo adopts. See Faraj and Azad, *supra* n. 12, pp. 251–252.

[56] Calo, "Can Americans Resist Surveillance?", *supra* n. 27, pp. 35–36.

greater population something, in a series of one-to-one relationships? Or is it the accused who is afforded something by the law, or perhaps by the social and/or material processes of the court? Or does his or her experience result in new affordance relationships arising between the institutions of law and individual members of the citizenry? At the very least, there is a lack of clarity here. At worst, adopting the concept at such an abstract level adds little of value to our analysis.

In another recent paper Calo returns to affordance theory in the context of privacy. Again, he invokes law *per se* as an affordance, but his analysis is unconvincing – he introduces this discussion with the claim, in relation to people-as-affordances, that "many factors – social, physical, technical, cultural – mediate these affordances".[57] He then lists two examples, information and law. On the latter, which he claims is a "'hidden' affordance", he states the following: "the second is the role of *law*. A trespasser might think your house affords him shelter, a cannibal that your body affords him nutrition. Property and criminal law say otherwise."[58] This belies another confusion. Firstly, affordances are instances of mediation between users and artefacts; they are not themselves mediated (this was discussed above in part 3).[59] Secondly, can the *law* in this case (property or criminal, in his example) properly be said to be an affordance *per se*? Where does it fit into the relationship between the trespasser and the house, or between the cannibal and one's body? I would suggest that the house *as a matter of fact* affords shelter to the trespasser, and one's body *as a matter of fact* affords nutrition to the cannibal (or indeed any organism capable of extracting nutrition from human

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[57] Ryan Calo, "Privacy, Vulnerability, and Affordance" (2017) 66 *DePaul Law Review* 591-604, p. 601.

[58] *Ibid.*, pp. 601–602 (emphasis supplied).

[59] See also Kiran and Verbeek, *supra* n. 35.

flesh).[60] That there are other considerations, including the law, is a secondary question; the law does not initially enter the frame, since the affordance relationship is properly between two parties. Rather, in the examples Calo provides there are in fact (at least) *two* affordance relationships, instead of just one. First, between the human agent (the trespasser or the cannibal) and the artefact (the house or one's body) there exists the affordance to which he refers (one of shelter or of nutrition). Second, between the artefact (again, the house or one's body) and the law (property or criminal) there is perhaps another affordance (in each case 'protection', in the sense that the law affords the artefact protection). Calo's analysis would appear to conflate these two relationships.[61]

Multiple and complex webs of technological (artefact-user) affordances are certainly possible (as discussed above, these are what in aggregate make up technological mediation), but when bundles of affordances are conflated in this way without some finer-grained analysis, it is unclear what value the theory adds. This is particularly true when the affordances are of a different species, as in Calo's examples (technological and legal). It is challenging to strike an appropriate balance between abstraction and particularity; go too far in the latter direction and we might end up with an atomistic view of reality which, while perhaps empirically accurate, provides us with little purchase for the heuristic normative prescriptions the law aims to promulgate. Too abstract, on the other hand, and the theory of affordance ends up doing very little work. This is perhaps

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60 This example brings to mind the English case of *R v Dudley and Stephens*, (1884) 14 QBD 273, and Lon Fuller's "The Case of the Speluncean Explorers" (1949) 62(4) *Harvard Law Review* 616-645, both of which concern murder and survival cannibalism. In both *Dudley and Stephens* and in Fuller's fictional story, the very fact the accused parties survived means they were *by definition* afforded nutrition by the bodies of their unfortunate victims, notwithstanding the legal controversies that ensued (which included, in both cases, their ultimate conviction for murder). The affordance of nutrition and the legal consequences were separate concerns.

61 The proper separation of these two relationships is considered further below in part 5.2.

one reason to retain the focus on concrete artefactual affordance; if we concern ourselves with the affordance relationships between complex entities that consist of many situated elements ('law', 'court', 'human'), we might end up facing the impossible task of drawing connections between the shifting constituent parts of two moving targets.

Admittedly, Calo does point out in the papers cited above that his discussion is limited in scope, and that he is merely introducing the concept to the legal sphere and only in the context of privacy and surveillance.[62] Such an introduction is to be welcomed, and there is indeed potential for a more in-depth and wider-ranging discussion on law *per se* as an affordance (or, rather, set of affordances). One approach to such an analysis might be to treat individual legal norms as 'artefacts', and to query their relationships with particular users (legal persons) from that perspective. Using Davis and Chouinard's affordance mechanisms, it becomes possible to determine what a particular norm requests, demands, allows, encourages, discourages, or refuses of or from a particular user. Whether such an approach would have analytical value is worth exploring. This paper is concerned with the compliance of technological affordances with the law, however, and so this kind of generalised theoretical discussion is outwith its scope. As will be appreciated from the preceding section, however, if the theory is to retain any analytical value it is important to identify clearly who and what is involved in the affordance relationship: there is an important qualitative difference between considering law *per se* as an affordance, and using affordance theory to deepen our enquiry into the legally-relevant effects of *non*-legal artefacts.

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62 Calo, "Can Americans Resist Surveillance?", *supra* n. 27, p. 31.

4.2 Law as a *product* of affordance

Across a range of publications Hildebrandt sets out one such analysis, combining technological affordance with a legal-historical perspective. She charts in detail the development of the technological affordances of text and the printing press, and how these have in turn resulted in what she calls modern law, or "law-as-we-know-it".[63] Hildebrandt uses *technological* affordances to chart the evolution of law, going on to elaborate a crucially important warning about how law-as-we-know-it might develop in ways which are antagonistic to constitutional democracy. The methodological novelty is in observing how the affordances of a particular technological embodiment of law, namely printed text, have affected how law has developed in certain ways which have led to the mature and stable set of institutions and concepts we today take for granted.[64] Her warning concerns how the normative evolution of the law will change as that embodiment shifts from text to "smart technologies": vis-à-vis the law, the affordances of those two embodying technologies, printed text and smart technologies, do not necessarily correspond, and the question is how we can respond to the differences, whatever they may turn out to be. Hildebrandt's concern, with which

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[63] Mireille Hildebrandt, "Legal Protection by Design: Objections and Refutations" (2011) 5 *Legisprudence* 223-248. Technology law scholar David Harvey also considers the effect of print on the development of law, discussing the problems that arise when "rules and legal doctrine that were developed and have their foundation in one communications paradigm encounter a new one." See David Harvey, *Collisions in the Digital Paradigm: Law and Rule Making in the Digital Age* (London: Hart Publishing, 2017), p. 347 and ch. 6 generally. For my review of Harvey's book, see Laurence Diver, "Book Review: Collisions in the Digital Paradigm" (2017) 14:2 *SCRIPTed* 373-380, available at https://script-ed.org/?p=3422 (accessed 3 February 2018).

[64] See Hildebrandt, *Smart Technologies*, *supra* n. 3, ch. 8 (particularly the section "8.3.2 The Hallmarks of Modern Law" at p. 176 *et seq*.); Mireille Hildebrandt and Bert-Jaap Koops, "The Challenges of Ambient Law and Legal Protection in the Profiling Era" (2010) 73 *The Modern Law Review* 428-460; Mireille Hildebrandt, "A Vision of Ambient Law" in Roger Brownsword and Karen Yeung (eds.), *Regulating Technologies: Legal Futures, Regulatory Frames and Technological Fixes* (Oxford: Hart, 2008), p. 176; Hildebrandt, "Legal and Technological Normativity", *supra* n. 30, pp. 171–172.

it is difficult to disagree, is that the latter embodiment has the potential seriously to undermine those institutions of legality which have become the bedrock of societies built around constitutional democracy.[65]

If we are to heed this warning we need a way of testing for its effects; the ways in which a particular technology affords, or does not afford, the normative elements of modern law are what is in question in Hildebrandt's analyses. The irony is that she deploys the theory of (technological) affordance in her *diagnosis* of the problem, but not in her prescriptions for a solution, despite technological ("smart") artefacts being both at the core of her concerns, and the quintessential subject for contemporary application of the theory, it having been imported squarely into the world of design by Donald Norman. This absence might be what Calo is referring to when, in his review of Hildebrandt's book, he laments that her argument is not arranged more closely around an overarching theory of affordance, despite her already having "the scaffolding for such a thesis".[66] Although the value of her application of affordance theory to the diagnosis of the problem is evident, it is curious that she does not continue that method of analysis in her prescriptions for what she calls "legal protection by design" ('LPbD'): she opens the door, but does not step through it.

Text, and the printing press as its enabler, have resulted in the legal system as we know it, complete with the normative commitments which constitutional democracies have been built around and come to rely on. LPbD is concerned with maintaining those commitments through a sensitivity both to what enabled them to come about, and how they can be sustained, or if necessary re-imagined, in the

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[65] She states her thesis most succinctly in Hildebrandt, "Law As an Affordance", *supra* n. 27, p. 119.

[66] Ryan Calo, "Technology, Law, and Affordance: A Review of Smart Technologies and the End(s) of Law" (2017) 4 *Critical Analysis of Law* 72-77, p. 75, available at http://cal.library.utoronto.ca/index.php/cal/article/view/28150 (accessed 3 February 2018).

new medium in which law is increasingly being embodied. Hildebrandt defines LPbD as

> a way to ensure that the technological normativity that regulates our lives: first, is compatible with enacted law, or even initiated by the democratic legislator; second, can be resisted; and third, may be contested in a court of law.[67]

The question is how to achieve these aims, which Hildebrandt acknowledges represent a "vertiginous challenge to traditional doctrinal research methods within legal scholarship and to the scientific methods of computer science, requirements engineering and electronics."[68] It is to this end that this exploratory enquiry hopes to contribute. Affordance theory has already assisted Hildebrandt in diagnosing the problem; it has the potential to assist in solving it.

4.3 *Operation* versus *formation* of law

In a response to a set of reviews of her book *Smart Technologies*,[69] Hildebrandt makes explicit an important distinction that I believe is missing, or at least only implicit, in the book itself, between (i) law *as an* affordance, and (ii) the affordances *of* law.[70] Again, the importance of terminology is clear. In the former case, law is the *relationship* between two entities – the technology of embodiment (text and the printing press) and society. Law does not *afford*; it *is* the affordance.

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67 Hildebrandt, *Smart Technologies*, *supra* n. 3, p. 218. In an earlier paper written with Bert-Jaap Koops, Hildebrandt discusses "ambient law", apparently a precursor term for LPbD, which is defined similarly as "the technological articulation of legal norms as a form of democratic legislation, requiring both democratic participation and built-in safeguards that guarantee the contestability of the decisions made within the legal-technical infrastructure". See Hildebrandt and Koops, *supra* n. 64, p. 446.

68 Hildebrandt, *Smart Technologies*, *supra* n. 3, p. 218.

69 Hildebrandt, *Smart Technologies*, *supra* n. 3.

70 Hildebrandt, "Law As an Affordance", *supra* n. 27.

Written and printed text have, over time, afforded society or the collective the law-as-we-know-it. This is the dialectical first branch of Hildebrandt's thesis.

In the second branch, law-as-we-know-it has arisen as a set of institutions and processes which, taken together, afford certain things to certain agents. This is the way in which Calo uses the concept, although it bears repeating that in this case the law is *not* an affordance *per se*, it is one of the entities between which the affordance relationship arises – the other being the citizen, or the legal person. The institutions of law *afford* the citizen legality. This is the second branch of Hildebrandt's thesis, from which her central warning flows: how can the law continue to so afford legality, when the affordances upon which its nature in turn rests are themselves changing? The second (non-technological) set of affordances is dependent on the (technological) first: law's affordance of legality to citizens is only possible because of what written and printed text has afforded humanity over the past five centuries.[71]

What if we extend the second branch of Hildebrandt's thesis to continue the analysis of technological affordances, but instead look beyond the *formation* of law through technological artefacts, towards its daily *operation* through them? To do so will require a steadfast focus on the relationality of affordance, and if we are to avoid introducing tertiary agents to the relationships so identified,[72] it might be useful to recast the law as the (mere) *user* of the technical artefact.

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[71] This is perhaps a more complex version of what William Gaver terms "sequential" affordances, which "explain how affordances can be revealed over time". See William Gaver, "Technology Affordances", *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (New York, N.Y.: ACM, 1991), pp. 81–82.

[72] It could be argued that Calo succumbs to this in his discussion of the affordances of courts, mentioned above, when he invokes more than two parties in his analysis: (i) the law, (ii) the artefact (a court), and (iii) the litigant (or accused). On the value and necessity of viewing technological affordances as relational, rather than as "bundles of features" that are insensitive to the characteristics of the user, see Faraj and Azad, *supra* n. 12.

The reason it is the artefact that is used by the law, and not the opposite position, is that the regulatory power of law is fundamentally undermined by the instrumental power of designers. Law's hegemonic grip on the promulgation and enforcement of rules is now profoundly at risk,[73] and because of this the legal world might benefit from a shift away from a solipsistic and positivist belief in law as both omnipotent and somehow invulnerable to context.[74] Perhaps nowhere is such a perspective less accurate than in contemporary developed liberal societies, reliant as they have become on privately-ordered, black-boxed technical infrastructures.[75] For the purposes of applying affordance theory, and perhaps even generally,[76] we in the legal academy should submit more fully to the (perhaps uncomfortable) idea that the designer of the online artefact is the true sovereign, and the law is, in fact, merely another one of its users.

5 The law as a user

5.1 Code is both more, and less, than law

In a provocative paper Cornelia Vismann and Markus Krajewski posit that computing architectures are "governmental bureaucracies in miniature", which demonstrate significant structural and authorisational homologies with

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[73] Hildebrandt, *Smart Technologies*, *supra* n. 3, p. 218.

[74] Cohen, *Configuring the Networked Self*, *supra* n. 27, p. 15 *et seq*. On the solipsism of the legalistic outlook generally, see Judith Shklar's classic text *Legalism* (Cambridge, Mass.: Harvard University Press, 1964) *et passim*. Of course, one cannot suggest that Hildebrandt is guilty of such solipsism, particularly given her willingness to look beyond the traditional boundaries of legal scholarship. Nevertheless, she cautions that she is "a lawyer and a philosopher, rather than an information scientist", so it is perhaps to be expected that the legal side of the equation will take precedence in her analysis. See her "Law As an Affordance", *supra* n. 27, p. 116.

[75] Frank Pasquale, *The Black Box Society: The Secret Algorithms That Control Money and Information* (Cambridge, Mass.: Harvard University Press, 2015).

[76] But without lapsing too far into technological determinism.

law-as-we-know-it.[77] In direct reference to online technologies, they write that

> [i]nstead of analysing the causes of its impotence, however, the law rather naïvely continues to perceive the Internet as a matter of law, which poses certain problems to the legal order. The law is thus blind to its own dependency on the computer medium as well as to its structural homologies with it.[78]

Law is instantiated in and by the technological artefact, and while those artefacts are themselves constituted to some extent by pre-existing legal precepts, in day-to-day operation the relationship is lopsided. Both law and technical artefacts and infrastructures "control mechanisms of inclusion and exclusion, access and nonaccess",[79] but owing to a hermeneutic 'gap', where law on the page requires interpretation to alter behaviour in the real world, legal norms are not nearly as powerful as we might suppose (or wish) when operating in the technical context.[80] The immediacy and instrumental power of that medium and the

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77 Vismann and Krajewski, *supra* n. 1. The quote is in turn borrowed from Friedrich Kittler. See his "Protected Mode" in John Johnston (ed.), Stefanie Harris (tr.), *Literature, Media, Information Systems: Essays* (Amsterdam: Psychology Press, 1997), in which he invokes Michel Foucault's concept of power as "action upon action", suggesting that one should "abandon the usual practice of conceiving of power as a function of so-called society, and, conversely, attempt to construct sociology from the chip's [CPU's] architectures." (p. 162). For Foucault's discussion of power, see his "The Subject and Power" (1982) 8 *Critical inquiry* 777-795.

78 Vismann and Krajewski, *supra* n. 1, p. 92. One can appreciate the connection here with Hildebrandt's discussion of law's embodiment in a particular technological medium.

79 *Ibid.*, p. 91. Here we can detect echoes of Davis and Chouinard's affordance mechanisms (*supra* n. 23).

80 Hildebrandt calls this gap the "underdeterminacy" of (text-based) law. See Hildebrandt, "Legal and Technological Normativity", *supra* n. 30, p. 177. Legal philosophers Zenon Bańkowski and Neil MacCormick suggest that without such a gap to enable a "principled approach to interpretation", legality collapses into legalism. See Zenon Bańkowski and Neil MacCormick, "Legality without Legalism" in Werner Krawietz et al. (eds.), *The Reasonable as Rational? On Legal Argumentation and Justification; Festschrift for Aulis Aarnio* (Berlin: Duncker & Humblot, 2000), p. 194.

implied sovereignty of the designer tip the balance inexorably away from law as hegemonic creator and regulator of reality.[81] While the law continues to constitute a *form* of reality through legal facts, when faced with the instrumental juggernaut of architectural constitutionality its power is eviscerated.[82] The written law is but "a paper dragon in the age of the 'digital tsunami'";[83] the social and rhetorical power of legal fictions make way for the representationalism of "digital virtuality" through which reality is by definition constituted by and through the machine.[84] As Bruno Latour suggests, with the advent of computers "we are able to conceive of a text (a programming language) that is at once words and actions";[85] when the text of the rule on the 'page' is source code, it no longer requires an interpretative step to constitute reality.[86] The end result is the collapse of adjudication into compliance.[87]

Technological mediation, and individual affordances as its building blocks, very literally "subject human conduct to the governance of rules".[88] To a greater or lesser degree, the commercial entities which define that mediation and

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81 James Grimmelmann sets out a useful taxonomy of the regulative characteristics of software, arguing that its particularities mean it is a *sui generis* mechanism of regulating behaviour that is qualitatively different from Lessig's more diffuse 'architecture'. See James Grimmelmann, "Regulation by Software" (2005) 114 *The Yale Law Journal* 1719-1758. On the latter, see Lessig, *supra* n. 18, ch. 7.

82 This relates to Hildebrandt's discussion of constitutional versus regulative norms, and the relationships of the "twin sisters" of technological and legal normativity. See Hildebrandt, "Legal and Technological Normativity", *supra* n. 30.

83 Hildebrandt and Koops, *supra* n. 64, p. 440.

84 Vismann and Krajewski, *supra* n. 1, p. 92.

85 Latour, *supra* n. 36, n. 1.

86 Of course, source code does in fact require either to be interpreted or compiled by an additional application in order to be executed. Assuming the code is syntactically sound, however, it is for all practical purposes isomorphic with the running software.

87 Zenon Bańkowski and Burkhard Schafer, "Double-Click Justice: Legalism in the Computer Age" (2007) 1 *Legisprudence* 31-49, p. 48.

88 This quote is Lon Fuller's definition of law, taken from his influential *The Morality of Law* (New Haven, Conn.: Yale University Press, 1977) *et passim*.

those affordances thus exercise sovereign-like power over users.[89] As Lessig puts it, "[a]rchitecture is a kind of law: it determines what people can and cannot do. When commercial interests determine the architecture, they create a kind of privatized law."[90] The power that inheres in those who decide that private ordering is significant:

> The *quasi-sovereign power of the computer engineer's code* stems from the ease by which posing, implementing, and applying a norm are achieved in technology compared with the cumbersome procedures that legal code must pass through. The swift effectiveness of a technological code, which cannot, when seen through legal eyes, appear as anything other than uncanny, *renders any possible competition between law and computer pointless*.[91]

Technical artefacts are not just law-like, they are simultaneously both *more*, and *less*, than law. More, because their instrumental power is far greater, owing to the representationalism of software code which necessarily becomes reality, collapsing the hermeneutic gap. Less, because, as Hildebrandt observes, they lack the normative mechanisms that keep their textually-bound legal sister in check.

Vismann and Krajewski's juridification of technical architectures runs even deeper than this. They posit the role of a "programmer of the programmer" ('PoP'), who sits earlier in the design chain, enforcing architectural compliance on the designer of the user-facing technological artefact.[92] The PoP does this through the design of chip architectures, programming languages, and

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89 Nagy and Neff, *supra* n. 12, p. 4. As Grimmelmann suggests in relation to social networking platforms, "sovereigns of software have absolute and dictatorial control over their domains." See James Grimmelmann, "Anarchy, Status Updates, and Utopia" (2014) 35 *Pace Law Review* 135-153, p. 135.

90 Lessig, *supra* n. 18, p. 77.

91 Vismann and Krajewski, *supra* n. 1, p. 93 (my emphasis).

92 *Ibid.*, p. 100.

integrated design environments, creating the underlying constitutional setting within which the product designer must herself operate. The mediation of the user's reality is preceded by the mediation of the designer's; how the PoP architects the languages and tools with which consumer artefacts are designed creates a backdrop of mediation and affordance that affects and channels the underlying mechanisms of artefact production.

A parallel thus begins to emerge between the legal public and the technological private: the mediating decisions of the PoP create fundamental rules (a 'constitution') which constrain and enable the activities of designers within their development environments ('parliament'), which in turn affect the design-rule choices that are subsequently made ('legislation') and how these affect the user ('citizen'). Without dwelling too long on the metaphor of the PoP, it hopefully adds some depth to the understanding of how easily legal constitutions are supplanted by their technological counterparts.[93]

5.2 The mediation of law by technological artefacts

The first step in ameliorating the blindness of law referred to by Vismann and Krajewski is for it to accept the uncomfortable realities of its place in the power structures being fomented by online artefacts and infrastructures. Only then can it begin to respond intelligently to the material practices, and commercial incentives, of those who design and implement those technologies. Hildebrandt's LPbD represents a major push towards this realisation.[94] The question is where

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[93] On the quasi sovereignty and quasi legislative and executive power of online intermediaries, and their ability to "autonomously implement their self-defined regulations via technical means", see Luca Belli and Jamila Venturini, "Private Ordering and the Rise of Terms of Service as Cyber-Regulation" [2016] 5(4) *Internet Policy Review* 1-17, p. 4.

[94] Hildebrandt is not the first to have considered this problem, but within the legal literature her engagement with design theory is perhaps the most in-depth to date. The literature on the threat to legality with respect to technological enforcement includes, for example, Cohen,

to go next. Her analysis relies on affordance (and, tangentially, mediation) to diagnose the problem, but only in passing does she refer to how LPbD might be achieved.[95] With awareness of affordance theory introduced to the legal fold, we have the beginnings of a methodology that can address 'sovereign' designers on their own terms.

When technical artefacts create legal effects,[96] they mediate the operation of law through their mediation of reality. The artefact becomes the means through which the law-as-a-system operates in the world. Let us consider digital rights management (DRM) systems, and specifically those involved in the Sony BMG scandal in the mid-2000s. The system in that case was designed to concretise copyright law so that users were unable to behave in ways contrary to it. Taking the perspective of law-as-user, copyright's purposive aim was to endow the rightholder (in this case Sony BMG) with the absolute right to control who is permitted to make copies of the CDs in question. In terms of Davis and Chouinard's affordance mechanisms, the affordance the law was looking for was one of *refusal*. For most users, the technical instantiation of the relevant law by the two DRM systems fulfilled this affordance.

"The Regulatory State in the Information Age", *supra* n. 52; Pasquale, *supra* n. 75; Roger Brownsword, "In the Year 2061: From Law to Technological Management" (2015) 7 *Law, Innovation and Technology* 1-51; Kenneth Bamberger, "Technologies of Compliance: Risk and Regulation in a Digital Age" (2010) 88 *Texas Law Review* 669-739; Danielle Citron, "Technological Due Process" (2007) 85 *Washington University Law Review* 1249-1313.

95 Hildebrandt and Koops discuss "transparency-enhancing technologies" as one potential, but only in the context of data protection and user profiling. See Hildebrandt and Koops, *supra* n. 64, p. 449 *et seq*.

96 Automated decision-making systems that have "legal effects" vis-à-vis data subjects are explicitly regulated under art. 22 of the EU's GDPR (Regulation on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 85/46/EC (General Data Protection Regulation) 2016). Of course, that instrument is concerned with data protection, while the present discussion takes a more holistic view of law-as-a-system.

But the system was (famously) not fool-proof – users with even minimal technical knowledge could easily circumvent the system by preventing the then-standard 'autorun' feature of Windows operating systems.[97] The mediation of law through the mediation of reality then reduces to mere *discouragement* at best, and *allowance* at worst: by affording the user copying, the law is not afforded isomorphism by the artefact (in the form of an architecturally instrumentalised blanket prohibition on copying).

The artefact mediates both reality for the user, and the substantive law. Law's reality is transformed by the technical artefact in the way in which it co-constitutes the user's reality. Returning to the model from above, in the case of the Sony BMG DRM the technological mediation of law ($TM_{(law)}$) did not match the technological mediation of reality ($TM_{(reality)}$); the law-system expected refusal of copying, and the reality for the user as co-constituted by the artefact was not isomorphic with this – she was able easily to make such copies.

Figure 2. Law-system ↔ Artefact ↔ User relationships of technological mediation

That fact that many users will have been unaware of the easy work-around means that their reality matched the law; $TM_{(law)}$ and $TM_{(reality)}$ were isomorphic, and their behaviour was constrained as expected. The extent to which the law can tolerate non-compliance will vary between norms, depending on the aims of

[97] Mulligan and Perzanowski, *supra* n. 20, p. 1202 and n. 206.

the legislator and the seriousness of the ill it is designed to avoid. By positioning the law as a user in this way, the law-system looks for certain characteristics in the technology in and through which it is embodied, much like a human user does when she wants to achieve something with a particular online artefact.[98]

By enquiring as to the expectations of the legal norm, and how the technical artefact can meet those expectations (how it can afford them), we can think about how to improve architectures during the early stages of a product's design. This is in line with initiatives like the EU law-mandated data protection by design and by default, which requires data controllers to implement "appropriate technical and organisational measures" in their design processes so as to implement the data protection principles.[99] Depending on how the expectations of the law are couched for the purposes of affordance (either in terms of the substantive content of the norm, or towards more diffuse principles of legality, akin to LPbD[100]), we as lawyers can engage directly with the design world on its own terms. Building a narrative around an imagined user persona is common practice in design processes,[101] but since the law is (at least in the mid-

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98 As Faraj and Azad put it, affordance is "a relational construct linking the capabilities afforded by technology artifacts to the actors' purposes". See Faraj and Azad, *supra* n. 12, p. 254. See also Maier and Fadel, *supra* n. 11, p. 3 ("2.4 The Fundamental Affordance Relationship"), where the authors discuss how affordances are manifestations of new behaviours which the constituent user/artefact cannot produce alone. Considering a legal norm as an 'actor' in this way accords with the ANT method of viewing non-humans as 'actants', giving them equal agency in the process of transformation which results in hybrid human/non-human 'actors'. See Latour, *supra* n. 35, p. 159 and n. 11.

99 GDPR, *supra* n. 96, art. 25. This initiative has a long history, originating with 'privacy by design' in the 1990s. See Ann Cavoukian, "Privacy by Design: Origins, Meaning, and Prospects for Assuring Privacy and Trust in the Information Era" in George Yee (ed.), *Privacy Protection Measures and Technologies in Business Organizations: Aspects and Standards: Aspects and Standards* (Pennsylvania: IGI Global, 2012).

100 Some tensions that arise when choosing a point on this spectrum are explored by Hildebrandt in Hildebrandt, "Legal Protection by Design", *supra* n. 63.

101 Benjamin Bratton, *The Stack: On Software and Sovereignty* (Cambridge, Mass.: MIT Press, 2016), pp. 254–255; Nagy and Neff, *supra* n. 12, p. 4; Chris Ivory, "The Role of the Imagined User in Planning and Design Narratives" (2013) 12 *Planning Theory* 425-441.

term) a fixed entity in a way a real user is not, identifying its requirements and how the artefact might afford it compliance is perhaps a less complicated task.[102] The mode of thinking which affordance theory foments is apt to identify what an artefact *in fact* does, over and above its intended function.[103] Looked at from a compliance perspective, external legally-problematic effects might thus be avoided, for example the privacy invasion occasioned by the Sony BMG DRM systems.[104] The latter is a negative affordance in the Gibsonian sense, from the perspectives of both the law-as-user and the human user: the law, and constitutional democracy more generally, are 'injured' by non-compliance; the human by her privacy being undermined.

Approaching the compliance by design conundrum from such a perspective means the designer is not wrenched from her natural habitat and expected to become a quasi-lawyer; rather she can work with the conceptual tools of her trade, as can those in the legal world.[105]

6 Conclusion

The application of affordance theory in the legal realm has promise, but as it develops this nascent literature must be careful to avoid the pitfalls of definitional confusion and overbroad application warned of in the design sphere.

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[102] For a critical perspective on the problematic reductionism of imagined human (as opposed to legal) users, see Adrienne Massanari, "Designing for Imaginary Friends: Information Architecture, Personas and the Politics of User-Centered Design" (2010) 12 *New Media & Society* 401-416.

[103] See Maier and Fadel, *supra* n. 45, p. 24, where the authors argue that an affordance-based analysis "forces the designer to think about what else a particular embodiment affords besides providing its intended function (in particular the early identification of negative affordances)."

[104] See Mulligan and Perzanowski, *supra* n. 20 *et passim*. On the conflict between DRM and privacy generally, see Julie Cohen, "DRM and Privacy" (2003) 46 *Communications of the ACM* 46-49.

[105] Maier and Fadel, *supra* n. 45, p. 24.

The present contribution aims to avoid some of these problems by maintaining a focus on the relational structure of affordance theory, and of technological mediation more generally. Through an appreciation of the instrumentality of technological architectures, which renders the previously hegemonic law merely another 'user' of those architectures, we can begin to come to terms with law's diminished position, and to ask the difficult questions required to uphold its normative aims and structures. Casting the law as a user in this way both recognises its status vis-à-vis code, and enables it to fit into the relational schema of affordance and mediation theory. From there, our critical assessments of the technological architectures which mediate the operation of law can be better attuned to both the material realities of architectural regulation, and the contexts within which the power of the new designer-sovereigns is wielded.

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Unfolding the New-Born Right to Data Portability: Four Gateways to Data Subject Control

*Helena Ursic**

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Abstract

Data portability is a fluid concept that can be used in multiple contexts and can be defined in various ways. In the EU General Data Protection Regulation, it is given the legal status of a data subject right. The key objectives of the right to data portability in the GDPR are privacy, protection of personal data, and data subjects' control over their data. However, it remains open how these goals materialise through the new-born right. This article suggests four possible ways in which the right to data portability could unfold in the future: (i) establishing control over personal data transfers, (ii) enabling (re)use of personal data, (iii) enabling better understanding of data flows, and (iv) facilitating equality and allowing the free development of personality. Data portability could increase transparency of data processing and could allow data subjects to control their online identities. It could also be instrumental in enhancing other rights and principles, such as equality. However, the provision on data portability in the GDPR faces many legal and practical constraints. The prospects of the right will depend on regulatory interpretation and interactions with other legal areas.

Keywords
Personal data, portability, GDPR, privacy, data protection, big data

* Resident Fellow, Information Society Project, Yale University, New Haven, US; PhD Candidate, Centre for Law and Digital Technologies, Leiden University, the Netherlands, h.ursic@law.leidenuniv.nl

1 Introduction

Data portability is a fluid concept that can be used in multiple contexts and defined in various manners. One possible definition is the following: "Data portability is the ability of people to reuse data across interoperable applications."[1]

Data portability may pursue several objectives. For instance, it has been argued that data portability is inseparably tied to the goals of competition law.[2] Some recent implementations of data portability indicate that data portability can be used as a commercial strategy to please consumers.[3] Finally, data portability may pursue the goals of privacy, data protection and, as will be shown in this paper, data subjects' control over personal data.[4]

When data portability is guaranteed by law, we speak about the *right* to data portability.[5] This is the case in the EU General Data Protection Regulation, which recognises data portability as an inherent part of the EU data protection law and which has applied as of 25 May 2018.[6] As a right under data protection law, data portability's declared goal has been to strengthen individual control over data.[7] However, it remains open how this control might materialise through

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1 DataPortability Project, http://dataportability.org (accessed 26 April 2018).

2 See for instance Maurice E Stucke and Allen P Grunes, "No Mistake About It: The Important Role of - Antitrust in the Era of Big Data" (2015) *University of Tennessee Legal Studies Research Paper*; Damien Geradin and Monika Kuschewsky, "Competition Law and Personal Data: Preliminary Thoughts on a Complex Issue" (2013) S*SRN Electronic Journa*l; Inge Graef, "Blurring Boundaries of Consumer Welfare How to Create Synergies between Competition , Consumer and Data Protection Law" in Bakhoum, Conde Gallego, Mackenordt, Surblyte (eds.), *Personal Data in Competition, Consumer Protection and IP Law - Towards a Holistic Approach?* (Springer, forthcoming).

3 See Section 2.1.

4 Also see Alexander MacGillivray and Jay Shambaugh, "Exploring data portability" (Obama White House Archives, 30 September 2016), available at https://obamawhitehouse.archives.gov/blog/2016/09/30/exploring-data-portability (accessed 26 January 2018).

5 In this paper, a "right" is understood in Jhering's sense as a legally protected interest. See Munroe Smith, "Four German Jurists. II", (1896) 11(2) *Political Science Quarterly* 278, p. 289.

6 Art. 15 of the European Parliament and Council Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) [2016] OJ L 119.

7 Orla Lynskey, *The Foundations of EU Data Protection Law* (Oxford University Press 2015), p.263.

the right to data portability. Whilst there has been a lot of discussion about data portability in relation to its antitrust angle,[8] less is known about the ways in which *individuals* could make use of the right. To fill the gap, this paper discusses what sort of control and/or protection the right to data portability under the GDPR offers to data subjects. Taking into account some existing practical applications, the paper indicates four ways in which the right could unfold in the future: (i) establishing control over personal data transfers, (ii) enabling (re)use of personal data, (iii) enabling better understanding of data flows, and (iv) facilitating equality and allowing the free development of personality. Through the four gateways, data portability could increase transparency of data processing and could allow data subjects to better control their online identities. Also, the right could be instrumental in enhancing other rights and principles, such as equality. A better understanding of the gateways could thus contribute to the implementation of the new born right.

The paper starts with a short explanation of the historical development of the idea of data portability to illustrate differences in the scope and implementation of the right (Section 2). Section 3 continues with a legal analysis of the provisions in the GDPR to emphasise numerous legal and practical constraints to data portability, which put limits on the application of the right. Section 4 is the core part of the paper, investigating four gateways through which the right could enhance the specific goals of privacy, data protection law, and data subjects' control. Section 5 concludes by recognising that the four gateways face some important legal and practical boundaries, originating in the GDPR's narrowly drafted definition of data portability. As well as suggesting a more lenient interpretation of the legal provisions, the paper proposes that the use of

[8] *Supra* n. 3.

some related legal mechanisms can mitigate the downsides of the GDPR's right to data portability.

2 How and when the idea of data portability emerged

2.1 Commercial initiatives

Outside the data protection law domain, data portability as a concept emerged some time ago. For example, dataportability.org (also known as The Data Portability Project) was founded in 2007 to discuss and work on solutions to unconstraint data portability.[9] This initiative set a basis for the attempts to adopt data portability in a commercial environment.

The Data Portability Project adopted a broad definition of data portability. According to it, data portability means that "[t]he user is able to obtain her data and to transfer it to, or substitute data stored on, a compatible platform."[10] This definition can be broken down in four building blocks: free data access, open formats, platform independence, and free deletion.[11]

Following dataportability.org's initiative, some data-driven platforms have implemented voluntary solutions for export of user data they held. Among others, the project attracted some of the biggest data holders, such as Google and Facebook. For example, in 2011 Google created the "Google Takeout" tool, which allows users to export and download data from 27 of Google's products.[12] Moreover, Facebook offered a similar web-tool for downloading user information.[13] Facebook users all across the globe were (and still are) able to

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9 Barbara Van der Auwermelen, "How to Attribute the Right to Data portability in Europe: A Comparative Analysis of Legislations" (2016) 33 (57) *Computer Law & Security Review* 57, p. 58.

10 *Supra* n. 1.

11 Todd Davies, "Digital Rights and Freedoms: A Framework for Surveying Users and Analyzing Policies" in Luca Maria Aiello and Daniel McFarland (eds), *Social Informatics: Proceedings of the 6th International Conference (SocInfo 2014)* (Barcelona, 2014), p. 3.

12 The tool is available at https://takeout.google.com/settings/takeout (accessed 26 January 2018).

13 The tool is available at https://www.facebook.com/help/405183566203254 (accessed 26 January 2018).

download not only the information that they have shared on their profile, but also other information that Facebook holds on them, including a log of their activity, which is visible to users when they log into their profiles, and information that is generally not visible to users, such as ads clicked on, IP addresses used for log-ins, etcetera).[14]

One common denominator of the commercial versions of data portability is that they strongly resemble the right to data access.[15] The right to access gives an individual an insight into her data but does not actually facilitate transfers to third-party providers. In fact, many commercial initiatives fail at enabling a meaningful transfer of data.[16] As shown above, data portability in its broadest sense[17] includes some extra qualities, such as platform independence, meaning that users could update their data on another platform and have the updates reflected in the platform in current use. Needless to say, platform independence has not been built into commercial data portability initiatives. This is not surprising: absolute data portability is hard to achieve, in particular in highly competitive business environments. Thus, a limited version of data portability is what major data-driven companies consider a good commercial strategy, offering consumers an extra benefit while not putting their business assets at risk.[18]

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14 European Commission Staff, "Online Platforms Online Platforms - Accompanying the Document Communication on Online Platforms and the Digital Single Market {COM(2016) 288}" (2016), p. 37.

15 Art. 15 of the General Data Protection Regulation, *supra* n. 4. Art. 12 of the Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data [1995] OJ L 281.

16 Sometimes willingly. See for example the discussion on portability in the House of Lords on online platforms and the EU digital single market (London, 23 November 2015), available at http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/eu-internal-market-subcommittee/online-platforms-and-the-eu-digital-single-market/oral/25076.html (accessed 26 January 2018).

17 See the definition by dataportability.org, p. 1.

18 Typically, commercial versions of data portability do no incorporate automatic, simultaneous deletion, and rarely support interoperability of formats. For more detail on this issue, see *supra* n. 16.

Google and Facebook were not the only adopters of data portability. Data portability has recently been implemented in the products of some minor software providers, for instance Project Locker[19] and CozyCloud.[20] While the former targets business users offering them a cloud repository, the latter turns to individuals, helping them handle personal data (flows). In both solutions data portability is facilitated by APIs. After users have chosen applications that they would be willing to share their data with, an API enables a connection to these applications by providing users' data.[21] This kind of data portability comes closer to the version of data portability proposed by The Data Portability Project and, as will be shown, also to the GDPR's version of the data portability right.

2.2 Regulatory initiatives

In the regulatory domain, personal data portability was introduced along with some other initiatives that promoted rights, abilities, and influence for users over their online environments and data. Building on Berners-Lee's idea of a "bill of rights" and some other calls to strengthen individual rights online, Davies included portability in his framework of digital rights.[22] Likewise, the Electronic Frontier Foundation, a privacy rights organisation, suggested that data portability should be a building block of "A Bill of Privacy Rights for Social Network Users".[23] In 2010, the US White House launched the My Data initiative with the intent to ease data access, but also to enhance data portability.[24]

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19 http://projectlocker.com (accessed 26 January 2018).

20 https://cozy.io/en/ (accessed 26 January 2018).

21 Lachlan Urquhart, Neelima Sailaja, and Derek McAuley, "Realising the Right to Data Portability for the Domestic Internet of Things", p. 10, available at https://ssrn.com/abstract=2933448 (accessed 26 January 2018).

22 *Supra* n. 11, p. 3.

23 Kurt Opsahl, "A Bill of Privacy Rights for Social Network Users" (EFF, 19 May 2010), available at https://www.eff.org/deeplinks/2010/05/bill-privacy-rights-social-network-users (accessed 11 November 2017). Also see: Lisa A. Schmidt, "Social Networking and the Fourth Amendment: Location Tracking on Facebook, Twitter, and Foursquare" 22 (2) *Cornell Journal of Law and Public Policy* 527.

24 Kristen Honey, Phaedra Chrousos, and Tom Black, "My Data: Empowering All Americans With Personal Data Access" (Obama White House Archives, 15 March 2016), available at

In 2012, the requirement on data portability was made, for the first time, part of a data protection law. In that year the European Commission kicked off the data protection reform by publishing the draft EU General Data Protection Regulation. In relation to data portability, the EC proposal was innovative, as it suggested that data portability was introduced "…to further strengthen the control over their own data and their right of access". Thus, the proposal introduced a right with potentially far-reaching effects, but it came with little explanation regarding its implementation.

The proposed version of data portability was considered somewhat controversial. During the negotiations, EU Member States often had diverging views to what data portability was or should be.[25] At first, it was not clear from the text of the proposal whether the right was meant as a "lex social network"[26] or if it concerned every instance of data processing regardless of context, including sectors such as energy and finance.[27] Further, it was not clear whether data portability meant simultaneous access and transfer, or whether it was limited to transmission between services.[28] Similar uncertainty also arose with regards to interoperability.[29]

As shown above, data portability came to life as both controversial and promising. Now that the GDPR is applicable, the uncertainty regarding the implementation of the right to data portability is an issue of concern. Recognising

https://obamawhitehouse.archives.gov/blog/2016/03/15/my-data-empowering-all-americans-personal-data-access (accessed 11 November 2017).

25 Materials from the GDPR negotiations in the Council available via http://data.consilium.europa.eu/doc/document/ST-9281-2015-INIT/en/pdf (accessed 25 January 2018).

26 A law that is primarily or even exclusively supposed to regulate social networks.

27 Kristina Irion and Giacomo Luchetta, "Online Personal Data Processing and EU Data Protection Reform" (Centre For European Policy Studies Brussels, 2013), p. 68.

28 *Supra* n. 25, p. 137. Spain, France, and Romania wanted data portability to mean the transmission of data from one controller to another. However, a majority of delegations saw the right to portability as a right to get at copy without hindrance and to transmit data from one controller to another controller.

29 Expert Group on cloud computing contracts, "Data Portability upon Switching" (2014), available at http://ec.europa.eu/justice/contract/files/expert_groups/discussion_paper_topic_4_switching_en.pdf (accessed 13 November 2017).

this problem, in 2016 the Article 29 Working Party issued guidelines on the right to data portability to provide some guidelines for data controllers.[30] The next section outlines the legal nature of the right under the GDPR, taking into account the Working Party's views.

3 Data portability under the GDPR

Under the GDPR, the right to portability has a twofold structure. The first component is the right of individuals to obtain a copy of their data in a structured, commonly used, and machine-readable format. The second component is that this data should be transmitted to another controller without hindrance. For the reasons which will be discussed in Section 3.4, the scope of data portability under the GDPR is very limited. As a consequence, it falls short from what The Data Portability Project considered a right to data portability.

3.1 "The … right to receive the personal data … in a structured, commonly used and machine-readable format"

In an attempt to be technologically neutral,[31] the GDPR remains silent on what exactly the terms "structured", "commonly used", and "machine-readable format" mean. Therefore, the scope of the right to data portability will be to a large extent dependent on the interpretation of these open-ended provisions. Needless to say, the format in which data is transmitted is of utmost importance for the efficiency of the right to data portability. When users receive data in generic formats, for example simply as a PDF or a zip file, they will often face difficulties with transmitting the data.[32] Hence, the right format is a pre-requisite

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30 Article 29 Data Protection Working Party, "Guidelines on the Right to Data Portability" WP 242 (April 2017), available at http://ec.europa.eu/justice/data-protection/index_en.htm (accessed 26 January 2018).

31 Technology neutrality means that the same regulatory principles should apply regardless of which technology is being used. In this way, the law does not render obsolete too quickly.

32 *Supra* n. 29.

for portability.

To explain the open-ended terms, some related legal documents could serve as a guideline. For example, in the Directive on the reuse of public sector information, "machine-readable" is defined as allowing software applications to easily identify, recognise, and extract specific data.[33] Two formats that the Article 29 Working Party explicitly recommends are CSV and XML.[34] However, even these two types of standardised formats are restricted in the sense that they do not always allow the determination of data types, primary keys,[35] possible relationships between tables (for example foreign keys) etcetera, and require additional APIs to access that information.[36]

To be "structured", data should have a specific structure, for instance it should be stored in a database or in specific files such as JSON or CSV files.[37] Structured data formats not only enhance possibilities for the reuse of datasets, but also possibilities for their coupling.[38] The latter is an integral part of large-scale data mining (data analytics).

Lastly, the data format must be "commonly used". The interpretation of "commonly used" differs from industry to industry. In the music industry, completely different formats will be used (for example the MP3[39] and AAC[40] formats) than in the health care sector (for example the standardised ODM

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33 Recital 21 of the Directive 2013/37/EU of the European Parliament and of the Council of 26 June 2013 amending Directive 2003/98/EC on the re-use of public sector information, OJ L 175, 27.6.2013.

34 *Supra* n. 30, p. 18.

35 The unique identifier of a database.

36 Darko Androcec, "Data Portability among Providers of Platform as a Service" (2013) *Research Papers Faculty Of Materials Science And Technology In Trnava, Slovak University Of Technology In Bratislava*, p. 9, available at https://www.mtf.stuba.sk/buxus/docs/doc/casopis_Vedecke_prace/32SN/002_Androcec.pdf (accessed 11 November 2017).

37 Haut Leonard et al., "D2.4 Report on the technological analysis" (EuDEco, 2016), p. 55, available at http://data-reuse.eu/wp-content/uploads/2016/06/D2.4_ReportOnTheTechnologicalAnalysis-v1_2016-02-29.pdf (accessed 26 January 2018).

38 Bart Custers and Daniel Bachlechner, "Advancing the EU Data Economy: Conditions for Realizing the Full of Potential of Data Reuse" (forthcoming 2018) *Information Policy*, p. 10.

39 MP3 is an encoding format for digital audio.

40 AAC is a proprietary encoding standard for digital audio compression. It was designed to be the successor of the MP3 format.

format for the clinical trial data[41]). In some areas, common formats are determined by formal standards. In other areas, there are no common formats at all. In such cases, the Article 29 Working Party's Guidelines recommend to use open formats.[42]

Recital 68 mentions interoperability as an additional non-mandatory requirement adding to the description of the format in Article 20. Interoperable formats enable transformation from one format to another without any loss of data. For instance, Apple's .ibooks format for ebooks can be easily transformed into the open standardised EPUB2 format.[43] This type of format interoperability should be differentiated from a perfect technical interoperability, which requires compatibility of information systems and is explicitly exempted from the data portability provision in Recital 68.[44]

3.2 "… the right to transmit those data to another controller without hindrance"

The second dimension of the right is the entitlement of individuals to transmit their personal data from one provider to another without hindrance.[45] The Article 29 Working Party translates the phrase "without hindrance" into: refraining from or slowing down access, reuse, or transmission. Examples of measures that create hindrance include lack of interoperability of formats, fees asked for delivering

41 Pascal Coorevits and others, *Electronic Health Records: New Opportunities for Clinical Research* (2013), p. 274.

42 *Supra* n. 30, p. 18.

43 *Ibid*.

44 Perfect social network interoperability (compatibility) would, for instance, enable a Google+ user to upload pictures or post messages on someone's Facebook page directly without having to create a profile on Facebook. Inge Graef, "Mandating Portability and Interoperability in Online Social Networks: Regulatory and Competition Law Issues in the European Union" (2015) 39 (502) *Telecommunications Policy*, pp. 14-15. In a similar sense, Ian Brown argues that interoperability actually works together, or includes, interconnectivity. Ian Brown and Chris Marsden, "Regulating Code: Towards Prosumer Law?", p. 24, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2224263 (accessed 26 January 2018).

45 Art. 20 of the GDPR, para. 1.

data, lack of access to a data format or API, deliberate obfuscation of the dataset, and excessive sectorial standardisation or accreditation demands.[46]

The Article 29 Working Party's guidance could in some cases be understood as *requiring* data controllers to ensure format interoperability. In fact, the Working Party believes that interoperability is a necessary component of a format that is standardised, commonly-used, and machine-readable. This interpretation is surprising given that Recital 68 of the GDPR explicitly states that interoperability should be *encouraged* but not made mandatory.

That said, taking such a strong position against undesirable hindrance may be critical for the success of data portability. This has been confirmed by the efforts of the EC Expert Group on cloud computing and some international standardisation bodies, who have noted a lack of interoperability and have been working on standardisation and technical solutions for data portability.[47]

3.3 "… the right to have the personal data transmitted directly from one controller to another, where technically feasible"

Data portability includes the right to have data directly transmitted from one controller to another. In line with the view of the Article 29 Working Party, the requirement can be fulfilled by making an application program interface (API) available.[48] A consortium of EU digital service providers went even further, stating that "the service provider who would not put an API to retrieve our data, while this is the most effective and cheaper to transfer data directly, would be objectively seen as trying to create friction." Besides APIs, the use of standard

46 *Supra* n. 30, p. 15.

47 *Supra* n. 29; in relation to standardisation activities of the International Organisation for Standardisation (ISO) see Irene Kamara, "Co-Regulation in EU Personal Data Protection: The Case of Technical Standards and the Privacy by Design Standardisation 'Mandate'" (2017) 8 (1) *European Journal of Law and Technology* 1.

48 *Supra* n. 30, p.15.

protocols has been suggested as a method of a direct transfer of data.[49]

According to the GPPR, a direct transfer of data between controllers is only required when technically feasible. What the phrase "technically feasible" actually means remains open. "Technically feasible" does not necessarily match "operationally feasible" or "economically feasible". A solution proposed by the European Banking Federation (EBF) is the following: if a data controller claims that a transfer is unfeasible, it has to prove this. If it fails to do so, portability should be facilitated.[50]

"To have data transmitted" implies a duty of data controllers to carry out the transmission. An alternative to assigning this duty to data controllers would be a third-party service based on an agency contract.[51] For example, a marketing company or a data broker would offer data subjects free products or services, a voucher or even a certain amount of money, if they authorised it to exercise their right to data portability.[52] The company (or broker) could later use this data itself, or sell it to interested companies.[53] As will be explained below, this model of data portability can be described as Data Portability as a Service (DPaaS).

3.4 The restrictive definition of the right to data portability

The limitations built into the definition of data portability indicate that the right to data portability under the GDPR is considerably restricted.

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49 Yunfan Wang and Anuj Shah, "Supporting Data Portability in the Cloud Under the GDPR" (Carnegie Mellon University, 2018), p. 14, available at http://alicloud-common.oss-ap-southeast-1.aliyuncs.com/Supporting_Data_Portability_in_the_Cloud_Under_the_GDPR.pdf (accessed 26 January 2018).

50 European Banking Federation, "European Banking Federation's Comments to the Working Party 29 Guidelines on the Right to Data Portability" (2017), p. 4, available at http://www.ebf.eu/wp-content/uploads/2017/04/EBF_025448E-EBF-Comments-to-the-WP-29-Guidelines_Right-of-data-portabi.. .pdf (accessed 26 January 2018).

51 *Supra* n. 30, n. 4.

52 *Ibid*.

53 *Ibid*., subject to GDPR restrictions.

3.4.1 "…data provided"

The right to data portability only applies to data that has been provided to a controller by a data subject. First, this data includes personal data that the data subject has *actively* provided to the data controller.[54] Examples are email addresses, telephone numbers, preferences regarding communication etcetera, which the data subject typically communicates the first time she interacts with a data controller. Second, the right to data portability also applies to data that has been provided *passively*. Typically, this is behavioural data, which has been gathered by observing data subjects' behaviour, for example raw data processed by smart meters, activity logs, history of a website etc. *(*"observed data").[55]

However, once data has been analysed by using any sort of algorithmic techniques to draw useful insights, the results of this analysis should not be ported. It is arguable that in applying analytical techniques, data loses the direct connection with the data subject and is thus no longer considered to be "provided by them". The Article 29 Working Party refers to it as "inferred data".[56] A user's profile created by the analysis of raw smart metering is one such example. Some types of data may be between raw data and inferred data,[57] such as reputation scores that are attained by users of online marketplaces such as Airbnb. If the scores were portable, this would mean that Airbnb users would have the right to take their reviews and transfer them to a competitor, for example Couchsurfing.

The interpretation of "provided data" is one of the most disputed aspects of the GDPR's provisions on data portability, yet a critical one, as it can open up or close down the portability of a large amount of personal data. Authorities have not yet made up their minds of what the boundaries of data portability should

54 *Supra* n. 30, p. 10.
55 *Ibid*.
56 *Ibid*.
57 *Supra* n. 50, p. 4.

be. In fact, the Article 29 Working Party was criticised by the European Commission for adopting a too data subject-centric position.[58]

3.4.2 "…concerns a data subject"

The right to data portability is limited to data that "concerns a data subject". "Concerning a data subject" means that there must be a connection between the data and the identity of an individual. Consequently, anonymous data is excluded from the scope of data portability.[59] Moreover, Article 11(2) exempts a controller from complying with data subject rights when he is not able to identify the data subject. Thus, such Article 11(2) de-identified data also falls out of the scope of data portability.[60] However, if the data subject provides additional information enabling her identification, the right to data portability should again arise.[61]

Personal data records may contain multiple persons' data which are often intertwined. This may create additional difficulties in applying the right to data portability. When a data subject decides to transfer her social media data to a different platform, her decision may affect the data of a third party which is also part of the ported dataset. For example, porting photos of someone's friends from a closed social media network (for example a private Facebook group) to another which is open to public by default (for example Twitter) could infringe privacy of this person's friends. The Article 29 Working Party adopted a strict interpretation, stating that processing of such personal data by another controller should be allowed only to the extent that data is kept under the sole control of the requesting user and is only managed for purely personal or household

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58 David Meyer, "European DPAs Mull Strategy for Tackling Uber's Data Catastrophe" (*IAPP Privacy Advisor*, 2017), available at https://iapp.org/news/a/european-commission-experts-uneasy-over-wp29-data-portability-interpretation/ (accessed 26 January 2018).

59 *Supra* n. 49, p. 7.

60 *Ibid*.

61 *Ibid*.

activities.[62] However, in many situations personal motives for data portability will coincide with commercial use of third party data and will likely exceed "purely personal or household activities". For example, in the case of reputation scores, an Airbnb user may want to port her data to Couchsurfing, including all the reviews that she received from Airbnb users, and may want Couchsurfing to process this data when calculating her new ratings. The Working Party's view should be taken with a grain of salt as their purpose was not to constrain data portability but rather to mitigate commercial exploitation of data portability.

3.4.3 "The processing is based on a consent … or on a contract"

Third, data portability is only applicable in cases where the legal basis for data processing is either consent or a contract (Article 20(1)(a) of the GDPR). This provision has received some criticism, since it means that a data subject would only be able to port the data that has been processed with her approval.[63] In other words, a data subject has no influence over data that has been legitimately collected and processed without her consent. For example, data processing that is based on legitimate interest of a data controller is excluded from the scope of data portability. To process behavioural data or to create consumers' profiles, controllers typically use the legal basis of legitimate interests.[64] In such cases data portability is exempted, although porting these sorts of analyses can be in individuals' interest as well.[65] Moreover, in for example the work environment,

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62 *Ibid*.

63 Nadezha Purtova, "The Illusion of Personal Data as No One's Property" (2013) 7 *Law, Innovation, and Technology* 15. Also see Eleni Kosta and Kees Stuurman, "Technical Standards and the Draft General Data Protection Regulation" in Panagiotis Delimatsis (ed), *The Law, Economics and Politics of International Standardisation* (Cambridge University Press, 2017).

64 Gwendal Le Grand, Jules Polonetsky, and Gary LaFever, "GDPR Data Analytics Webinar Summary Three Key Points", available at https://www.anonos.com/hubfs/Whitepapers/GDPR_Data_Analytics_Webinar_Summary_Anonos.pdf (accessed 13 November 2017).

65 For some examples of data analytics based on the legitimate interest of a controller see Article 29 Data Protection Working Party, "Opinion 06/2014 on the Notion of Legitimate Interests of the Data Controller under Article 7 of Directive 95/46/EC", p. 25.

the legal basis will almost never be consent but it will very often be a controller's legitimate interest.[66] Therefore, the Article 29 Working Party recommended that it will be good practice for data controllers allow data portability for data that is processed on the basis of legitimate interest.[67]

4 Data portability as an instrument of data protection through data subjects' control

As already mentioned in the introduction, the most (if not the only) plausible reason why data portability has become part of the GDPR is that it also aims at achieving the GDPR's goals of privacy and data protection. More specifically, portability of data strengthens data subjects' control over their data. Recital 68 of the GDPR sends a clear message:

> To further strengthen the *control* over his or her own data, where the processing of personal data is carried out by automated means, the data subject should also be allowed to receive personal data concerning him or her which he or she has provided to a controller in a structured, commonly used, machine-readable and interoperable format, and to transmit it to another controller[68]

However, the recital itself has little substance with regards to *how* data portability establishes control. Prevention of user lock-in and more consumer choice are two possible outcomes of data portability that lead to increased user control. [69] However, these goals can be to some extent achieved by the

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66 Article 29 Working Party, "Opinion 2/2017 on Data Processing at Work" WP 249 (2017).

67 *Supra* n. 40, pp. 47-48.

68 Although Commissioner Almunia has also clearly acknowledged that data portability is also a measure of competition law. See http://europa.eu/rapid/press-release_SPEECH-12-860_en.htm (accessed 23 January 2016).

69 See for example Kamara, *supra* n. 47, p. 11.

instruments of competition law, which prevents dominant companies from tying users to their own products, thus restricting competition.[70]

To justify its existence in EU data protection law, data portability should strive for objectives beyond those tied to competition policy.[71] Rather, data portability should pursue objectives that are instrumental to privacy and data protection. Article 20 does not articulate them clearly, but they can be distilled from the GDPR as a whole. This section suggests four objectives:

1. Establishing control over personal data transfers;
2. Establishing control over (re)uses of personal data;
3. Enabling better understanding of personal data flows and their complexity; and
4. Facilitating free development of personality and enhancing equality.

4.1. Control over personal data transfers

In a sense, data portability is a rule about data transfers. A transfer (migration) of data should happen in an organised manner, in line with data subjects' preferences. As the Article 29 Working Party explains, data portability guarantees the right to receive personal data and to process it according to the data subject's wishes.[72] For example, the data subject may opt for a more privacy-friendly service provider, for example Wire[73] instead of Skype.[74] While doing so, she might wish to ensure that all her contacts, conversation history, and chat

[70] However, it should be kept in mind that competition law measures only apply to dominant organisations. This is not that much of a problem since most often users experience the lock-in problem in the relation with companies that are dominant on the market. See *supra* n. 16.

[71] Orla Lynskey, "Aligning Data Protection Rights with Competition Law" (2017) *London School of Economics and Political Science Working Papers*, p.12.

[72] *Supra* n. 30, p. 5.

[73] Wire – a communication app offering end-to-end encrypted chats, calls, and file transfers, protected by European privacy laws.

[74] Skype is a voice over Internet Protocol (VoIP) software application used for voice, video, and instant messaging communications.

groups are transmitted to this new provider.[75]

Data "porting" can be carried out in different ways. The choice between the alternatives foreseen by the GDPR has further implications for the level of control that a data subject is able to exercise. Two possibilities are:

- A transmission of the overall dataset, or extracts of it;
- A transmission using a tool that allows extraction of relevant data.[76]

The second option gives a data subject more precise and meaningful overview and control over the information, since she may opt for portability of a limited set. As a result, the receiving controller only receives the data that is needed for a specific activity or task. As this method prevents bulk data transmission, it helps guarantee compliance with the principle of data minimisation.[77] If portability is approached in this way, then it is indeed possible to agree with the Article 29 Working Party's statement that "[d]ata portability can promote the controlled and limited sharing by users of personal data between organisations …".[78]

4.2. Control over (re)uses of data

Data portability helps data subjects not only exercise control over data transfers but also direct future uses of data. More specifically, the right to data portability has the potential to enable individuals to use data to create value.[79]

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75 Simultaneously, a data subject will also have to make sure that his data gets deleted from the first controller's servers. Otherwise data portability will add little to actual control.

76 *Supra* n. 30, p.16.

77 Art. 6(1)(c) of the GDPR.

78 *Supra* n. 30, p.5.

79 European Data Protection Supervisor, "Meeting the Challenges of Big Data - A Call for Transparency, User Control, Data Protection by Design and Accountability (Opinion 7/2015)", p. 13. See also Proposal for the General Data Protection Regulation from 2012, where the possibility to use data was explicitly mentioned as one of the objectives of the right of data portability, available at http://ec.europa.eu/justice/data-protection/document/review2012/com_2012_11_en.pdf (accessed 26 January 2018).

For example, individuals could either use the data for their own purposes, or license the data for further use to third parties, in exchange for additional services or cash value. One viable way to do this would be to derive utility from connected (IoT) devices. For instance, athletes who track their activities with a smart watch may have trouble transmitting their data from their smart watch to the provider of a data processing service, for example Strava.[80] Data portability helps overcome the transmission hurdle. Furthermore, the athletes would get compensated for allowing their athletic performance data to be displayed and analysed on a competing platform.[81]

Data portability can only lead to control over data reuse if it is supported by functional infrastructure. For instance, by using personal data stores, privacy dashboards or other kinds of personal data management software, data subjects could hold and store the personal data and grant permission to data controllers to access and process the personal data as required.[82]

Hub of All Things is a free online tool that enables users to store and manage personal data. The hub uses "data plugs" to pull in personal data from around the internet and enables users to view their personal data and to share it with others.[83] A similar solution is the blockchain technology developed by Pikciochain, a Swiss software firm, that is intended to facilitate individual data sharing and even sale.[84] According to the founders, a special quality of Pikciochain is that all data uses are perfectly traceable, thus giving the users a

80 Strava is a website and mobile app used to log athletic activity via GPS tracking.

81 It should be noted that the European Data Protection Supervisor expressed disagreement with the possibility of monetary compensation for personal data exchange: European Data Protection Supervisor, "Opinion 4/2017 on the Proposal for a Directive on Certain Aspects Concerning Contracts for the Supply of Digital Content", available at https://edps.europa.eu/sites/edp/files/publication/17-03-14_opinion_digital_content_en.pdf (accessed 13 November 2017).

82 *Supra* n. 30, p. 16.

83 https://hubofallthings.com (accessed 26 January 2018).

84 See *supra* n. 81, regarding the possibility of selling personal data.

better overview and control over sold, shared, or ported data.[85] Finally, the MyData initiative launched by the Finnish government is a solution that also appeals to data protection rights.[86] The aim is to provide individuals with some practical means to access, obtain, and use datasets containing their personal information, such as purchasing data, traffic data, telecommunications data, medical records, financial information and data derived from various online services and to encourage organisations holding personal data to give individuals control over this data, extending beyond their minimum legal requirements to do so.[87]

However, it should be kept in mind that many such decentralised architectures for supporting privacy self-management have failed in the past.[88] The reasons were complex, ranging from purely technical (for example network unreliability) to cognitive (for example the incorrect assumption that users were able to exercise more control than they were actually capable of).[89] Despite this, recent research has shown that modern privacy dashboards have been actually quite successful in achieving the goal of strengthening control over data flows.[90]

In spite of the myriad of options briefly described above, companies often find it difficult to convince customers to exercise their right to data portability.[91]

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85 There are arguments against such a positive approach to the block chain technology but this discussion is out of the scope of this paper. An interested reader should be referred to: Michèle Finck, "Blockchain Regulation" *German Law Journal* (forthcoming 2018).

86 Antti Poikola, Kai Kuikkaniemi and Harri Honko, "MyData – A Nordic Model for Human-Centered Personal Data Management and Processing", available at http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/78439/MyData-nordic-model.pdf (accessed 1 November 2017).

87 A similar UK initiative, which has winded down in the recent months, is the "midata" project. See https://www.gov.uk/government/news/the-midata-vision-of-consumer-empowerment (accessed 26 January 2018).

88 Kristina Irion et al., "A Roadmap to Enhancing User Control via Privacy Dashboards" (IVIR, 2017), pp. 13-14.

89 *Ibid*.

90 *Ibid*.

91 Michael Röhsner, "Data Portability as a Service; A Legal and Normative Analysis of the Requirements under the Law of the European Union for Contracts That Authorize a Service Provider to Exercise the Right to Data Portability on Behalf of a Data Subject" (Leiden University, 2017), p. 11.

As a solution, a concept data portability as a service (DPaaS) has been proposed.[92] In a DPaaS relationship, a data subject could authorise a DPaaS-provider to exercise the right to data portability in her name and to demand the data to be sent directly to a third party or to the DPaaS-provider itself.[93] In this way, data subjects could have their data ported and transferred to a preferable provider, while businesses would benefit from access to additional data sources.[94]

One important question to answer in this regard is whether such contracts are actually allowed under EU law. One possible hesitation could be the fact that data in such contracts will be handled as a commodity, which may not be in line with the strict protection of privacy and data in the human rights laws.[95] Furthermore, a related question is if fundamental rights are transferable. The European Court of Human Rights has held that this is not the case.[96] However, exercising data portability on behalf of a data subject does not require a transfer of the right. Only data is transferred. The right to data protection remains intact, for example individuals can demand deletion of data at any time (within the legally defined limits). The authorities seem to agree with this explanation. The Article 29 Working Party even foresees such relationships to emerge in the future.[97] In the past, several Data Protection Authorities have stated that it is legal for a data subject to authorise a third party to exercise the right to access in his or

92 *Ibid*.
93 *Ibid*.
94 Also supported by *supra* n. 30, p.16.
95 For an in-depth analysis see *supra* n. 91, pp. 16-17.
96 See for example: European Court of Human Rights, *Sanles Sanles v. Spain*, App. no. 48335/99; European Court of Human Rights, *Thévenon v. France*, App. no. 2476/02; European Court of Human Rights, *Mitev v. Bulgaria*, App. no. 42758/07; European Court of Human Rights, *M.P. and Others v. Bulgaria*, App. no. 22457/08; European Court of Human Rights, *Koch v. Germany*, App. no. 497/09.
97 *Supra* n. 30, p. 19.

her name.[98] This argument can indeed be extended to all other data subject rights, including the right to data portability.[99]

However, the risk that companies would misuse this option remains present. Rather than individual control, the result would be a new form of commercial exploitation and, as a result of wide data sharing, decreased privacy protection. For example, some health care start-ups have already investigated their options under Article 20 to gain access to medical data that is typically stored at a hospital or some other health care service provider.[100] Of course, they would first need to convince data subjects to permit the transfer of their raw data. While the business case for DPaaS is solid (building new applications on vast amounts of raw data), it is not clear what benefits this would have for data subjects.

4.3. Control over complex data flows

The right to data portability could lead to better legibility of complex data flows, especially in an IoT environment. By allowing or disallowing that data to be transferred to another controller, data subjects would be able to ensure that the picture that the IoT industry has about them is complete.

At the moment, exercising the data access right can simply lead to receiving multiple pages of information.[101] With data portability, people will be able to search within and analyse the data that organisations hold about them.[102]

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98 Austrian Data Protection Commission, Decision of the 14-12-2012, K121.897/0020-DSK/2012. See also the UK Information Commissioner's Office, "The Guide to Data Protection" (2017), p. 49, available at https://ico.org.uk/media/for-organisations/guide-to-data-protection-2-7.pdf (accessed 15 June 2017).

99 *Supra* n. 91, p. 18.

100 The information is based on the series of interviews conducted by the author in May 2016 with entrepreneurs from Leiden Bio Science park.

101 Loekke Moerel en Corien Prins, "Privacy for the homo digitalis - Proposal for a new regulatory framework for data protection in the light of Big Data and the Internet of Things", p. 65, available at http://dx.doi.org/10.2139/ssrn.2784123 (accessed 26 January 2018).

102 Jenni Tennison, "Data Portability" (Jeni's Musings, 2017), available at http://www.jenitennison.com/2017/12/26/data-portability.html (accessed 26 January 2018).

Data could be ported to data analytics services which could provide deeper insights into what information it holds. For example, individuals could examine data about particular types of activity (for example helping them to reduce their energy usage) or data that links together different types of activity (for example bringing together their transport spend with the routes that they travel).[103] Thus, the right to data portability could enable greater literacy around how data is being used.[104]

4.4. Data portability as a reflection of the right to free development of personality and equality

Data portability is a manifestation of the broader right to privacy, which is an enabler for many other rights, including the right to free development of human personality and the right to equality. [105]

First, data portability has implications for the right to free development of human personality. This can be observed in situations when data subjects have formed an entirely new personality on the internet, for example an account on a digital shopping platform that has built up a reputation and history. An example is a user's eBay reputation:

> A long-time seller on eBay has a reputation that she has built up carefully. But if she switches to the entrant, she will be a newbie again and buyers will naturally be reluctant to transact with her. But there is a ready solution: make the eBay identity and reputation portable. If I am a good seller on eBay as HotDVDBuysNow, I should be just as good on another site.[106]

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[103] *Ibid*.

[104] *Supra* n. 21.

[105] Eva Fialová, "Data Portability and Informational Self-Determination" (2014) 8 (45) *Masaryk University Journal of Law and Technology*.

[106] Quoted from Gabriela Zanfir, "The Right to Data Portability in the Context of the EU Data Protection Reform" (2012) 6 *International Data Privacy Law*.

Indeed, on websites like eBay the concepts of digital identity and reputation are fragments of the general dimension of one's identity and reputation.[107] Both terms are strongly linked to the concept of (digital) personality. Data portability pursues the goal of free development of human personality by offering the means to achieve it, namely a technical process.[108]

Second, the EDPS suggests that data portability could also help minimise unfair or discriminatory practices and reduce the risks of using inaccurate data for decision-making purposes.[109] Unfortunately, the EDPS did not articulate clearly how exactly data portability would achieve this. One could think of a situation in which a data subject may want to transfer data from an email service provider which uses personal data for behavioural advertising, for example Gmail, to a less intrusive one, for example Outlook. However, this still does not completely solve the problem of possible discriminatory data uses. Google would still be able to use historical data to use behavioural advertising on its Chrome browser.[110] Data portability does not mean that data is entirely removed from the first controller's server – it only means that *a copy* is transferred and reused. Only in combination with the right to erasure can portability effectively prevent data-driven decision-making that could otherwise have a negative effect on the data subject. However, using the right to data portability to send data to a third party to conduct an impartial check could decrease the risk of discrimination. In the context of profiling, portability of personal profiles to trusted third-parties could offer a solution to the lack of control over personal

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[107] *Ibid*.

[108] See also *supra* n. 71, p. 38. It should be pointed out that portability could nevertheless be limited if third party rights would be affected.

[109] European Data Protection Supervisor, "Privacy and Competitiveness in the Age of Big Data: The Interplay between Data Protection, Competition Law and Consumer Protection in the Digital Economy" (2014), available at https://edps.europa.eu/sites/edp/files/publication/14-03-26_competitition_law_big_data_en.pdf (accessed 12 November 2017).

[110] Gewirtz, David, "Your questions answered: Why I switched from Outlook to Gmail" (ZDNEt, 7 August 2014), available at http://www.zdnet.com/article/your-questions-answered-why-i-switched-from-outlook-to-gmail/ (accessed 26 January 2018)

data. These third parties would examine the profiles and determine whether the decisions made based on them were erroneous, biased, or unfair. The idea faces an important limitation: the narrow definition of the right. As data portability as a right only applies to data provided by data subject, profiled data could hardly fall within Article 20's definition. That being said, companies could allow this sort of portability voluntarily as a sign of compliance and trust.[111]

5 Conclusions

This paper examined four ways in which data portability could lead to effective individual control: (i) establishing control over personal data transfers, (ii) enabling (re)use of personal data, (iii) enabling better understanding of data flows, and (iv) facilitating equality and allowing free development of personality.

The analysis of each of these four "gateways" showed that data portability could enhance personal data protection and control over personal data. For example, data portability could increase transparency of data processing and could allow data subjects to control their online identities. Also, data portability could be instrumental to enhancing other rights and principles, such as the principle of equality. However, the effectiveness of the right depends on multiple factors. First, the language of the provision on the right to data portability in the GDPR is restrictive, because it seeks to balance competing commercial and personal interests. Section 3 has demonstrated that many types of personal data fall out of the scope of data portability. Second, portability is dependent on the ICT infrastructure. More specifically, data portability is contingent on the use of interoperable formats and systems, and on the security of those systems.[112] The

[111] Paul De Hert et al., "The right to data portability in the GDPR: Towards user-centric interoperability of digital services" (2018) 34(2) *Computer Law & Security Review* 193.

[112] *Supra* n. 50, pp. 1-2.

success of data portability as a right will be correlated with the success of standardisation initiatives and with the robustness of information security.

To summarise, data portability as a right is very limited. At this point in time, any further regulatory changes to Article 20 are highly unlikely. To ensure that the idea of data portability survives, it will be necessary to adopt a lenient interpretation of the GDPR provisions as well as consider some alternative legal mechanisms.[113]

As already mentioned, in the area of competition law, personal data portability reinforces the goals of competition policy.[114] While the GDPR's version of the right to data portability can be only applied to personal data *provided* by an individual, competition law faces no such restriction. As a consequence, competition law can offer a remedy in situations such as the transfer of reputational profiles on sharing economy platforms, where a data subject would indeed benefit from data portability.[115] Application of competition law, however, remains contingent on the dominance of the data controller.

Furthermore, Articles 13 (2)(c) and 16(4)(b) of the proposed Directive on Digital Content could be another useful alternative.[116] The Directive addresses problems such as weakened position of consumers in the digital economy and the issue of elusive digital ownership.[117] Specifically, the directive mandates that consumers are given the option to *retrieve* their data for free when they leave a

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[113] See for instance De Hert et al., *supra* n. 112. Due to the limited scope of the paper the implementation and enforcement aspects of the right to data portability are not further explored, although this could be interesting follow-up research.

[114] *Supra* n. 3.

[115] Aysem Diker Vanberg and Mehmet Bilal Ünver, "The Right to Data Portability in the GDPR and EU Competition Law: Odd Couple or Dynamic Duo?" (2017) 8 (1) *European Journal of Law and Technology*, p. 2; *supra* n. 71, p. 20.

[116] Proposal for a Directive of the European Parliament and of the Council on certain aspects concerning contracts for the supply of digital content, COM/2015/0634, available at http://eur-lex.europa.eu/legal- content/EN/TXT/?qid=1450431933547&uri=CELEX:52015PC0634 (accessed 26 January 2018).

[117] For a detailed study of this issue see Jason Schultz and Aaron Perzanowski, *The End of Ownership; Personal Property in the Digital Economy* (The MIT Press 2016).

digital service. These provisions resemble the right to portability under Art. 20 of the GDPR but are broader in scope. A retrieval is not only required with respect to personal data, but also with respect to any other content provided by the consumer and any data produced or generated through the consumer's use of the digital content.[118] This would apply, for example, to pictures uploaded by consumers, as well as to ratings they submit online.[119]

Thus, the GDPR's version of data portability is not alone on the mission to enhance data subjects' control. Some other legal domains contain similar ideas on portability that could also lead to some positive outcomes for individuals. Taking a holistic view of data portability, as well as adopting a lenient interpretation of the GDPR provisions, could be a way to make the weak right ready for the challenges of the big data era.

[118] *Supra* n. 117, Art. 13c.
[119] *Supra* n. 117, Recital 15.

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On the Uneasy Interface between Economic Rights, Moral Rights and Users' Rights in Copyright Law: Can Canada Learn from the UK Experience?

*Eugene C. Lim**

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Abstract

Copyright in Canada is subject to a number of statutory defences, of which parodies and non-commercial user-generated content (UGC) are but two examples. However, the interface between these defences and the protection of moral rights is not very clearly delineated in Canada's *Copyright Act*. The statutory defences appear to immunise a user from liability for traditional copyright infringement but not from claims of moral rights infringement. Under this fragmentary approach, users engaging in acts of fair dealing or in the production of non-commercial UGC might still find themselves vulnerable to attack from author-claimants alleging that their moral rights have been violated. Through a comparative survey of key legislative provisions in Canada and the United Kingdom, this article explores the extent to which Canada can learn from the UK experience, and considers the viability of streamlining the scope of the statutory defences to copyright infringement, in order to clarify the interface between users' rights, moral rights and economic rights.

Keywords
copyright; moral rights; users' rights; statutory defences; fair dealing; interface

* Faculty Member, School of Law, City University of Hong Kong, eugenlim@cityu.edu.hk

1 Introduction

> If I have seen further, it is by standing on the shoulders of giants.
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> – Isaac Newton

Creative expression can perhaps be considered one of the hallmarks of an advanced civilisation. Newton's quotation serves as a fitting reminder that all artists, authors and inventors, however gifted, owe their wondrous accomplishments to the body of knowledge and intellectual achievement that has been built up over time. Art is therefore never static, but is a symbol of the constant re-construction, renewal, and re-interpretation of ideas. In this regard, all artists are "borrowers" in the sense that they take from the work of their predecessors and transform, translate and re-articulate its form and content, clothing each old idea with a new sheen of ingenuity and imagination.[1] The process of creating new content is therefore inextricably bound up with the act of using extant material, such that authors are also users of *other* authors' ideas and expressions.

Yet, the intertwined nature of authorship and use can generate issues of some complexity for copyright in contemporary society. Questions of infringement can arise if the use by an author of an earlier work amounts to a qualitatively significant portion of the original. Though they seek to transform the underlying works into "new" products with creative or humorous elements, authors of parodies and user-generated content often need to "borrow" material

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[1] Under this broad interpretation of the term "user", all creators can be considered to have exploited, purchased or utilised existing technologies at some point in the production of their "new" works. The act of drawing upon older works for inspiration is not a new phenomenon, but rather a historical practice that continues to animate the creative ethic of producing intellectual work. See Greg Lastowka, "User-Generated Content and Virtual Worlds" (2008) 10 *Vanderbilt Journal of Entertainment and Technology Law* 893-917, p. 897.

from other sources in order to perform their intended functions. From Duchamp's moustachioed version of the Mona Lisa in the year 1919 to the colourisation of "The Asphalt Jungle"[2] and the reinterpretation of the "Gangnam Style" dance routine by amateur dance groups, significant traces of the original works remain – traces which, if absent, would likely obliterate any connection with the derived compositions, thereby defeating their very purpose. A successful parody therefore owes its success to a recognised connection with the parodied work,[3] while managing to distinguish itself sufficiently from the author's original.[4] Interestingly, in spite of this connection, copyright holders are unlikely to voluntarily grant licences to parodists to allow them to engage in use which essentially subjects their work to ridicule or satire.[5] Quite ironically, parodists themselves are unlikely to seek permission for their satirical activities, either because the copyright owner's "stamp of approval" might not be forthcoming, or because such approval might eviscerate the quality of irreverence that gives a parody its impact.[6] Although protecting freedom of

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2 It is nevertheless open to some debate as to whether the colourisation of a film constitutes a derivative work involving the exercise of creative choice.

3 The connection that a parody has with the parodied work is sometimes referred to as the "conjure up" test, which allows an observer to relate the parody to the original whilst distinguishing one work from the other. In this respect, a successful parody must be "evocative" of the underlying work from which it has been derived in order to fulfill its intended purpose. See Geri J. Yonover, "The Precarious Balance: Moral Rights, Parody, and Fair Use" (1996) 14 *Cardozo Arts & Entertainment Law Journal* 79-126, pp. 105-106.

4 See Sam Ricketson & Jane Ginsburg, *International Copyright and Neighbouring Rights: The Berne Convention and Beyond*, 2nd ed. (Oxford: OUP, 2006), para. 10.29, who note that the reader or observer of a parody would be perfectly aware that the piece is not the work of the author whose *oeuvre* is being parodied.

5 *Supra* n. 3, p. 103.

6 In this regard, it has been observed that a parodist who identifies or is made to identify the author of the work being parodied might in some circumstances be viewed as making an implied admission that the parody has failed. See Robert Burrell & Allison Coleman, *Copyright Expressions: The Digital Impact* (Cambridge: CUP, 2005), p. 61.

expression through "users' rights"[7] is often touted as an important dimension of copyright law, the artistic freedoms of parodists and users can nevertheless be severely curtailed through the threat of litigation relating to either copyright infringement or to the violation of authors' moral rights.[8]

Not all user-generated content, however, seeks to ridicule or poke fun at other works. Parodies and user-generated content can be situated under the broader umbrella term "derivative works". Derivative works, which may in some cases attract copyright protection in their own right if they are sufficiently original,[9] raise potentially contentious issues in copyright law because of the way in which they modify, transform or adapt other (earlier) works.[10] Derivative works include user-generated content (UGC),[11] which is, in turn, broader in scope than parodies. The term "UGC" encompasses both creative derivations of an original work that are laudatory, such as fan art, as well as critical, parodic, satirical, or humorous reflections of the original, such as outlandish mimicry, mockery or imitations. Clearly some UGC is benign in orientation, though obviously many examples of parodic content would not be generated in good

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7 See *CCH Canadian Ltd. v Law Society of Upper Canada*, [2004] 1 SCR 339 (hereinafter *CCH Canadian)*, para [51], where it was held that "[r]esearch" under section 29's fair dealing provision must be given a "large and liberal interpretation in order to ensure that users' rights are not unduly constrained."

8 See *supra* n. 3, p. 103.

9 See for instance *Redwood Music v Chappell*, [1982] RPC 109.

10 See Teresa Scassa, "Acknowledging Copyright's Illegitimate Offspring: User-Generated Content and Canadian Copyright Law" in Michael Geist (ed.), *The Copyright Pentalogy: How the Supreme Court of Canada Shook the Foundations of Canadian Copyright Law* (Ottawa: University of Ottawa Press) 431-453, p. 440, who raises the question of whether a compilation or a mix-tape could be considered a "new work" in which copyright subsists.

11 According to Peter Yu, examples of such content include remixes, mash-ups, cut-ups, spoofs, parodies, satires, caricatures, pastiches and machinimas. See Peter K. Yu, "Can the Canadian UGC Exception Be Transplanted Abroad?" (2014) 26 *Intellectual Property Journal* 175-203, p. 178.

faith.[12] It has been observed that parody "smacks of irreverence" and is usually critical, rarely engaging in a deferential or loving treatment of the underlying work.[13] That an author might take umbrage to the treatment of the work by a user is certainly a very real possibility.

Currently, the statutory defences in Canada against copyright infringement, including the relatively new "UGC-exception",[14] provide very limited shelter against claims of *moral* rights infringement. Moral rights introduce an added layer of complexity to the process of defining the boundary between permitted use and actionable conduct in the context of derivative works. While copyright protects the economic interests of the owner (sometimes though not always the author, since copyright ownership may vest in another party, either through law or through assignment), moral rights on the other hand protect the reputational and personality interests of the author. Moral rights include the right to be identified as the author of a work (the right of attribution) and the right to object to derogatory treatments or mutilations of the work that would prejudice the author's reputation (the right of integrity).

This article argues that fair-dealing parodies and other user-generated content, whether laudatory, satirical, or critical, play an important role in enhancing cultural discourse and communication in society.[15] As such, the current fragmented approach in the Canadian *Copyright Act* toward exonerating

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12 See Mark A. Petrolis, "An Immoral Fight: Shielding Moral Rights with First Amendment Jurisprudence when Fair Use Battles with Actual Malice" (2008) 8 *John Marshall Review of Intellectual Property Law* 190-215, p. 198, citing the landmark case of *Campbell v Acuff-Rose Music, Inc.*, (1994) 510 US 569.

13 See *supra* n. 3, pp. 103 and 110.

14 See section 29.21 of the *Copyright Act* of Canada, R.S.C., 1985, c. C-42.

15 By generating UGC, users are not merely participants but rather active contributors to the "cultural dialogue" of society. See Fraser Turnbull, "The Morality of Mash-Ups: Moral Rights and Canada's Non-Commercial User-Generated Content Exception" (2014) 26 *Intellectual Property Journal* 217-236, p. 220.

certain works from liability for infringement should be replaced with a more internally consistent framework, which clarifies the scope of the protective "umbrella" offered to users against liability for *both* copyright *and* moral rights infringement. The article will offer three principal arguments in support of a more harmonious and integrated copyright system in Canada which attempts to streamline the defences to copyright and moral rights infringement, whilst drawing upon insights gleaned from the UK experience. The larger aim of this analysis is to refocus attention on the need to place clearer limits on the rights of authors, so that moral rights cannot be used unreasonably as a weapon to target forms of fair speech or expression that are statutorily protected as being in the public interest.

Part 2 of this article will sketch the contrasting orientations of economic and moral rights, and situate Canada's approach within the common law and civilian approaches to moral rights protection. It will also investigate the fascinating intersections and tensions between the economic and moral rights regimes within the statutory framework of the Canadian *Copyright Act*. Part 3 will explore a number of arguments in favour of constructing a more internally consistent *Copyright Act* which encompasses both moral rights and economic rights within a unified framework. Part 4 seeks to evaluate the extent to which Canada can learn from the structure of the UK's copyright statute, and to outline a number of legislative responses that would facilitate the entrenchment of a more coherent and internally consistent treatment of economic interests and personality rights. This is followed by some concluding remarks in Part 5.

2 Exploring the encounter between economic rights and moral rights in comparative perspective

Striking an equitable balance between the protection of exclusive rights and the preservation of civil liberties such as freedom of expression has always been a challenge for intellectual property law. To this end, the fair dealing provisions in the Canadian *Copyright Act* serve an important function in mediating the interplay between owners' rights and users' rights by acting as a bulwark against encroachment by monopoly rights upon the public's right to use and adapt information for purposes that are essential for human communication and cultural dialogue.[16] The fair dealing provisions provide shelter against infringement in respect of activities that provide some form of public benefit, such as news reporting, parodies and private study and research. Although not classified as a fair dealing defence by pedigree, a provision relating to non-commercial user-generated content was added to the statutory scheme in November 2012, by dint of the *Copyright Modernization Act*,[17] broadening the panoply of activities that are exonerated in Canada from liability for copyright infringement.[18] This provision now aligns Canada's position with a

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16 In addition to the guidance provided by the Supreme Court of Canada in *CCH Canadian* regarding the integral role of users' rights in Canadian copyright law, it has also been held that users' rights are to be interpreted from the point of view of the user, rather than the content provider or copyright owner. In the case of *Society of Composers, Authors and Music Publishers of Canada v Bell Canada*, [2012] 2 SCR 326, for instance, the use of previews of musical works by a distributor to increase sales was held to be fair dealing due to the fact that customers used these previews to decide whether or not to make purchases.

17 Copyright Modernization Act 2012, SC 2012, c. 20. Most of the provisions in the *Copyright Modernization Act* (formerly Bill C-11), which was designed to amend Canada's *Copyright Act*, entered into force on November 7, 2012. The remaining provisions were brought into force by January 2, 2015.

18 See *supra* n. 11, pp. 177-178, where it is suggested that the Canadian UGC exception provides a useful starting point for exploring how copyright law could accommodate the needs and interests of Internet users in their efforts to create UGC, many examples of which can be found on YouTube and other social media platforms.

recommendation made some years ago by Lawrence Lessig – that legislation should exempt non-commercial UGC from "the requirements of fair use or the restriction of copyright."[19]

Interestingly, however, artistic freedom in Canada still appears to be somewhat unevenly protected by the economic and moral rights regimes enshrined in the *Copyright Act*. In the case of *Théberge v Galerie d'Art du Petit Champlain Inc.* (*Théberge*),[20] Binnie J of the Canadian Supreme Court noted that the "separate structures" in the Canadian *Copyright Act* for economic rights and moral rights serve as evidence that Parliament intended a "clear distinction and separation" between the two species of right.[21] This quality of "separateness" can also be observed in the absence of a clearly-defined interface between the two sets of statutory defences. The fair dealing and related provisions appear to immunise the identified categories of activity from liability for copyright infringement, but *not* generally for moral rights infringement. This creates the possibility that a user who escapes liability for infringing copyright might nevertheless be subject to a moral rights complaint if the use in question allegedly injures the personality of the author.[22] The fear of litigation and liability may have a chilling effect on the generation of parodies and other expressive activities by users if statutory defences to copyright infringement do not sufficiently protect parodic or derivative expression.[23] In this regard, the interface between fair dealing and moral rights in the Canadian copyright scheme is not very clearly defined. While the provisions on criticism or review, news reporting and UGC

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19 See Lawrence Lessig, *Remix: Making Art and Commerce Thrive in the Hybrid Economy* (Penguin Books, 2008), p. 255.

20 [2002] 2 SCR 336.

21 *Ibid*., para. 59.

22 See *supra* n. 15, p. 235, where it is noted that certain forms of UGC may be suppressed by "overzealous moral rights claims".

23 See *supra* n. 3, p. 104.

do make non-explicit references to the moral right of attribution as requirements for successful invocation of the respective defences,[24] the provision on parody, satire and research makes no mention whatsoever of moral rights.[25] None of the above provisions mention the moral right of integrity.[26] This creates the rather uncomfortable situation that a defence might provide immunity from liability for one kind of infringement (of an economic nature) but leaves the user open to attack by the moral rights holder. In particular, unauthorised modifications or distortions of a work could still potentially lead to liability for infringement of the moral right of *integrity*.

This somewhat awkward conundrum can be better understood by tracing the (civilian) origins of moral rights, which are in some ways considered a newcomer to the shores of the English, American, and Canadian copyright systems.[27] At the international level, the subject of moral rights remains a controversial minefield, with no uniform consensus on the appropriate level of protection.[28] Various commentators have questioned whether moral rights are

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[24] See sections 29.1, 29.2 and 29.21(1) of the Canadian *Copyright Act*. To invoke these defences, it is necessary, among other things, for the source of the protected use to be mentioned. However, these provisions do not expressly refer to the moral right of attribution. The text of these provisions will be discussed in greater detail in section 4 of this article.

[25] See section 29 of the Canadian *Copyright Act*, which merely states that: "Fair dealing for the purpose of research, private study, education, parody or satire does not infringe *copyright*." (emphasis added)

[26] For two seminal Canadian cases concerning an artist's or author's right to integrity of the work, see S*now v The Eaton Centre Ltd.*, (1982) 70 CPR (2d) 105 (Ont. H.C.) and *Prise de parole Inc. v Guérin, éditeur Ltée.*, (1996) 73 CPR (3d) 557 (Fed. C.A.). For other Canadian decisions touching upon the moral right of integrity, see, *inter alia*, *Patsalas v National Ballet of Canada*, (1986) 13 CPR (3d) 522 (Ont. S. Ct.) as well as G*nass v Cité d'Alma*, unreported (Que. S. Ct. Nov. 23, 1973), Doc. A-158, affirmed in unreported decision Doc. 200-09-0000232-745 (Que. C.A. June 30, 1977).

[27] See Robyn Durie, "Moral Rights and the English Business Community" (1991) 2(2) *Entertainment Law Review* 40-49, p. 43, who describes a "reticence" in the UK toward acknowledging moral rights.

[28] It is interesting to note that while the Berne Convention contains a specific moral rights provision in Article 6bis, the TRIPS Agreement has expressly excluded this provision from its importation of the substantive Berne provisions. Article 9(1) of the TRIPS Agreement

only grudgingly accommodated within the US copyright system,[29] with some observing that the concept of moral rights is generally unsettling to the average American lawyer,[30] and others suggesting that the United States government fiercely resisted accession to the Berne Convention for over 100 years, joining only in 1988.[31] In a similar vein, the moral rights provisions in the UK's *Copyright, Designs and Patents Act 1988* (CDPA) have been described as "half-hearted" and "cynical", reflecting a lack of conviction on the part of the drafters in the viability or desirability of moral rights.[32] This has resulted in a moral rights regime under the CDPA that is "riddled with exceptions", rendering the attempt to implement moral rights in the UK somewhat incoherent and insincere, in the view of some commentators.[33] It has been suggested that copyright jurisdictions which remain generally hostile to the concept of personality interests do moral rights more harm than good by enacting a vague or incoherent statute that is pockmarked with exceptions.[34] Yet other commentators have argued that moral rights are not

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provides that "Members shall not have rights or obligations under this Agreement in respect of the rights conferred under Article 6bis of that Convention or of the rights derived therefrom." Further, in the European context, Bently and Sherman observe that the directives have "steered clear" of moral rights, citing Term Dir., Art. 9, Recital 20; Database Dir., Recital 28; Info. Soc. Dir., Recital 19 as examples. They also note that the *travaux préparatoires* of these instruments reflect an intention to introduce moral rights provisions, which however failed to bear fruit owing to the lack of consensus on the matter. They are however quick to point out that the moral right of attribution is recognised in EU law to the extent that some exceptions in the Directives are dependent on attribution of the source or author for their operation. See Lionel Bently & Brad Sherman, *Intellectual Property Law*, 4th ed. (Oxford: OUP, 2014), p. 291.

29 Amy M. Adler, "Against Moral Rights" (2009) 97(1) *California Law Review* 263-300, p. 266.

30 Michael B. Gunlicks, "A Balance of Interests: The Concordance of Copyright Law and Moral Rights in the Worldwide Economy" (2001) 11 *Fordham Intellectual Property, Media & Entertainment Law Journal* 601-669, p. 604.

31 Gillian Davies & Kevin Garnett QC, *Moral Rights* (London: Sweet & Maxwell, 2010), p. 38.

32 See for instance Jane Ginsburg, "Moral Rights in the Common Law System" [1990] *Entertainment Law Review* 121-130, p. 129 and Davies & Garnett QC, *Moral Rights*, *ibid.*, 16.

33 See Ginsburg, *Moral Rights*, *ibid*.

34 Ginsburg, *Moral Rights*, *ibid*., pp. 129-30. It has also been observed that the scope of moral rights needs to be "clearly delineated" in order to work effectively. See Gerald Dworkin,

entirely anathema to common-law copyright systems, and can be integrated harmoniously within a statutory framework, in line with the legislative models adopted in several European Union countries.[35]

The economic or pecuniary rights that are primarily associated with copyright protection derive largely from the Anglo-American paradigm of protecting intellectual works with creative or original expression.[36] Moral rights, in contrast, trace their beginnings to the *droit d'auteur* or *Persönlichkeitsrecht*[37] traditions of Continental Europe, which treat as almost sacrosanct[38] the special connections that authors have with their works.[39] Despite the purportedly harmonising effect of Article 6*bis* of the Berne Convention, "no two countries that give serious thought to moral rights ever produce the same set of provisions."[40]

"Moral Rights in English Law - The Shape of Rights to Come" (1986) 8(11) *European Intellectual Property Review*, 329-336, p. 336.

35 See for instance *supra* n. 30, p. 649 and Ysolde Gendreau, "Digital Technology and Copyright: Can Moral Rights Survive the Disappearance of the Hard Copy?" (1995) 6(6) *Entertainment Law Review* 214-220, p. 218.

36 See *supra* n. 27, pp. 40-41, where it is observed that many common law jurisdictions seem "ill at ease" with the basis and rationale for moral rights, their copyright laws having been based on the "utilitarian" protection of economic interests rather than moral interests. For a detailed treatment of the operation of moral rights in France and Germany, as well as an in-depth analysis of the development of authorial moral rights in Canada, the UK, the US, and Australia, see Elizabeth Adeney, *The Moral Rights of Authors and Performers: An International and Comparative Analysis* (New York: OUP, 2006), particularly chapters 8 to 18.

37 The German expression "Persönlichkeitsrecht", which refers to "personality right", has been presented as a more favourable alternative translation to the French "droits moraux", since there is nothing inherently "moral" about these rights in the English sense of the term. See Mira T. Sundara Rajan, "Creative Commons: America's Moral Rights?" (2011) 21 *Fordham Intellectual Property, Media & Entertainment Law Journal* 905-969, p. 909.

38 See Joan Pattarozzi, "Can the Australian Model be applied to U.S. Moral Rights Legislation?" (2007) 15 *Cardozo Journal of International and Comparative Law* 423-460, pp. 424 and 427-8, who characterises moral rights in creative works, under a "personality" approach to copyright protection, as "inseparable extensions" of an author's personality.

39 The continental European concept of moral rights is based on the personality of the author and what one commentator terms "the romantic notions of authorship". This paradigm of moral rights recognises the special bond between the creator (author) and the creation (work). See *supra* n. 3, p. 88-89.

40 Elizabeth Adeney, "Defining the Shape of Australia's Moral Rights: A Review of the New Laws" (2001) 4 *Intellectual Property Quarterly* 291-325, p. 323.

Under the moral rights paradigm, works are considered manifestations of an author's personality and this special connection is not severed even when the economic interests (vested in copyright) have been transferred to another party, a principle that has also been recognised in the seminal Canadian case of *Théberge*.[41] Several civil law jurisdictions, including France, prohibit the alienation of moral rights, and refuse to enforce waiver agreements against the author.[42]

Canada appears to adopt a moderate approach, allowing moral rights waivers to be enforced against the author, providing, in some respects, a bridge between the common law and civil law approaches to moral rights.[43] This is attributable in part to the fact that Canada's laws have been influenced by the civil law principles of Quebec, even though it is primarily a common law country.[44]

The uncomfortable tension between moral rights and economic rights that can be observed in the Canadian copyright framework is reflective of the vastly different traditions from which they originate.[45] Despite Canada's bijural legal tradition, moral rights are occasionally perceived as a foreign object in the Act and do not appear to be as seamlessly integrated into the statutory regime as they

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41 In this respect, moral rights treat the artist's œuvre as an "extension of his or her personality", possessing a dignity which is deserving of protection." See *Théberge*, para. 15.

42 See *supra* n. 27, p. 44, where it is noted specifically that moral rights can be assigned and alienated contractually in common law jurisdictions, but such a possibility is not generally recognised in civil law countries such as France.

43 See Gerald Dworkin, "The Moral Right of the Author: Moral Rights and the Common Law Countries" (1995) 19 *Columbia-VLA Journal of Law & the Arts* 229-267, p. 243.

44 See *supra* n. 31, p. 36, who observe that the civil law system in Quebec has rendered Canada "more open to ideas and legal theories originating in Continental Europe".

45 It has been suggested that moral rights, when introduced into a common law "copyright system" from the "civilian system" show all the signs of being an imported commodity, and continue to be regarded as an outgrowth of the civilian authors' rights system. See Gendreau, *Digital Technology and Copyright*, *supra* n. 35, p. 217.

are in civil law jurisdictions.[46] The somewhat isolated nature of moral rights in the Canadian statutory scheme for copyright protection is reflected in the lack of any *express* defences to moral rights infringement. The concern here is not that Canada's *Copyright Act* lacks a set of express moral rights provisions, but rather that these provisions are not satisfactorily connected with the rest of the statute. The copyright and moral rights regimes sit alongside each other rather awkwardly, like ill-fitting appendages, under the statutory umbrella of the Canadian Act: in its definition of "copyright", section 2 refers to the economic rights that subsist in works[47] and related rights[48] (such as those relating to performances, sound recordings, and communication signals). Moral rights are defined separately in section 2 as "rights described in subsections 14.1(1) and 17.1(1)". Further, section 28 governs the infringement of moral rights generally, including the moral rights held by both authors and performers. It is noteworthy that moral rights are not classified as "copyright",[49] but are treated in a structurally distinct fashion in the Act, which is a testament to the separateness of the two regimes.

As such, at a *macroscopic* level, it appears somewhat unlikely that the general fair dealing and related defences to copyright infringement enshrined in section 29 *et seq*. of the Canadian *Copyright Act*, such as research, criticism and review, and so forth, would be capable of being extended to complaints relating to moral rights. As the wording of the Act currently stands, it is certainly plausible that an alleged moral rights infringement could fall outside the

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46 *Ibid*.

47 See section 3 of the *Copyright Act* (1985) of Canada, c. C-42.

48 See *ibid.*, sections 15, 18, 21 and 26.

49 See Daniel J. Gervais & Elizabeth F. Judge, *Intellectual Property: The Law in Canada* 2nd ed., (Toronto: Thomson Canada, 2011), p. 190.

protective ambit of the statutory copyright defences even if the underlying act otherwise qualifies for protection under the fair dealing or related provisions.

3 Toward a "moral" copyright regime in Canada: Fostering consistency between the statutory defences for infringement

This section seeks to develop the argument that a use which is "fair", by definition, should *not* result in actionable harm to another party. The corollary of this argument is that activities which are covered by a fair dealing defence should not trigger liability for a moral rights action under the *Copyright Act* of Canada.[50] In this vein, the statutory defences to copyright infringement should clarify the extent to which protective shelter is provided against moral rights infringement, and the specific grounds on which a user will be immunised from liability under the Act. Under an integrated regime, qualifications or limitations to the scope of a defence could be built into the statutory provision itself, so as to ensure that legally protected forms of fair dealing would be inherently respectful, within reason, of moral rights, taking into account the nature and purpose of the protected activity.

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[50] It is noteworthy that, in addition to the point about moral rights made earlier, fair dealing is not listed as a defence to the circumvention of technological protection measures. See for instance section 41.1(1)(a) of the Canadian *Copyright Act*, which provides that "No person shall circumvent a technological protection measure…", and the ensuing provisions, which provide exceptions including those relating to the interoperability of computer programs and encryption research. Interestingly, however, under section 41.21(2), the Governor in Council may prescribe "additional circumstances" in which section 41.1(1)(a) does not apply, taking into account whether the anti-circumvention rule could adversely affect criticism, review, news reporting, commentary, parody, satire, teaching, scholarship, or research in respect of the work. A detailed discussion of the anti-circumvention provisions is outside the scope of this article.

Clarifying the interface between the protection of moral rights and the statutory defences (such as fair dealing) is not a purely theoretical issue. Practically speaking, the scope of protection granted by the statutory defences can have a significant impact on the exercise of basic civil liberties, such as the freedom of expression, through derivative or parodic works. In effect, the UGC exception and other users' rights provisions introduced by Canada's *Copyright Modernization Act* might be rendered inutile, or in some cases, even nugatory, if moral rights can be raised as grounds to object to the generation of such content. These personality rights could then serve as a backdoor through which authors and artists can place continuing restraints on creative expression by others, even though such expression might otherwise be protected by one or more of the statutory defences, such as the fair dealing or the UGC exception.[51] The ability to use moral rights as a weapon to stifle or limit creative expression would effectively emasculate the UGC provisions, possibly defeating the purpose for which they were enacted.[52]

On the other side of the spectrum, however, is the need to confer adequate protection to moral rights, particularly in light of the special challenges posed by the Internet and digital technology, which have radically heightened the ease with which creative content can be altered, modified and embellished.[53] From the point of the view of an author-creator, the threats posed by digital technology to the integrity of and connection to the work can be significant. The losses that a moral rights holder would suffer as a result of damage to reputation might extend beyond complaints of a personality-linked nature to include financial injury if their ability to attract custom through their work is thereby impaired by

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51 *Supra* n. 15, p. 236.

52 *Ibid*.

53 See for example Gendreau, *Digital Technology and Copyright*, *supra* n. 35, p. 218.

the infringing activity. The key issue, therefore, lies in designing a fair dealing regime which accommodates and addresses moral rights concerns in a clear and transparent way, whilst elucidating the qualifications that must be satisfied in order for third party expression to be protected from both moral rights and copyright infringements.

This article seeks to offer three (related) principal arguments in favour of integrating moral rights more holistically into the Canadian copyright framework, with the longer-term goal of constructing a more coherent and "moral" statutory regime for the protection of economic and personality-based rights in respect of expressive work.

The first argument relates to the possibility of avoiding duplicity of proceedings over essentially the same act complained of. Under the current statutory framework in Canada, an author who fails in a claim for economic infringement against a party who successfully cites fair dealing may nevertheless attempt a "second bite at the cherry". If the copyright owner is also the moral rights owner (usually though not always the author if the economic rights have been assigned to another party), then a second action for moral rights infringement could potentially form the basis for a subsequent lawsuit against the same defendant. Such "duplicitous" proceedings would result in additional costs and place unnecessary burdens on resources over an impugned act for which the defendant has already been immunised from liability for a *different* cause of action under a copyright defence. Similar arguments would also be applicable to a situation where economic rights and moral rights are held by *different* parties. In the latter scenario, a second plaintiff might attempt to vindicate moral rights against the same defendant in respect of the same act of use where the claim of a first plaintiff has earlier failed on grounds of fair dealing, or similar circumstances. In short, having two uncomfortably-integrated regimes for liability would increase the complexity of copyright litigation and aggravate

the level of legal uncertainty for artists and parodists seeking to rely on statutory defences to shield their creative work and activity from potential liability.

The second advantage of a holistically integrated copyright system is a stronger assurance of balance between the protection of authors' rights and the public interest, whilst reducing the chilling effect that personality-based authorial interests would have on creative expression.[54] Since derivative works and user-generated content are, by definition, adaptations or modifications of underlying original works, they constitute a form of creative expression whose legality is highly dependent upon the scope of protection granted to moral rights, particularly the moral right of integrity. Allowing transformative uses of original work to receive protection under a more comprehensive fair dealing regime which covers both economic and moral rights infringements would play an important role in ensuring that artistic activity can continue to flourish and contribute to the intellectual and cultural advancement of society.

Third, the harmonisation of statutory defences against economic and moral rights infringements would help to promote a more doctrinally coherent copyright regime that integrates moral rights protection more seamlessly into the exclusions from liability.[55] The key advantage of an integrated copyright and moral rights regime is greater consistency in the shelter that it seeks to provide

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[54] See Albert Fang, "Let Digital Technology Lay the Moral Right of Integrity to Rest" (2011) 26 *Connecticut Journal of International Law* 457-475, pp. 457 and 475, who suggests that the moral right of integrity is swiftly becoming obsolete in the digital age – an age where available software programs have rendered art, especially digital art, "more malleable than clay". He argues against having a strong moral rights regime, which in his view would only stifle creativity and chill the modern development of art.

[55] See Gendreau, *Digital Technology and Copyright*, *supra* n. 35, p. 220, who cites arguments in support of recognising a fair dealing defence for moral rights infringement, suggesting that a practice that "establishes itself over time" would be preferable to having special provisions on moral rights for the digital environment. Having an "established practice" in place where moral rights and economic rights are integrated as part of a coherent whole would also help to guard against fragmentation of the copyright system.

to producers of derivative works. Integrating moral rights within the protective ambit offered by the fair dealing umbrella would imbue the Canadian *Copyright Act* with a stronger sense of internal compatibility, cogency and conceptual defensibility. The role of the statutory defences can also be clarified if their respective ambits are delineated with precision within the scheme of the Act. The internal consistency of statutory copyright provisions would have an additional practical advantage of communicating information more effectively to the public, thereby serving as a more useful and comprehensible guide to behaviour by users in the creative and expressive industries.

A possible counter-argument that might be raised against the integration of defences to copyright and moral rights infringement is that certain forms of use (such as parodies and user-generated content) may severely damage the original author's reputation, even though their purpose may, broadly speaking, be in the public interest. For example, a parodist citing fair dealing who replaces a cartoon character in a famous comic strip cover with a lurid or salacious representation might tarnish the wholesome character of the comic artist's original *oeuvre*. In other scenarios, famous artistic works might be modified through the addition of images bearing the likeness of politicians for the purpose of making comments (usually of a critical nature) on the politicians concerned. In a well-known Belgian case, *Deckmyn and Vrijheidsfonds v Vandersteen* ("*Deckmyn*"),[56] the cover of a comic book titled "De Wilde Weldoener" ("The Wild Benefactor") was altered by a parodist, who replaced the original image of a man (in a bowler hat and scattering money) with the face of the mayor of Ghent. The purpose of the modification was to make a political statement about the mayor's alleged wastefulness in the use of public funds. Critics of the integration

[56] Case C201/13, [2014] ECDR 21.

argument might try to suggest that moral rights target a different kind of injury to the author (as opposed to economic infringement), and that broadening the umbrella of fair dealing too far might severely compromise the interests of authors.

It is submitted, however, that the concerns outlined in the above paragraph can be overcome through a proper construction of fair dealing. It is *not* the contention of this article that moral rights and economic rights should be merged. Indeed, moral rights and economic rights target different forms of injury and it is possible for one set of rights to be infringed but not the other.[57] Rather, it is the *interface* between the statutory defences to both sets of rights that should be delineated with greater clarity. The paramount feature of an integrated approach is that the user's act must be *fair* in order to be covered by a statutory defence to copyright infringement. In considering whether a parody or other form of derivative expression falls within the ambit of a statutory defence, it is necessary to strike an equitable balance between the rights owner and the derivative user. In this regard, not all parodies or UGC would (or should) qualify for fair dealing. The nature of the parody, the amount of material that was "borrowed" from the original, and the impact of the parody on the original work are all factors that are pertinent in determining if the use is fair.[58] In particular, it

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[57] For instance, the unauthorised reproduction and dissemination of an author's work in its entirety with appropriate attribution would likely constitute economic infringement, but not moral rights infringement. Conversely, altering an artistic work or removing the author's name from the work might constitute moral rights infringement but not economic infringement if no copying of the work is done, or if the user has been assigned the economic rights to the work or is otherwise licensed to use the work for economic purposes.

[58] See *Fraser-Woodward Ltd v BBC*, [2005] FSR 36, in which Mann J outlined several requirements that must be met in order for a use to be fair, including the motives of the user, the amount of work used, and the overall / general purpose of the use. See also the recent Canadian case of *United Airlines, Inc. v Jeremy Cooperstock*, (2017) FC 616, para. [141], where it was held that parody, as an aspect of free speech, is subject to restrictions. On the facts, it was held that the questionable purpose, amount and effect of the dealing militated against a finding that the use in question was fair.

should be borne in mind that parodists who, without due cause, insert politically or religiously offensive material into the work of others or who exploit unnecessarily large amounts of the author's original content in making their statement would have significant difficulty in demonstrating that their use was fair. On the flip side of the coin, it must be borne in mind as well that simply because an author objects to a parody (or other use) of a work does not mean that the moral right of integrity has necessarily been violated. In both the UK and Canada, there is a general requirement to demonstrate that the unauthorised treatment of the work has resulted in prejudice to the honour or reputation of the aggrieved author claiming that their moral right of integrity has been infringed. This prejudice requirement has generally been interpreted strictly by courts in the UK and Canada, with several leading cases suggesting that an objective test will be applied in such cases, based on the perception of the author's standing in the community by right-thinking members of society.[59]

A further issue that should be considered is whether streamlining the statutory defences to provide protection against moral rights infringements would result in a reading down or narrowing of the fair dealing provisions. It is submitted that this need not necessarily be the case. By stipulating the specific conditions under which fair dealing is available as a defence (i.e. against both economic and moral rights claims), a properly constructed copyright regime can foster a more equitable balance of power between owners and users of protected

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[59] See for instance *Pasterfield v Denham*, [1999] FSR 168, *Confetti Records v Warner Music UK Ltd*, [2003] EMLR (35) 790, *Harrison v Harrison*, [2010] FSR 25, and *Tidy v Trustees of the National History Museum*, (1998) 39 IPR 501 in the UK. See also *Prise de Parole Inc v Guérin*, (1995) 66 CPR (3d) 257 (Federal Court Trial Division), *Boudreau v Lin*, (1997) 150 DLR (4th) 324 (Ontario Court of Justice), *Patsalas v National Ballet of Canada*, (1986) 13 CPR (3d) 522 (Ontario High Court of Justice) and *Wiseau Studio et al. v Richard Harper*, 2017 ONSC 6535 in Canada. The oft-cited Canadian case of *Snow v Eaton Centre Ltd*, (1982) 70 CPR (2d) 105 (Ontario High Court of Justice), which resulted in a finding of infringement to the moral right of integrity, was decided before the 1985 amendments to the Canadian *Copyright Act*.

content. These conditions need not necessarily require *full* or *exact* compliance with the moral right(s) in question, if the use in question is justified by strong public interest considerations. For example, the fair dealing defence for news reporting can be modified to provide protection against both economic and moral rights infringement (broadly defined), as long as reasonable efforts have been made to acknowledge the author or source of the material. This would give reporters some degree of flexibility in modifying the format of the work for the purpose of broadcasting or display.

Similarly, the parody and satire clause in section 29 of the *Copyright Act* of Canada can be re-configured as a separate statutory provision to extend its protection against moral rights claims through textual amendments such as:

> Fair dealing for the purpose of parody, satire or pastiche does not infringe copyright or *moral rights* if the use in question does not take unreasonable advantage of the work or its author, or otherwise introduce material that is contrary to public order and morality.

Such a provision would arguably be broad enough to permit creative parodic expression that might not be entirely flattering to the work (or its author), whilst at the same time ensuring that a system of checks and balances can be put in place to protect the author's work against outrageous, defamatory, untrue, outlandish or scandalous mutilations that are not justified by the parodist's intended message or purpose. In this regard, the fairness considerations that are embedded in the process of evaluating whether a derivative work is permissible can be tailored in a flexible manner to suit the specific purpose for which the user is claiming protection. This is a context-specific question: what is fair in the case of a parody (where some alteration is expected) might not be so in the case of news reporting (where what is expected is the accurate presentation of facts).

What is essential, therefore, is for fair dealing to be tempered by a requirement of reasonableness that takes into account the legitimate interests of the author, in line with the three-step test for general copyright exceptions mandated by the international conventions.[60] An integrated approach to copyright and moral rights defences would merely recognise, in a more explicit and harmonised form, the current disparate interests that are protected under different segments of the statutory copyright framework, and would not necessarily lead to more onerous evidentiary burdens on users seeking to demonstrate that their use is fair. Under a "moral" copyright regime, the statutory defences for fair dealing would accommodate *only those forms of use* that are *justified* by the public interest *and* that are respectful, *within reason*, of the author's personal interests.

The above approach is consistent with the interpretation adopted by the WTO Panel in *United States – Section 110(5) of the US Copyright Act*, where it was held that "legitimate interests", in the context of the three-part test, involves a consideration of "justifiable interests" in light of the objectives underlying the protection of exclusive rights.[61] In this vein, a parody that takes unfair advantage

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[60] Central to the process of determining whether a use, in general, is "fair", is the "three-step" test for copyright defences found in the Article 9(2) of the *Berne Convention for the Protection of Literary and Artistic Works* as well as Article 5.5 of the *Information Society Directive* (*Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001*). The three-step test has also been incorporated in a modified form into Article 13 of the TRIPS Agreement. It is important to note that the three-step test prescribes, as an overriding consideration, that the use in question must not unreasonably prejudice the legitimate interests of the author or conflict with the author's normal exploitation of the work. The idea of "balance" is therefore a central part of any attempt to interpret the scope of the fair dealing provisions within the larger context of Copyright legislation. See also Paul Torremans, *Holyoak & Torremans Intellectual Property Law* 8th ed. (New York: OUP, 2016), p. 295.

[61] See Report of the Panel, *United States – Section 110(5) of the US Copyright Act* (Panel Report, WT/DS160/R, circulated 15 June 2000), para. 6.224, where the WTO Panel expressed the view that whether an interest is "justifiable" is to be determined in light of the objectives underlying the protection of exclusive rights.

of an author's work would arguably *not* be eligible for protection under the statutory defence as it currently stands (since it fails the fairness test), and would consequently leave open the possibility of a moral rights action by the aggrieved author, provided that the author can satisfactorily demonstrate the required prejudice to their honour or reputation. Clearer coordination between the statutory defences to the two sets of rights can, however, be achieved through the incorporation of an appropriate cross-referencing provision to include protection against moral rights claims, such as a qualifying clause in each statutory defence or fair dealing provision that clearly prescribes the conditions for its availability. The mechanics of inserting cross-referencing provisions into the current statutory framework of the *Copyright Act* of Canada will be explored further in the next section.

4 Possible legislative responses to the "copyright conundrum"

In view of the normative arguments articulated in the preceding section, it is submitted that the protection of moral rights can be more effectively integrated into the copyright framework through legislative reform which seeks to bridge the gap between the statutory treatment of fair dealing and moral rights. These legislative amendments might take the form of a qualifying provision inserted into the statutory defences to copyright infringement stipulating the conditions under which the defences are available and extending their applicability to moral rights actions as well. In order to streamline the moral rights and economic rights regimes, the statutory defences should expressly clarify what types of moral rights have to be respected in order to qualify for the defence in question. That would enable the two regimes to operate in tandem within a unified framework.

Before exploring the possible strategies for ameliorating the perceived tensions between the protection of moral rights and economic rights in Canadian copyright law, it is first appropriate to examine the key statutory provisions in fuller detail. The principal sections that govern moral rights in the Canadian *Copyright Act* are sections 14.1 and 14.2 (with corresponding sections for performers in sections 17.1 and 17.2), which begin by outlining an author's right to the integrity of the work, right to be associated with the work, and the right to remain anonymous. The ensuing sections relate to issues such as waiver (section 14.1 (2), (3) and (4)) and the term of protection for moral rights (section 14.2). The above sections are silent on whether there are certain fair dealing activities which might be exonerated from liability for moral rights infringement. Interestingly, sections 64(2) and 64.1(1) of the *Copyright Act* provide, under prescribed circumstances, for the non-infringement of copyright and moral rights with respect to the application of *industrial designs* to certain useful articles or the application of useful article features that are dictated solely by the utilitarian function of the articles. Nevertheless, sections 64(2) and 64.1(1) relate more to products of industrial or commercial manufacture produced in quantities of more than fifty, or applications involving utilitarian processes, features, functions or methods of manufacture, and do not apply to works of art, music or literature in general. In short, the Act does not contain a general section which sets out a list of defences, limitations or exceptions to the moral rights adumbrated in sections 14.1 and 17.1.

It ought to be pointed out that the key moral rights provisions in Canada's *Copyright Act*, sections 14.1 and 17.1, are subject to a qualifying provision in section 28.2. However, section 28.2 does not contain a general list of defences to the infringement of moral rights, which is defined in section 28.1 as "[a]ny act or omission that is contrary to any of the moral rights" of the relevant author or performer that is done without the author or performer's consent. Rather, section

28.2 places limits on what constitutes actionable prejudice of an author or performer's honour or reputation. Except in the case of a painting, sculpture or engraving, where distortion of the work is presumed to result in prejudice, an author is required, in all other cases, to demonstrate that such prejudice has indeed occurred. Section 28.2 is silent on whether an act of fair dealing that is protected under section 29 of the *Copyright Act* could incur liability for moral rights infringement. The text, as it stands, appears to leave open the possibility that acts of fair dealing could nevertheless be found to be infringing of moral rights if the acts in question cause actionable prejudice to the author's reputation or connection with the work.

In contrast, sections 79 and 81 of the UK's *CDPA*, which respectively relate to the moral rights of attribution (right to be identified as author or director) and integrity,[62] contain a list of exceptions to moral rights, including provisions exonerating specified acts that would not infringe copyright. Hence, adapting or using a work for the purpose of reporting current events might potentially not only be exonerated from liability for economic infringement, but *also* receive protection from moral rights infringement by virtue of sections 79 and 81.[63] In addition, sections 79 and 81 exclude from the ambit of moral rights protection certain classes of work in which such rights would not vest, such as computer-generated works,[64] and works that are made for the purpose of publication in periodicals or collective works of reference.[65]

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62 For a leading UK decision on the criteria for determining prejudice to an author's reputation in the context of asserting the moral right to integrity, see the case of *Confetti Records v Warner Music UK Ltd*, [2003] EWCh 1274 (Ch).

63 It is important to note, however, that section 79(4)(a) of the CDPA expressly refers to "fair dealing" under section 30 for the purpose of reporting current events through certain media, while section 81(3) of the same Act merely refers to "any work made for the purpose of reporting current events", without explicitly mentioning fair dealing.

64 See for instance section 81(2) of the *CDPA*.

65 See section 81(4) of the *CDPA*.

This presence of an exceptions clause for moral rights in the copyright legislation of the UK stands in sharp contradistinction to the statutory framework in Canada. By setting out a number of situations where moral rights are *not* infringed, even though the underlying acts complained of might appear to interfere with the personality interests of the author, sections 79 and 81 of the UK statute furnish a structurally logical framework with which to delineate more precisely the contours of acceptable use by third parties. It is worth noting that sections 79 and 81 follow immediately from the defining provisions on moral rights (sections 77 and 78 on the right to be identified as author or director, and section 80 on the right to object to derogatory treatment of work, respectively), thereby adhering to an organisational sequence that mirrors the corresponding provisions on economic infringement and fair dealing. The inclusion of an exceptions provision for moral rights in the UK statute plays an important role in streamlining and harmonising the relationship between the economic and personality aspects of copyright material as they relate to the activities of users, as part of a holistic and coherent statutory framework for the determination of liability.

This article proposes that the UK statutory framework can provide, to some degree, useful guidance to Canada in streamlining its approaches to the protection of economic and moral rights under its copyright statute. However, the UK model is by no means a panacea. Only a relatively narrow class of fair dealing activity appears to be covered by the defences to moral rights infringement in the UK.[66] It was not until fairly recently that a transformative use exception was incorporated into the CDPA to protect works such as caricatures,

[66] See Bently & Sherman, *Intellectual Property Law*, *supra* n. 28, p. 289.

parodies and pastiches,[67] following the recommendations of the Gowers Review[68] and the Hargreaves Review of Intellectual Property.[69] Nevertheless, even with the new addition, the cross-linkages between the moral rights provisions and the fair dealing provisions in the CDPA are somewhat inconsistent – section 79 contains a specific sub-clause which expressly refers to *fair dealing* for the purpose of reporting current events,[70] while section 81 mentions works made for reporting current events without explicitly citing fair dealing.[71] It is therefore not entirely clear whether the use in question has to be fair in order to qualify for the news reporting exception under section 81.

The situation is perhaps compounded even further by the scope of the "new" exception for parodies and caricatures[72] in the CDPA – section 30A –

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67 See section 30A(1) of the *CDPA,* added by The *Copyright and Rights in Performances (Quotation and Parody) Regulations* 2014. The new "parodies" exception in the CDPA appears to take advantage of the flexibilities and freedoms allowed by Art 5(3)(k) of the *Information Society Directive*, *supra* n. 60. The UK provision, however, contains a statutory requirement of "fairness".

68 See recommendations 11 and 12 of the 'Gowers Review of Intellectual Property' (December 2006) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228849/0118404830.pdf accessed 18 June 2018.

69 See Ian Hargreaves, *Digital Opportunity: A Review of Intellectual Property and Growth – An Independent Report by Professor Ian Hargreaves*, (May 2011), p. 49-51, particularly paragraphs 5.32 and 5.35.

70 See section 79(4)(a) of the CDPA, which makes explicit reference to "section 30 (fair dealing for certain purposes), so far as it relates to the reporting of current events by means of a sound recording, film, broadcast or cable programme".

71 Section 81(3) of the CDPA merely states that: "The right does not apply in relation to any work made for the purpose of reporting current events." There is no mention of the section 30 provision on fair dealing for criticism, review and news reporting.

72 It is perhaps worthy of note that the CDPA does not provide a definition of the terms "parody", "caricature" or "pastiche". However, the meaning of the term "parody" has been considered by the European Court of Justice in the Belgian case discussed in the preceding section, *Deckmyn*, *supra* n. 56, in which the court largely endorsed the advisory opinion of Advocate-General Cruz Villalón. It agreed with the Advocate-General's view that while "parody" has a relatively broad scope of flexibility vis-à-vis its application, a successful parody (in the European context) must be shown to have both a structural component (addition of original material to a work so that the two are not confused by the public) and a

which applies only to economic rights.[73] The text of section 30A(1) reads: "Fair dealing with a work for the purposes of caricature, parody or pastiche does not infringe *copyright* in the work" (emphasis added). The limited scope of the UK parodies exception would not appear to provide any greater shelter than the equivalent fair dealing provision for parodies in the Canadian legislation. Considerable tensions remain unresolved in the UK framework – tensions that might be instructive in shaping future reform efforts to harmonise the protection of moral rights and freedom of expression in both the UK and Canada. The qualifying provisions in sections 79 and 81 of the CDPA do *not* currently provide general protective shelter from liability for moral rights infringement. Instead, they appear to apply selectively to activities such as news reporting,[74] leaving other forms of use (such as parodies, user-generated content, and criticism and review) outside the ambit of protection. This means that despite the presence of a qualifying clause for moral rights under the UK's copyright statute, there remains the possibility of a disjuncture between the defences to economic and moral rights infringement in some cases, and inadequate protection of expressive activity in other cases. An act of use that qualifies as fair under the economic rights regime may still offend one or more of the moral rights provisions in the CDPA.

An effective and streamlined approach would need to go further in order to harmonise the protection of expressive activities and uses under the economic and moral rights regimes of copyright law. Under a more harmoniously defined copyright framework, the scope of the fair dealing and other statutory defences should be extended to provide protection against infringements of both

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"burlesleque" intention or functional component (which may encompass but is not necessarily limited to situations of target parodies.)

[73] See Bently & Sherman, *Intellectual Property Law*, *supra* n. 28, p. 289, note 133.

[74] See sections 79(4)(a) and 81(3) of the CDPA.

economic and moral rights, while stipulating the conditions under which such protection is available. Under such a framework, section 29 of the Canadian *Copyright Act* might be modified to read: "Fair dealing for the purpose of research, private study, education, parody or satire does not infringe copyright *or moral rights if the following conditions are satisfied…*", while the first line of section 29.1 could be amended to state: "Fair dealing for the purpose of criticism or review does not infringe copyright *or moral rights* if the following are mentioned…"

It ought to be re-emphasised that the conditions for invoking a specific fair dealing defence against moral rights claims might differ from provision to provision. Hence, the reporting of current events defence might merely require that the user indicate, where reasonable, the source of the copyright material, while allowing *reasonable* modifications of the material (e.g. resizing, reformatting or truncating to fit broadcasting or publishing requirements) that might otherwise form the basis for a potential moral rights complaint. Appropriate adjustments could also be made to the other statutory defences, such as the parody or satire defences, by stipulating, for instance, that the derivative work should not contain material that is contrary to public order or morality, while at the same time extending the reach of their protective ambit to encompass moral rights claims. This would allow for reasonable parodic or satirical uses of the work to be made, even if their message may not be entirely flattering to the author concerned. It is submitted that these qualifications are already embedded to some extent in the fairness analysis; however, codifying these qualifications in statutory form would play an important role in clarifying the uncertain interface between moral rights and fair dealing, and in providing guidance and coordination to authors and users on what constitutes legally permissible derivative use of a work.

Since the fair dealing provisions in the CDPA do not provide explicit protection against moral rights infringement, similar adjustments might, under an integrated approach, have to be made to the structure of section 29 and accompanying provisions in the UK. As is the case in Canada, the UK's fair dealing provisions could be expanded to include protections against both copyright *and* moral rights infringements, provided the requisite conditions for the specific purpose (e.g. news reporting or parody) are satisfied.

A harmonised copyright regime for economic and moral rights would accordingly require the fair dealing provisions and the exceptions to moral rights to be consistent in the degree of protective shelter that they provide to the expressive activities of users. In this vein, it is recommended that the UK and Canada consider adopting a more integrated and harmonised approach to copyright and moral rights exceptions. The provisions relating to fair dealing and other statutory defences to copyright infringement should, where appropriate, be amended to incorporate references to moral rights. A clarification in this regard would enhance the doctrinal consistency of the protection of rights under a more unified copyright framework, and perhaps imbue copyright law in Canada and the UK with a stronger sense of "morality" and fairness.

5 Conclusion

The exhortation that art begets more art has probably never been more pertinent than in the current digital age. The expansive reach of the Internet has rendered media and content available to a wider audience than ever before, exposing users to an almost unimaginable onslaught of images, sounds and ideas. Since creators of intellectual content are themselves also users, the opportunities for creative expression *and* the subsequent sharing of that expression through channels of digital communication have been significantly enhanced by the pervasive reach

of information networks. It is therefore no longer appropriate for intellectual property lawyers to rely rigidly on concepts and principles that were once designed for the analogue age.

This article has sought to argue that the copyright statutes of the UK and Canada are in need of a more streamlined approach in delineating the complex interface between economic rights, moral rights and users' rights. In particular, clearer guidance needs to be provided on the extent to which protected material can be used for activities such as research, parody, news reporting and criticism under the statutory provisions which offer immunity against liability for infringement. As such, an important question for policymakers to consider is whether the scope of the statutory provisions that provide shelter from copyright infringement should be extended to protect users from liability for *moral rights* infringement. Under the current copyright regimes in Canada and the UK, the statutory framework leaves open the possibility that an act which receives protection under the umbrella of the statutory defences might still offend the moral rights of authors. This seeming inconsistency can be corrected by expanding the ambit of the fair dealing and other statutory defences to protect against infringements of *both* economic and moral rights, whilst elucidating the conditions under which such protection is available. The above measures would involve amendments to the current text of the copyright statutes in Canada and the UK.

Clarifying the interface between fair dealing and moral rights infringement would constitute an important step in defining the ambit of acceptable use in Canada and the UK, and help in the construction of a more internally consistent and doctrinally sound copyright statute in each jurisdiction. Further, a streamlined approach to economic and moral rights infringement would facilitate the re-imagination and re-interpretation of copyright works by third parties and encourage vibrant discourse among authors in the creative

industries and other users in the public at large, thereby promoting a more permissive and innovative culture of creation for the new information society.

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Biobank Governance: The Cautionary Tale of Taiwan Biobank

Shawn H.E. Harmon, Shang-Yung Yen,** Shu-Mei Tang****

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Abstract

The importance of biobanks has long been mooted, and multiple models of development and operation can be found as a result of many actors founding biobanks (from institutions starting disease-specific banks to governments starting national population biobanks). Many countries began developing biobanks in the absence of national policies to aid in that formation. Taiwan was one such country. Believing that the unique genetic makeup, distinctive lifestyles, and disease-causing factors of the Taiwanese people deserved study, Taiwan took steps to create Taiwan Biobank. This paper examines Taiwan Biobank's development and governance and focuses on two matters in particular which generated consternation during the development of Taiwan Biobank: the position adopted in relation to autonomy and ethnicity; and the approach toward transparency and internal governance. It concludes that Taiwan Biobank's conflict-ridden evolution represents a cautionary tale, an example of how not to develop a flagship resource.

Keywords
Taiwan Biobank, governance, regulation, participation, ethnicity, consent, privacy

* Honorary Fellow, University of Edinburgh, and Adjunct Professor, Dalhousie University; Deputy Director, J Kenyon Mason Institute for Medicine, Life Sciences and Law
** Professor of Graduate Institute of Management of Technology, Feng Chia University, Taiwan
*** Professor, Financial & Economic Law, Asia University, Taiwan

1 Introduction

Shortly after the sequencing of the human genome, it was claimed that medical knowledge would be accelerated by the formation of 'biobanks',[1] here defined as new repositories of human tissue and generated data (genetic, phenotypic, lifestyle, environmental, and demographic) together with associated health data (occupation, lifestyle, diet, and medical), which repositories are collective, inclusive, prospective, and purposively indeterminate.[2] It was felt that large-scale longitudinal investigations into the interaction between common disease genes and environmental factors would be an optimal way to overcome common diseases and improve health.[3]

Therefore, many countries began developing national policies to aid in the formation of biobanks, or began developing biobanks in the absence of policies.[4] Taiwan fell into the latter category. Believing that the unique genetic makeup, distinctive lifestyles, and disease-causing factors of the Taiwanese people deserved specific study,[5] Taiwan took steps to create a national biobank.

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1 Brigitte Nerlich, Robert Dingwall, and David Clarke, "The Book of Life: How the Completion of the Human Genome Project was Revealed to the Public" (2002) 6 *Health* 445-469; Bernice Elger and Arthur Caplan, "Consent and Anonymization in Research Involving Biobanks" (2006) 7 *EMBO Reports* 661-666.

2 Shawn Harmon, "Semantic, Pedantic or Paradigm Shift? Recruitment, Retention and Property in Modern Population Biobanking" (2008) 16 *European J Health Law* 27-43.

3 Jonathan Marchini et al., "The Effects of Human Population Structure on Large Genetic Association Studies" (2004) 36 *Nature Genetics* 512-517.

4 Jocelyn Kaiser, "Population Databases Boom: From Iceland to the US" (2002) 298 *Science* 1158-1161.

5 Elio Riboli et al., "European Prospective Investigation into Cancer and Nutrition (EPIC): Study Populations and Data Collection" (2002) 5 *Pubic Health Nutrition* 1113-1124; Chien-Te Fan, Jui-Chu Lin and Chung-His Lee, "Taiwan Biobank: A Project Aiming to Aid Taiwan's Transition into a Biomedical Island" (2008) 9 *Pharmacogenomics* 235-246; Chen-Yang Shen, "Taiwan Biobank and Its Purposes" (2010) 4 (4) *Law & Life Science* 1-6; Akiko Nagai et al., "Overview of the BioBank Japan Project: Study Design and Profile" (2017) 27 (3) *Journal of Epidemiology* S2-S8; Chien-Te Fan, Tzu-Hsun Hung, and Chan-Kun Yeh, "Taiwan Regulation of Biobanks" (2015) 43 *Journal of Law, Medicine & Ethics* 816-826.

Proponents considered that, if the genes involved in common diseases could be defined and their risk quantified, new and improved treatments could be developed for Taiwan. Like many such banks, then, Taiwan Biobank's conception was an exercise in promise; a leap into the scientific and policy unknown supported by claims that risks would be offset by advances in health and by valuable collaborations and commercial returns, the latter of which was not always clearly conveyed to or understood by the public.[6]

This paper examines the establishment, development, and governance of Taiwan Biobank. First, it reviews the historical evolution of Taiwan Biobank. Secondly, it examines two areas that generated significant controversy in this evolution, namely, positions adopted in relation to autonomy and ethnicity, and approaches in relation to transparency and internal governance. We propose that Taiwan Biobank's problematic evolution represents a cautionary tale, highlighting pitfalls to avoid in developing a national flagship resource.

2 The Development of Taiwan Biobank

2.1 Biotechnology in the Innovation Agenda (1990s-2005)

Like many countries, Taiwan adopted a policy of sci-tech innovation as a means of achieving sustainable development and international competitiveness. Health technology innovation and the establishment of biobank infrastructure resources featured heavily in this policy:[7]

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[6] Jon Merz, Glenn McGee, and Pamela Sankar, "'Iceland Inc.'?: On the ethics of commercial population genomics" (2004) 58 *Social Science & Medicine* 1201-1209.

[7] Kuei-Tien Chou, "Conflicts of Technology Policy and Governance Paradigm in a Knowledge-Based Economy: A Case Analysis of the Construction of the Taiwan Biobank" (2007) 43 *Issues & Studies* 97-130.

- 1997: The Science and Technology Advisory Group (STAG) of the Executive Yuan held its first strategic review meeting on biotech policy, intending to promote national projects in genetic medicine and public health technology. Consequent projects included the National Genetic Medicine and the National Pharmacy and Biotech Projects.
- 1998: A second strategic review meeting resulted in the National Development Fund investing NT$20 billion to support the development of the biotech industry, the emphasis being on technology innovation projects, strategic alliances, and enterprise creation, including the investment by state-owned enterprises in the biotech industry.
- 1999: The Luchu Science Park was redeveloped with a Biomedicine District.
- 2001: Multiple regional 'Biotech Hallways' were created.
- 2002: The Academia Sinica established the Taiwan Han Chinese Cell and Genome Bank Project, which relied on data collected randomly through the computerised household registration system.[8]
- 2004: The STAG argued that Taiwan should become an 'island of biomedical technology', and made a number of related recommendations.[9]

In response to the STAG, the Taiwanese Government launched the Biomedical Technology Island Plan 2005,[10] which comprised three main projects: the

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[8] Editorial, "Academic Meeting Passed Genetic Establishment: Experts Consultation" (United Evening News, 4 July 2000); Yuan-Tsong Chen, "Super Task: Disease Genetic Decoding Project – Everyone Together" (China Times, 27 July 2003).

[9] STAG, *Policy Statement on Constructing an Island of Biomedical Technology* (2004).

[10] Taiwan Ministry of Economic Affairs, *Report: Biomedical Technology Island Plan to Spur Investments of NT$40 Billion over 5 Years* (2005).

National Health Information Infrastructure Project; the Taiwan Clinical Services Project; and Taiwan Biobank. With respect to the latter, the National Science Council (NSC), predecessor to the Ministry of Science and Technology, asked Academia Sinica's Institute of Biomedical Sciences (IBS) to plan a large-scale population biobank that would support biotechnology development and medical research in Taiwan.[11]

Adopting UK Biobank as its model, the IBS conceived of Taiwan Biobank, which would collect biological samples (blood, plasma, urine, and tissue) from some 200,000 healthy participants aged 30-70, and link those samples/data with their lifestyle, family history, and health information in an effort to determine the effects of genetic and environmental factors and interactions on common diseases, and to develop personalised medicine.[12] Objectives included: determining the prevalence of specific genes and variations in the population; simplifying the procedure for searching for biological marker molecules; improving research into new curative medicines (especially for Taiwan-prevalent diseases); and simplifying disease-prevention and improving public health and hygiene decisions.[13] Importantly, both Taiwan Biobank and its Pilot

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11 Don Chalmers et al., "Has the Biobank Bubble Burst? Withstanding the Challenges for Sustainable Biobanking in the Digital Era' (2016) 17 *BMC Medical Ethics* 39.

12 Yuan-Tsong Chen, *Report: The Cohort Study of the Establishment of Taiwan Biobank and the Multiple Risk Factors for Multiple Diseases* (National Science Council: NSC 94-3112-B-001-017, 2007); Yuan-Tsong Chen, Chen-Yang Shen et al, *Report: The Preliminary Project of the Establish of Taiwan Biobank* (Department of Health: DOH95-TD-M-113-B001, 2006); Yuan-Tsong Chen and Chen-Yang Shen, "Be Careful in Designing Biobank" (China Times, 2 April 2006).

13 Chia-Hao Ou and Chen-Yang Shen, "The Taiwan Biobank Project: For the Health of Future Generations" (2006) *Academia Sinica E-News* No. 12; Huan-Cheng Chang et al., "Biological Risk Factors Relevant to Chronic Disease in Three Ethnic Groups in Taiwan: Results from Li-Shin Outreaching Neighbourhood Screening" (2008) 18 *Ethnicity & Disease* 228-234; Chin-Hsiao Tseng, "The ethnicity of Hakka Is associated with a Higher Risk of Hypertension Than Fukienese in Taiwanese Type 2 Diabetic Patients" (2008) 22 *Journal of Human Hypertension* 370-372; Hsin-Wen Lai et al., "Ethnic-specific Prevalence of Hepatitis B/C Virus Infection in Pin-Jen, Taiwan' (2009) 19 *Ethnicity & Disease* 384-389.

Study was structured around ethnicity;[14] it aimed to build the resource by collecting samples from four target groups – the Hakka,[15] the Minnan,[16] the Han,[17] and Aboriginals.[18]

2.2 Controversy and ethnicity during the Pilot Study (2003-2007)

Prior to commencement, Academia Sinica was tasked with performing a Pilot Study to test the scientific/technical feasibility of Taiwan Biobank. It had a target of 1,000 participants from three geographic regions: Miaoli (primarily Hakka); Chiayi (primarily Minnan); and Hualien (primarily Aboriginal). The ethnic foundation for the Pilot Study was not accompanied by any detailed or openly-discussed or accepted definition of each group, nor indeed by any explanation as

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[14] Chou, *supra* n. 7. The intention to create a "racial genetic database" like that in Iceland is reported.

[15] The Hakka is an immigrant group from Guangdong, Mainland China. They arrived in Taiwan in the late Ming and early Qing dynasties. See Hsin-Huang Hsiao and Khay Thiong Lim, "The Formation and Limitation of Hakka Identity in Southeast Asia" (2007) 4 *Taiwan Journal of Southeast Asian Studies* 3-28; Fu-Chang Wang, 'The Evolution of Attitude Toward Ethnic Categories and Assimilation in Taiwan', presented at the Annual Conference of Taiwanese Sociological Association, Taiwan, Academia Sinica, 2008. Changing ethnic classifications and rising inter-ethnic marriage have resulted in the Hakka making up approximately 13.5% of the Taiwanese population: Yu-yueh Tsai, "Geneticizing Ethnicity: A Study on the Taiwan Bio-Bank" (2010) 4 *East Asian Science, Technology & Society* 433-455.

[16] The Minnan is an immigrant group from Fujian, Mainland China. They arrived in Taiwan in the late Ming and early Qing dynasties, and, according to the national Hakka Committee, the Minnan constitute approximately 67.5% of the Taiwanese population: Hakka Committee of Executive Yuan, *Report on the National Population-Based Survey (2010-2011)*, available at http://www.hakka.gov.tw/dl.asp?fileName=1521131271.pdf (accessed 20 November 2014).

[17] The Han are immigrants who fled from Mainland China in the mid-20th century.

[18] The Aboriginals are Taiwan's earliest inhabitants. In the last four centuries, they have been forced into the mountainous and less developed eastern regions of the island. In addition to having socio-cultural structures and living habits that are generally distinct from the Han-dominated mainstream, their epidemiological history and biological traits are seen as unique.

to what or who counted as Aboriginal.[19] Nonetheless, the Pilot Study Protocol was approved by Academia Sinica's Institutional Review Board (IRB) in 2005.

The process leading up to (and beyond) this approval has been described as a 'development-first' approach with decisions being made almost exclusively by policy and science elites in closed processes.[20] Moreover, these decisions were sometimes based on misinterpretations of the course adopted in other countries, and they persistently exemplified either simplistic understandings of risk, or a complete disregard for the associated risks.[21] And while there was some effort to encourage scientific discourses, there was no effort to be transparent or to undertake any public engagement. Indeed, it has been argued that the complexity of the project together with the exclusivity of its development hindered both public understanding and public debate.[22] In short, there was no interest in social supervision.

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19 It is no simple task to identify indigenous Taiwanese, or to differentiate them in medically meaningful ways from other historic communities, a difficulty compounded by the fact that people frequently identify with, and claim membership in, more than one social group. A 2004 survey demonstrated that, when presented with multiple choices, 73.3% of respondents self-identified as Minnan Han, 13.5% as Hakka Han, 8.0% as Mainlander Han, 1.9% as Aboriginals, and 3.3% as Taiwanese: Hakka Committee of Executive Yuan, *Report on the National Population-Based Survey* (2004). In a 2010-2011 survey, 67.5% of respondents self-identified as Minnan Han, 13.6% as Hakka Han, 7.1% as Mainlander Han, 1.8% as Aboriginals, and 7.5% as Taiwanese: Hakka Committee of Executive Yuan, *Report on the National Population-Based Survey* (2011). In the most recent survey, 66.4% of respondents self-identified as Minnan Han, 13.5% as Hakka Han, 7.0% as Mainlander Han, 1.8% as Aboriginals, and 8.3% as Taiwanese: Hakka Committee of Executive Yuan, *Report on the National Population-Based Survey* (2014).

20 Chou, *supra* n. 7.

21 Hung-En Liu, "Legislative Policy Criticisms and Analyses of Icelandic Civil Medical and Genetic Database Establishment" (2004) 54 *Taipei University Law Review* 45-99; Hung-En Liu, "Public Trust, Commercialization, and Benefit Sharing in Biobanking" (2005) 57 *Taipei University Law Review* 367-368.

22 Chou, *supra* n. 7; Ching-Yi Liu, "How Come There Is a Taiwan Biobank?" (Judicial Reform Foundation, 15 February 2006), available at https://www.jrf.org.tw/newjrf/index_new2014.asp?id=793 (accessed 2 August 2018).

Eventually, and primarily after the academic community began to complain, the Pilot Study met with a maelstrom of public criticism, exemplified by a commentary in the *China Times* which raised questions about consent, confidentiality, and benefit-sharing, and which demanded that the plans for Taiwan Biobank be made public.[23] One of the issues that was persistently raised was that of ethnicity. Given the poor record of Aboriginal treatment, the fragility of human subject protections, the circulation of stories about failures to meet consent standards,[24] and the general absence of benefit-sharing models in Taiwan,[25] the Taiwan Association for Human Rights made a formal request (in

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[23] Liu, *supra n.* 22. This publication was book-ended by academic criticism of the policymaking process leading to the conception of Taiwan Biobank: Hung-En Liu, "Legislative Policy Criticisms and Analysis of Icelandic Civil Medical and Genetic Database Establishment" (2004) 54 *Taipei University Law Review* 45-99; Kuei-Tien Chou, "Biomedtech Island Project and Risk Governance: Paradigm Conflicts within a Hidden and Delayed High-Tech Risk Society" (2007) 58 *Soziale Welt* 123-143. With respect to other grounds of concern, previous and ongoing incidents served to erode public trust; confidential personal information had been leaked by/from a number of information-holders to a variety of inappropriate parties, some of whom used it to commit fraud: Taiwan Association of Human Rights, "Personal Information Divulgence Cases of 2002" (2002), available at https://www.tahr.org.tw/news/87 (accessed 2 August 2018). And a new law requiring citizens to provide fingerprints before renewing their national ID cards was controversially passed, and then subsequently declared unconstitutional as an infringement of informational privacy: Judicial Yuan Interpretation No. 603.

[24] Many were expressed, but note: Chao-Chun Wang, "Taiwan Biobank Blood Sampling Without Permission? Taiwan Association for Human Rights Calls for a Stop"(China Times, 23 January 2006); Zong-You Lee, "Doubts Over Human Rights Violations Remain: Taiwan Biobank Project Suck" (China Times, 24 July 2006); Chao-Chun Wang, "No One Understood the Reason for Blood Sampling in the Tribe" (China Times, 23 January 2006); Chao-Chun Wang, Chao-Chun Wang, et al " Academic Sinica Might Pry 200,000 Participants Through Blood Sampling" (China Times, 23 January 2006). They addressed a number of ethical issues.

[25] It took some time before researchers even acknowledged the contribution that indigenous peoples have made to research. Eventually, the propriety (and difficulty) of benefiting indigenous peoples has been noted, and a range of international instruments have been adopted to facilitate more equitable treatment: Francesco Mauro and Preston Hardison, "Traditional Knowledge of Indigenous and Local Communities: International Debate and Policy Initiatives" (2002) 10 *Ecological Applications* 1263-1269. Intellectual developments on this issue have progressed largely in tandem with work around engagement: Katy Moran,

July 2006) that Academia Sinica publish its project processes online so as to improve transparency.[26] That request was refused,[27] and the Pilot Study continued unabated.[28]

2.3 Law-making, further controversy and recruitment (2007-2023)

By 2007, and despite social outcry and non-engagement with social and ethical matters, the Pilot Study was viewed as having demonstrated feasibility. Thus, the Ministry of Health and Welfare (MOHW) directed the IBS to commence a Preparatory Study which would recruit 15,000 participants aged 30-70. The Preparatory Study dropped the overt emphasis on ethnic groups, but focused on Hakka, Minnan, and Aboriginal regions for its recruitment. As the study progressed, the number of participants was reduced to 8,000. During this time, the Executive Yuan took steps to legislate in the biobank setting so as to bring its regulatory environment more in line with international standards, adopting the *Human Biobank Management Act 2010* (HBMA 2010),[29] amending the *Personal*

"Bioprospecting: Lessons from Benefit-Sharing Experiences" (2000) 2 *International Journal of Biotechnology* 132-144; Paul Cox, "Ensuring Equitable Benefits: The Falealupo Covenant and the Isolation of Anti-Viral Drug Prostratin from a Samoan Medicinal Plant" (2001) 39 *Pharmaceutical Biology* 33-40. The potential of modern intellectual property systems to recognise and value indigenous contributions has been questioned: Dora Marinova and Margaret Raven, "Indigenous Knowledge and Intellectual Property: A Sustainability Agenda" (2006) 20 *Journal of Economic Surveys* 587-605.

26 Lee, *supra* n. 24.

27 Chou, *supra* n. 7.

28 The Pilot Study was tasked with conducting a test of the scientific/technical feasibility of Taiwan Biobank, but it failed to properly consult or authentically engage with the public, including the ethnic communities in Taiwan. See Shu-Mei Tang, "The Disputes of Establishing Taiwan Biobank" (2011) *The Legal Risk of the Emerging Biotechnology* 443-493.

29 See http://law.moj.gov.tw/Eng/LawClass/LawAll.aspx?PCode=L0020164.

Information Protection Act 2010,[30] and adopting the *Human Subjects Research Act 2011* (HSRA 2011),[31] more on which infra.

In October 2012, Taiwan Biobank was formally approved by Academia Sinica's IRB with the aims of preventing, diagnosing and treating a wide range of serious and life-threatening common complex diseases suffered by the Taiwanese people.[32] Country-wide recruitment commenced in late 2012, and over 77,000 participants have thus far provided 30ml of blood, 20ml of urine, specified physical measures, detailed information about themselves, and have agreed to have their health followed.[33]

In accordance with Article 5 of the HBMA 2010, Taiwan Biobank established an Ethics and Governance Council (EGC) to act as an independent guardian of Taiwan Biobank's Ethics and Governance Framework, and to advise the Competent Authority (the MOHW) on its revision from time to time. Very early in the EGC's existence, however, Taiwan Biobank took steps to amend its Protocol so that, in addition to the 200,000 participants originally envisioned, it could collect 100,000 patient samples and data from Taiwan's major hospitals, and it could focus on some specifically identified conditions (e.g., breast, lung, liver, colon, and rectum cancers, strokes, chronic kidney diseases, and Alzheimer's Disease).[34] This amendment was approved post facto by the EGC (in

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30 See http://law.moj.gov.tw/Eng/LawClass/LawAll.aspx?PCode=I0050021.

31 See http://law.moj.gov.tw/Eng/LawClass/LawAll.aspx?PCode=L0020176.

32 Lilian Wu, "Taiwan Biobank helping develop therapies suitable to Taiwanese", (Focus Taiwan, 3 November 2015), available at http://focustaiwan.tw/news/asoc/201511030010.aspx (accessed 31 May 2017).

33 Taiwan Biobank, available at https://www.twbiobank.org.tw/new_web/index.php.

34 Wu, *supra* n. 32.

2012).[35] In early 2015, the MOHW recommended that hospitals share their banked resources with Taiwan Biobank.[36]

However, on 30 September 2016, Academia Sinica's IRB, which has authority to suspend or terminate *any research* that is not conducted in accordance with its requirements, or that has been associated with unexpected serious harm to subjects, held that it must approve any amendment to the Taiwan Biobank Protocol prior to its implementation. It therefore suspended Taiwan Biobank activities in response to this self-initiated inclusion of hospitals,[37] holding that Taiwan Biobank should be governed by the EGC and the IRB jointly, with the EGC responsible for 'management' and the IRB responsible for 'research'.[38] Taiwan Biobank responded that the EGC, not the IRB, is the main ethical governance structure for Taiwan Biobank.[39] The MOHW countered that the Protocol should be submitted to and confirmed by the MOHW, which is the Competent Authority under the HBMA 2010.[40]

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35 EGC, *Report on Taiwan Biobank*, 19 March 2012.

36 Editorial, "Taiwan Biobank Illegal Collection of Disease Specimens" (Next Magazine, 16 November 2016), available at https://www.nextmag.com.tw/realtimenews/news/45889342 (accessed 2 August 2018).

37 IRB, "Report on Application No. AS-IRB01-AS-IRB01-12017" (2016), available at http://irb.sinica.edu.tw/doc/bm/doc/passed/12017O1.pdf (accessed 31 May 2017).

38 IRB, "News", available at http://irb.sinica.edu.tw/doc/20161209IRBBM_clarification.pdf (accessed 31 May 2017). It argued that, under the *Human Subjects Research Act 2011*, research involves obtaining, investigating, analysing, or using human specimens or an individual person's biological, physiological, psychological, behavioural, genetic, or medical information. Prior to conducting research, the Principal Investigator must submit the protocol for review and approval by the IRB. Amendments of an approved protocol must also be submitted for IRB approval prior to implementation. The IRB has authority to suspend or terminate research that is not being conducted in accordance with its requirements.

39 Taiwan Biobank, "News", available at https://www.twbiobank.org.tw/new_web/index.php (accessed 31 May 2017).

40 Editorial, "'The Disputes of Academia Sinica and the Taiwan Biobank", (China Times, 16 November 2016), available at http://www.chinatimes.com/realtimenews/20161116001735-260405 (accessed 31 May 2017).

This dispute re-ignited criticism from a range of stakeholders, including the Taiwan Association for Human Rights,[41] and led to delays in operations. While the jurisdictional conflict has not been resolved, the IRB did issue a Certificate of Approval on 2 March 2017, which states that (1) annual progress reports should be submitted to the IRB for review, (2) progress reports submitted to the MOHW should be copied to the IRB, and (3) all adverse events must be reported promptly to the IRB. This Certificate also seems to have approved the amendments to the Protocol, opening the way for hospitals to transfer their holdings to Taiwan Biobank.

This rather tortured history highlights two matters which appear to have undermined the good governance of Taiwan Biobank in its early phases, and the general satisfaction with its development (though they cannot be said to have derailed its development). The first relates to its handling of ethnicity, including the special requirements that it imposes with respect to obtaining participant consent, and the second relates to the transparency (and accountability) around the undertaking's governance. These two matters are addressed in more detail in the sections that follow.

3 Mishandled matter 1: Foregrounding ethnicity and consent shortfalls

3.1 The problem with ethnicity

The specific identification of ethnic groups generated public controversy that was entirely predictable given the difficulties experienced by previous ethnicity-based genomic research, and the historic exploitation of Taiwanese Aboriginals.

[41] Editorial, *supra* n. 36; Wen-Tsong Chiou, "The Dilemma of Taiwan Biobank Management", available at http://www.tahr.org.tw/node/1763 (accessed 31 May 2017).

With respect to previous difficulties, international genomics collaborations have given rise to concerns about the use of 'race' or 'ethnicity' in science, and to questions about the rights of indigenous peoples (relating to benefits entitlement and ownership of knowledge). Two projects that failed to survive their controversies are:

- The Human Genome Diversity Project (1992) involved researchers from North America and Europe seeking to identify discrepancies in the genetic makeup of humans from around the world.[42] It called for samples from 500 of the world's 5,000 'races' with an emphasis on indigenous or isolated communities, including those threatened with extinction. It was felt that their isolation supported unique genetic characteristics that would contribute to understandings of the origin and migration of humans. Some 722 groups were selected (165 from Africa, 212 from Asia, 114 from South America, 101 from Oceania, 107 from North America, and 23 from Europe), but it was discontinued.
- The Genographic Project was a 5-year international collaboration intended to collect biological samples from 100,000 indigenous peoples for the purpose of identifying genetic markers to assist in genealogical and human migratory research. Approved by the University of Pennsylvania's IRB, it recruited some 18,000 participants by the time the Indigenous Peoples Council on Biocolonialism (IPCB) intervened. [43] Several Taiwanese organisations participated in its petition, arguing that the

[42] Leslie Roberts, "How to Sample the World's Genetic Diversity" (1992) 257 *Science* 1204-1205.

[43] The remit of the IPCB is to assist indigenous peoples protect their genetic resources, knowledge, culture, and rights from the negative effects of biotechnology. For more, see http://www.ipcb.org/.

> benefits to subject populations were dwarfed by the risks, which included undermining identity and long-held beliefs if it were discovered that they are from somewhere other than they believed. This could undermine claims for sovereignty, land, and other legal rights.[44] In response to pressure, including that from the UN Permanent Forum on Indigenous Issues, ethical approval for the project was revoked in 2006.

The continued use of ethnic difference in recruitment, and the influence that race has had on (genomic) science and clinical medicine, largely to negative effect, has been widely lamented.[45] A study of 11 leading journals reported that 'race' was a confusing, imprecise, and flawed concept, and that ethnicity was also ambiguous and sometimes just a synonym for race; it concluded that these concepts are heterogeneous, contingent, and locally situated, and that there is a danger that their use could harden existing classifications, making them innate, immutable, and natural.[46] Some argue that there is only one valid use of race in medical

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44 Terence Tai and Wen-Tsong Chiou, "Equality and Community in Public Deliberation: Genetic Democracy in Taiwan", in Veikko Launis and Juha Räikkä (eds.), *Genetic Democracy: Philosophical Perspectives* (Munich: Springer, 2008) 105-120.

45 Kwame McKenzie and Natasha Crowcroft, "Describing Race, Ethnicity and Culture in Medical Research" (1996) 312 *BMJ* 1054; Alan Goodman, "Why Genes Don't Count (for Racial Differences in Health)" (2000) 90 *American Journal of Public Health* 1699-1702; Editorial, "Census, Race and Science" (2000) 24 *Nature Genetics* 97-98; Editorial, "Genes, Drugs and Race" (2001) 29 *Nature Genetics* 239-240; Morris Foster and Richard Sharp, "Race, Ethnicity and Genomics: Social Classifications as Proxies of Biological Heterogeneity" (2002) 12 *Genome Research* 844-850; Michael Root, "The Use of Race in Medicine as a Proxy for Genetic Difference" (2003) 70 *Philosophy of Science* 1173-1183; David Bevan, "Genes, Race and Drugs" (2004) 27 *Clinical & Investigative Medicine* 5-6; Richard Cooper, Jay Kaufman, and Ryk Ward, "Race and Genomics" (2004) 348 *New England Journal of Medicine* 1166-1175; Editorial, "The Unexamined 'Caucasian'" (2004) 36 *Nature Genetics* 541; Troy Duster, "Race and Reification in Science" (2005) 307 *Science* 1050-1051; David Skinner, "Racialised Futures: Biologism and the Changing Politics of Identity" (2006) 36 *Social Studies of Science* 459-488; Sandra Lee, "Biobanks of a 'Racial Kind': Mining for Difference in the New Genetics" (2006) 40 *Patterns of Prejudice* 443-460.

46 Andrew Smart et al., "The Standardisation of Race and Ethnicity in Biomedical Editorials and UK Biobanks" (2008) 38 *Social Studies of Science* 407-423.

research: that relating to disparities in access to healthcare.[47] At base, while labelling and classifying are necessary social and scientific practices for ordering the world, the use of race and/or ethnicity for doing so is characterised by uncertainty because racial/ethnic categories are often negotiated (or imposed), contingent, and contextual.

The second factor dictating against use of ethnicity in Taiwan Biobank is the historical treatment of Taiwanese Aboriginals specifically. There are some 16 peoples in Taiwan who identify as Aboriginals and who have traditionally lived in close (and partially closed) social networks. Unlike Han-dominated society, their lives and activities are rooted in unique cultural and spiritual beliefs about, and relationships to, the land and other ethnic groups. And despite increasing 'Hanization', tribal unity – an intrinsic value deeply ingrained through received practices – and tribal decision-making persists, the latter being a ritualised process used to solve both every-day and extraordinary matters. And Taiwanese Aboriginals bear a long history of exploitation and mistreatment.

In the medical context, tensions have often arisen – and communication breakdowns and research failures have often been experienced – as a result of the attitudes traditionally adopted by researchers; they have too often seen themselves as bearers of knowledge and technologies that will improve the welfare of impoverished Aboriginal communities, or as extractors of knowledge from Aboriginal communities which could then be converted into more (commercially) useful forms.[48] The knowledge and values of Aboriginals have

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47 Cheryl Mwaria, "Rejecting Race as a Critical Marker of Human Biomedical Difference" (2009) 45 *Houston Law Review* 1483-1487. For an opposing view, see Michael Malinowski, "Respecting Rather than Reacting to Race in Basic Biomedical Research: A Response to Professors Caulfield and Mwaria" (2009) 45 *Houston Law Review* 1489-1492.

48 James Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998); Linda Smith, *Decolonizing Methodologies: Research and Indigenous Peoples* (London: Zed Books, 1999).

been devalued, and their economic status has been exploited to coerce cooperation. Additionally, public debates and consultations, when they have occurred, have been focused in urban areas, thereby discouraging Aboriginal involvement, or have relied on communication methods which neglect their traditional models and so marginalises them. The result is that Aboriginal rights have been threatened. The following has been reported:

> …[R]esearchers often went to tribal villages to covertly collect blood samples under the guise of 'free health checks'. A news report even quoted a villager as saying that in just one year he gave blood eight times – meaning perhaps several times in his native tongue – for 'free health checks'. Moreover, the Bureau of Health Promotion has been offering indigenous elderly two physical examinations per year for free, but, lacking a sound monitoring procedure, this well-intentioned health policy has unfortunately made examinees vulnerable to surreptitious, unconsented extraction of more blood … than is necessary for the proclaimed purposes. [E]ven today one still finds that the registration form of a major hospital in an east-coast county requires indigenous patients to fill in tribal origins of their parents and grandparents – something that is absolutely unnecessary for diagnostic or therapeutic purposes.[49]

Although there have been no formal complaints, there have been controversies. In the NSC-funded Kavalan Project, an interdisciplinary team of researchers sought to investigate migratory routes and origins of Taiwanese Kavalan. Participants provided family and ethnic histories and blood samples. A tribal elder expressed concern about the collection of blood, which is viewed as sacred,

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[49] Tai and Chiou, *supra* n. 44.

so the researchers agreed to take saliva instead, obtaining 29 samples.[50] But the Kavalan Development Association filed a formal request for the withdrawal of the project and a return of the samples, emphasising that the project should have been considered by the tribe as a whole. In April 2007, the samples were returned to the participants and they were disposed of in a public ceremony.[51] As a result of all this, some Aboriginal communities – who often see themselves as oppressed minorities – have erected moratoriums on research within their territories.[52]

3.2 The law and current state-of-play

Before the Government embarked on its legislative programme relating to biobanks, research, and privacy, the *Indigenous Peoples Basic Law 2005* (Basic Law)[53] was in effect. Article 21 stipulates that when governments or private parties engage in research in indigenous peoples' regions, they must consult with, and obtain consent from, the peoples or tribes. As such, early and ongoing engagement (or consultation) with Aboriginal groups on Taiwan Biobank's development, investigative limits, and internal practices was warranted from the outset. And given that a Community Review Board system has been in place among some Aboriginal tribes for years,[54] it is curious that neither Academia Sinica nor Taiwan Biobank operatives set the appropriate actions in motion.

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50 Amy Lemke et al., "Public and Biobank Participant Attitudes Toward Genetic Research Participation and Data Sharing" (2010) 13 *Public Health Genomics* 368-377.

51 Yuan-Xiang Liu, "Discussing Ethics of Genetic Research Involving Indigenous Peoples: Concerning the Protection of Collective Rights" (2007) 24 *Newsletter of Biotechnology & Law* 44-62; Shu-Mei Tang, Shang-Yung Yen et al., "The Protection of the Human Research Subject and Institutional Review Board" (2010) 17 *Journal of Law and Medicine* 1-12.

52 Iain Davidson-Hunt and R O'Flaherty, "Researchers, Indigenous Peoples, and Place-Based Learning Communities" (2010) 20 *Society & Natural Resources* 291-305.

53 See http://law.moj.gov.tw/Eng/LawClass/LawAll.aspx?PCode=D0130003.

54 Lemke et al., *supra* n. 50.

Quite separate from consultation, there also needs to be a mechanism for encouraging community deliberation around participation. Such would encourage Aboriginal communities to discuss concerns and desires relating to Taiwan Biobank before freeing their members to exercise their own autonomous judgment. Again, a mechanism for obtaining community consent, or of recognising and engaging with existing mechanisms, was not apparently discussed by Taiwan Biobank in the 2005-2012 period. And despite Aboriginals being a specified target group, there is little evidence of a context-specific approach to them ever having been taken.

Now the HBMA 2010 states that biobank custodians must act in compliance with medical and research ethics, including standards relating to the provision of information and the taking of consent. Article 6 states that participants shall be informed of related matters in a clearly comprehensible manner, and such matters shall be specified in an agreement of consent. Collection may only be undertaken after the participant's written consent is obtained. Article 7 describes the information which must be given to potential participants in support of consent.[55] Article 8 gives participants the right to withdraw or change the scope of their consent, although circumstances are listed when this cannot be exercised.[56]

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[55] This includes: the identities of the sample collector and the biobank operator; reasons for recruitment; the sample collection methods; potential complications and risks associated with collection; type of health information that will be accessed and linked in the future; the expected purposes and duration of use of the samples; possible impacts of genetic information derived from samples on the participant and his/her relatives or an ethnic group; other reasonable risks or inconveniences; rights and benefits under the Act together with rights that are excluded by the Act; the mechanism in place to safeguard privacy and other rights; the operator's organizational structure and operating principles; relevant regulations governing biobanks; and anticipated commercial applications.

[56] Although Article 9 empowers custodians to continue to store and use samples and data after a participant's death or incapacity, except as otherwise agreed.

The HSRA 2011 also captures biobank activities (Article 4), stipulating that all projects must be reviewed by the research entity's IRB (Article 5). Through Articles 12-14, it also requires consent to be obtained from participants, though where the HBMA 2010 allows for general consent,[57] the HSRA 2011 requires more specific consent. Article 15 states that, where the research involves indigenous people, there shall additionally be consultations to obtain the consent of the indigenous group. The Central Council of Indigenous Peoples shall determine the consultation process, as well as determine the consent needs and any uses and commercial benefits. The related *Regulations on Informed Consent for Research Involving Indigenous People*, passed on 31 December 2015, also clearly mandates group consent for Aboriginals.

All told, then, the propriety of Taiwan Biobank taking different social and cultural contexts or perspectives into account when designing its recruitment and consent strategies, processes, and forms, and making room for alternative practices around consent, is well-founded on the evidence of the Project, and well supported by the legislation that both pre-dated its activities and was adopted during them. So what has Taiwan Biobank done? Now, it has removed references to ethnic groups from its website. Further, the website offers no information as to whether Aboriginals have been or are being recruited. It shows only a single consent form, and none of the EGC Meeting Reports posted since 2015 say anything about Aboriginal recruitment or consent.

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[57] Fan, Hung and Yeh, *supra* n. 5.

4 Mishandled matter 2: No governance framework communicated

4.1 General opaqueness

The second matter highlighted by Taiwan Biobank's fraught evolution is the absence of any sound governance framework being in place during the feasibility phases, when thousands of samples were being collected. The project was centred in Academia Sinica, and the Protocol was loosely based on UK Biobank, both seemingly salutary foundations, but no identifiable governance framework seems to have been in the proponents' minds when they undertook their Pilot and Preparatory studies. Even if a framework was within their minds, no effort seems to have been made to open lines of communication with communities of interest so that they could understand it and influence what it might look like. There was no programme of wider engagement/participation, and when actors raised concerns, as described above, they appear to have been ignored, and requests for information were denied.

This absence of wide participation undermined Taiwan Biobank's ability to anticipate or respond to critical social, ethical, and legal concerns, including those around ethnicity and management. Again, the negative consequences of this opaqueness and lack of responsiveness was entirely predictable, and there existed examples of the positive outcomes of open engagement (not least in the form of UK Biobank, which Taiwan Biobank purported to draw on).[58] Already

[58] Graeme Laurie, "Role of the UK Biobank Ethics and Governance Council" (2009) 374 *Lancet* 1676; Graeme Laurie, Ann Bruce, and Catherine Lyall, "The Roles of Values and Interests in the Governance of the Life Sciences: Learning Lessons from the "Ethics+" Approach of UK Biobank" in Catherine Lyall, Theo Papaioannou and James Smith (eds.), *The Limits to Governance* (Routledge: London, 2009) 51-77; Shawn Harmon, Graeme Laurie and Gill Haddow, "Governing Risk, Engaging Publics and Engendering Trust: New Horizons for

science democracy was much debated and the notion of 'research integrity' was growing in importance in Europe. European policymaking has since advanced the idea of 'responsible research and innovation' (RRI), which evolved out of responses to previous technological mishaps, the rise of increasingly controversial innovations, and ongoing discussions about integrity in contexts of ignorance and uncertainty.[59] Indeed, genomics and biobanking was one of the instigators of RRI,[60] which emphasises reflexive, adaptive, and anticipatory governance,[61] and strives for a more democratic and equitable science/society relationship, one that is deliberative, cooperative, and inclusive.[62]

All told, RRI calls for a comprehensive approach to research whereby *all stakeholders* can, at an early stage, develop insight into the social needs to which research ought to be directed, the range of options appropriate to a problem, and the consequences of research outcomes, and use this information to design protocols, products, and services.[63] It necessitates engaging actors in

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Law and Social Science" (2013) 40 *Science and Public Policy* 25-33.

59 Barbara Adam and Chris Groves, "Futures Tended: Care and Future-Oriented Responsibility" (2011) 31 *Bulletin of Science, Technology & Society* 17-27; René von Schomberg (ed.), *Toward Responsible Research and Innovation in the ICTs and Security Technologies Fields* (Brussels: European Commission, 2011); Hilary Sutcliffe, *A Report on Responsible Research and Innovation* (2011), available at https://ec.europa.eu/research/science-society/document_library/pdf_06/rri-report-hilary-sutcliffe_en.pdf (accessed 2 August 2018).

60 Kieran O'Doherty et al., "Explosives, Genomics, and the Environment: Conducting Public Deliberation on Topics of Complex Science and Social Controversy" (2013) *SAGE Open* 1-17.

61 Richard Owen and Nicola Goldberg, "Responsible Innovation: A Pilot Study with the UK Engineering and Physical Sciences Research Council" (2010) 30 *Risk Analysis* 1699-1707; Richard Owen, Phil Macnaghten, and Jack Stilgoe, "Responsible Research and Innovation: From Science in Society to Science for Society, with Society" (2012) 39 *Science & Public Policy* 751-760; Bernd Stahl, "Responsible Research and Innovation: The Role of Privacy in an Emerging Framework" (2013) 40 *Science & Public Policy* 708-716.

62 Michiel van Oudheusden, 'Where Are The Politics in Responsible Innovation? European Governance, Technology Assessment, and Beyond' (2014) 1 *Journal of Responsible Innovation* 67-86.

63 EC Expert Group on Dealing with Ethical and Regulatory Challenges of International Biobank Research, *Biobanks for Europe: A Challenge for Governance* (Brussels: EC, 2012); EC

participatory practices at all stages of research and all levels of governance, from agenda setting, to design and implementation, to evaluation. This was obviously not done by Taiwan Biobank: it grounded its original protocol on contested identities; it refused to make public processes; it made findings of feasibility without making the targets it set; and it founded an EGC but amended its protocol on its own, and then quarrelled with other relevant regulators/overseers about its authority and procedures.

4.2 The law and current state-of-play

As noted above, confronted with ongoing social dissatisfaction – not necessarily with the bank per se, but with how it was being developed/managed – the Government embarked on an extensive legislative programme. Foremost is the HBMA 2010, which applies to all biobanks established for research (as opposed to forensic banks).[64]

With respect to stewardship or governance, Article 5 HBMA 2010 states that operators shall establish an IRB of 9-15 members to review and supervise management matters. In the case of Taiwan Biobank, this is the EGC, and it has been argued that the EGC is at the centre of Taiwan Biobank's management.[65] Operators must act in compliance with medical and research ethics (Article 6). Under Article 15, samples shall not be exported, though derived lines can be, and approval of the Competent Authority is needed. Articles 16-17 sate that research

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Expert Group on the State of the Art in Europe on Responsible Research and Innovation, *Options for Strengthening Responsible Research and Innovation* (Brussels: EC, 2013); EU, *Horizon 2020: Responsible Research and Innovation* (2017), available at http://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation (accessed 7 March 2017).

64 In addition to Taiwan Biobank, there are now some 25 biobanks approved by the MOHW.

65 Fan, Hung and Yeh, *supra* n. 5.

uses must be authorised (by the EGC), and the principles of fairness and equality shall apply to access. Under Article 4, the Competent Authority can make rules and regulations to govern matters such as user qualifications, access procedures and conditions, review standards, biobank inspections, and other matters of compliance.[66]

It is unclear at this time how close or effective the EGC's oversight of Taiwan Biobank's operations is or might become; the Protocol amendment debacle does not illustrate an openly communicative setting, either between the bank and the EGC, or with the other key actors like Academia Sinica's IRB and the MOHW. The formation of the EGC does not extinguish the IRB's role as the IRB of the host institution,[67] but the two bodies need to clarify their respective roles, and communication between them does not seem to be regularised, or even particularly positive.[68] The erasure of the ethnicity foundation without comment or development of culture-sensitive recruitment procedures is also worrying, and not at all in keeping with the openness and discursiveness currently favoured (by policy approaches like RRI).

Article 21 HBMA 2010 states that any profits received by operators that are derived from commercial use of banked materials shall be given back to the specific population groups to which the respective participants belong. It is unclear whether Taiwan Biobank has a general benefit-sharing plan in place, or, more appropriately, any specific ones relating to Aboriginal participants. Article 5 HBMA 2010 states that any matters related to the application of data contained

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66 The *Administrative Regulations on the Establishment of Human Biobanks* were adopted in 2011: http://law.moj.gov.tw/Eng/LawClass/LawAll.aspx?PCode=L0020173.

67 Chien-Te Fan and Wan-Hsuan Lin, "The Relationship of Human Biobank Management Act and Human Subject Research Act in Taiwan" (2013) 215 *Taiwan Law Review* 5-16.

68 Shu-Mei Tang and Shang-Yung Yen, "Development of Taiwan Biobank: Ethical, Legal, and Social Implications (ELSI)" (2017) 6 *Bio-Industry Technology Management Review* 71-90.

in the bank shall be drafted as a plan and submitted to the IRB for approval, after which it must be submitted to the Competent Authority who will invite legal experts, social workers, and other disinterested community members to review it before final approval. Presumably such a plan has been submitted to the MOHW, though this is not clear.

Any loss or theft of, or tampering with, samples, data, or information must be investigated immediately and reported to both the Competent Authority and to affected participants (Article 11). Articles 12-13 state that individuals engaged in collecting, processing, storing, or using samples and data shall maintain confidences, and the operator shall disclose rules on information management, which must be submitted to the Competent Authority after approval by the REC. In support of this, the *Human Biobank Information Security Regulations 2010* were adopted. The Regulations focus on training, outsourcing, security systems and linkage management, and access to systems, but it is argued that uncertainty remains around the security measures that might be adopted to prevent unauthorised access and leakage.[69] Article 18 stipulates that samples and data must be encoded, encrypted, delinked, or transformed so that the participant's identity cannot be determined. But again, the operation of this in the context of sharing across banks (which is now a central stream of activity for Taiwan Biobank with the addition of the hospital samples) is uncertain. It would seem that the HBMA 2010 forbids such activity.

As demonstrated above, despite the comprehensive regulatory framework that has now been erected in relation to biobanks, there remains much uncertainty around the governance of Taiwan Biobank, not least in relation to data management. More importantly, there seems to be a persistent reluctance

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[69] Fan, Hung and Yeh, *supra* n. 5; Chien-Te Fan and Tsung-Hsien Liang, "Addressing the Controversies Raised on Taiwan Biobank" (2007) 91 *Taiwan Law Review* 48-59.

to engage in discourses with the public on these issues, and on governance matters more generally. And the laws that have been adopted have neglected to impose any sort of mandated participatory activities.

5 Conclusions: Taiwan Biobank – A cautionary tale

Taiwan Biobank is generally supported as a national project, but it has been criticised with regard to its operation to date. We suggest that the foregrounding of ethnicity and the absence of transparency have caused particular concerns that have not been well managed. If ethnicity was felt to be important, it needed to be more clearly delineated, more openly discussed, and more appropriately managed with respect to specific and bespoke recruitment mechanisms and governance processes. Also, given the general trend over the last 20 years with respect to science communication and the importance and value of healthy science-society partnerships, a much more open and participative approach to development, feasibility-testing, and stewardship was warranted.

With respect to recommendations, we argue that the evidence suggests that Taiwan Biobank must increase and improve its communication with stakeholders, including specified ethnic groups (whether as participants or as members of the broader public) if it is to maintain and finally secure legitimacy, and achieve some level of justifiable public trust. Taiwan Biobank not only needs concrete standards, but a means of making those standards understood. Related to this, the EGC should take steps to design ethically and legally sound recruitment practices that take into account cultural diversity (and the demands of legally protected groups). These practices should be clearly identified on the Taiwan Biobank website, and complied with by recruiters. Third, there is also significant work to be done with respect to privacy, and ensuring that Taiwan Biobank achieves its maximum utility through collaboration with researchers

and other banks. Indeed, collaboration between Taiwan Biobank and other banks is just now starting, and this demands much more consistent and proactive engagement and rigorous public scrutiny than has exemplified to date. As part of this, Taiwan Biobank must come to grips with its multi-party supervisory situation (i.e., the demands of its oversight by the EGC, the IRB, and the MOHW must be determined and communicated so that errors are avoided and the process does not become too burdensome).

Our take-home message is that the development of Taiwan Biobank must be viewed as a cautionary tale, an example of how *not* to develop a national population genetic biobank. Its survival can be characterised as a product of the autocratic approach adopted by its proponents, and any adjustments toward openness or sensitivity might surely be a credit to the perseverance of the academic and civil society actors who have worked so hard to insinuate some level of scrutiny into the governance of the undertaking.

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Volume 15, Issue 1, August 2018

Book review: *Research Handbook on EU Health Law and Policy*

Tamara K. Hervey, Calum Alasdair Young and Louise E. Bishop (eds.)
Cheltenham: Edward Elgar Publishing, 2017. 640 pages.
ISBN 9781785364716. £175.

*Reviewed by Edward S. Dove**

DOI: 10.2966/scrip.150118.130

* Lecturer in Risk and Regulation, School of Law, University of Edinburgh

In this new edition to Edward Elgar Publishing's "Research Handbooks in European Law" series, Tamara Hervey, Calum Young, and Louise Bishop, all of Sheffield Law School, bring together a panoply of leading EU legal scholars who unpack different aspects of EU health law and policy in 19 chapters. The editors completed this book shortly after the Brexit referendum in June 2016, and the impact of that referendum result is palpably felt at different points across these 600 pages. Foremost, it is felt in the Foreword from Martin McKee, Professor European Public Health at the London School of Hygiene & Tropical Medicine, who writes pointedly in his opening sentence that: "No one, following the events of early 2016, can be in any doubt of the need for a book that explains important aspects of European Union policy. The United Kingdom engaged in a debate on its relationship with Europe that revealed a profound degree of ignorance of all things European" (p. xi). In many ways, then, this *Research Handbook on EU Health Law and Policy* can be treated as an educational tool — particularly for those in the UK — to uncover the EU's growing contributions to health law and policy, though one is doubtful how many Brexit voters will read this book or any other book in the Elgar European Law series. Indeed, this *Research Handbook* is not geared primarily to a UK populace ignorant "of all things European". Instead, it has a broader purpose. As the editors observe, "[w]hatever the future relationship between the UK and the EU, and whichever way the EU itself develops, the EU's involvement with health law and policy will continue" (p. 1). What the editors seek to do is offer, from a variety of disciplinary perspectives, including law, political science, policy studies, and sociology, 1) expert views on the current status of EU health law and policy, and 2) horizon scanning on what future directions they may take. This is a book aimed at readers interested in European health law and policy on a continental level, EU institutional level, and indeed even a global level.

Not surprisingly in such a large edited collection, some chapters are stronger than others, and several shine with their adept analysis and clear writing. Foremost, the editors provide a brilliant and beautifully written introduction. Hervey, Young, and Bishop discern three broad themes in their book:

- "Fractured decision-making, leading to policy ineffectiveness or incoherence" (p. 6). That is, pursuing health agendas within the EU's institutional structures is "complicated by the actors and the decision-making processes involved" (p. 6), which are dispersed among different institutional settings.
- "The place of 'science' and 'innovation' in EU health law and policy" (p. 7). As several of the contributing authors suggest, the EU has struggled to balance effectively the (societal) desire to enable novel technological developments and protecting the interests and welfare of patients, health systems, and others.
- "The fragility and frustrated potential of EU health law and policy, and yet its remarkable durability [:] …although EU health law and policy may be seen as long-standing, it is also seen as precarious" (p. 9). Related to the second theme, here the editors highlight concerns with constitutional asymmetry in EU law, where "the logic of the market stands in a hierarchical relationship above other logics" (p. 9), i.e. health may stand in a non-equal relationship to market-based values.

The editors suggest that one potential direction in EU health law and policy is an increased focus on human rights — which would see the protection and promotion of health as a central value of EU law and policy (pp. 10-11).

Excellent chapters include Mary Guy and Wolf Sauter's chapter (Chapter 1) on "The history and scope of EU health law and policy". Guy and Sauter

explore the nature of EU health law and policy, query how their scope has developed within the broader context of EU law/integration, and chart their possible direction of travel. The authors divide their historical account into three periods: 1957-2002; 2002-2007; and 2007-present. As they note, the 1957 Rome Treaty contained no explicit references to health, with the exception of public health, as a justification for restrictions on free movement. The first piece of EU legislation pertaining to public health was on food safety, with a Directive on colourants in foodstuffs being adopted in 1962. From 1992 onwards, they argue that the EU witnessed a high point of integration of health into EU policies with "the scope for health rights […] significantly expanded" (p. 29). Even in the post-Lisbon period, defined by "political malaise" and (a lessening) "persistent economic downturn", "the integration of health into EU policies continues" (p. 32). Looking to the future, Guy and Sauter observe two key related trends: demographic ageing and the shift towards chronic health conditions. This will lead to spiralling costs in health systems. The authors equivocate as to whether this will result mainly in cost cutting or in new and/or common solutions across the EU.

A second excellent chapter worth highlighting is Markus Frischhut and Scott L. Greer's chapter on "EU public health law and policy — communicable diseases", which opens Part IV on Public Health (and which, in my opinion, is the strongest Part of the *Research Handbook*). Here, Frischhut and Greer present the historic development of EU communicable disease control law and policy since the 1990s. They write with noted disappointment that the EU hitherto has been a weak actor in public health law. This is largely "because it lacks coercive capabilities such as quarantine or distributive powers such as vaccination programmes". However, they write more optimistically that with the strength of its human rights law and its "increasing role in setting norms of good practice for public health", it is "increasingly, slowly, being drawn into the debates about

privacy, coercion and proportionality that mark communicable disease control law in most States" (p. 316). Ultimately, Frischhut and Greer paint a story of a developing network in the EU that plays a more effective role in communicable disease control. Yet political and legal challenges remain, foremost in regards to risk management and response, given that the EU "has very weak Treaty powers and Member States have deep conflicting incentives and responses" (p. 328).

Overall, this *Research Handbook on EU Health Law and Policy* is a welcome addition to the libraries of EU health lawyers and policymakers. A small criticism is that the editors and authors alike could have been clearer in demarcating the (albeit fluid) boundaries between law and policy. Interested readers will dip into chapters that appeal to their needs and interests, and the well-constructed bibliography and helpful glossary will appeal to keen and novice EU health law and policy scholars alike. I am pleased that despite the precarious future of the UK's relationship with the EU, the editors offer an optimistic outlook — at least insofar as the EU is concerned: "If the reasons for the EU institutions not having pursued health agendas in the past, despite formal legal competence and sufficient resources, lie in the political preferences of governments of powerful Member States, an EU without the UK may offer altered possibilities" (p. 11). Indeed. And *a contrario*, one can read into this quote a foreboding sense of concern about the UK's diminished role in Europe and the world, coupled with a lingering worry over the predominance of market-based values that subordinate health values and public interests.

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Book review: *Copyright and Information Privacy: Conflicting Rights in Balance*

Federica Giovanella
Cheltenham, UK: Edward Elgar, 2017. 352 pages.
ISBN 9781785369353. £100

*Reviewed by Ruth Flaherty**

DOI: 10.2966/scrip.150118.135

* PhD Candidate, Norwich Law School, University of East Anglia, Norwich, UK, r.flaherty@uea.ac.uk

Federica Giovanella, a Post-Doctoral Fellow in Private Comparative Law at the University of Trento, has published her first solo monograph, an investigation of the "thorny issue" of how lower courts balance the users' right to informational privacy with the rights of copyright holders to enforce infringement actions. Using this topic as a fascinating case study, Giovanella draws on experience from her PhD and background working in high-level European and Canadian research institutes to walk the reader though complex issues relating to the jurisprudence in three different legislatures — the US, Canada, and Italy. The US and Italy were chosen due to their size and influence on international law (Italy as an example within the EU), and Canada as tool for comparison between the two different constitutional systems. Throughout the work, the metaphor of weights, measures, and balances is used to great effect, especially given its focus on jurisprudence.

The most valuable contribution the book offers is a clear explanation of how judges in these locations attempt to balance different sets of rights in the new digital economy, and how judicial ideas relating to the importance of each right (copyright vs. informational privacy) can affect future legal thinking. By focusing on cases where copyright holders have requested personal information from ISPs relating to users accused of peer-to-peer and other illegal forms of file-sharing, the arguments in this research can be expanded to cover other similar topical cases, for example relating to user generated content. This is especially important given the discussion to date in Europe about the liability of websites that host potentially infringing material.

The argument is structured clearly around an introductory chapter and literature review (Chapter 1), which, given the author's focus on balance, is well answered by her conclusions in Chapter 5. The internal meat of the book is provided in Chapters 2, 3, and 4, in which she describes in detail the legislation in her chosen countries in relation to copyright and file-sharing (Chapter 2) and

data protection (Chapter 3). To round out this analysis detailed case histories, which relate to copyright holders requesting personal information relating to potential infringers from ISPs, are laid out in Chapter 4. These demonstrate that, at least in these locations, when judges have been asked to balance the scales between copyright and privacy, it is privacy that is deemed the more weighty of the two rights.

A clear, concise overview of knowledge in this area of the philosophy of law is given in Chapter 1, drawing on reading from esteemed jurists such as Dworkin, Barak, Aleinikoff, and Alexy.[1] The overview is clearly broken into sections explaining how the author envisages the idea of "balancing rights" and how academic thought has covered it in the past in the specified locations. This approach builds a precise understanding that enables the reader to follow the author through the explanation of how courts handle the specific conflict at hand in order to arrive at her proposed hypothesis of a new form of "conceptual balancing", whereby the constitutional conception of each right should be central to the discussion of its importance when balancing it against other rights.

This form of balancing is important since Giovanella explains how this area of normative, indistinct decision-making has created conflicts that are left open and without well-defined boundaries or rules for judges to follow. In order to solve this conundrum, it is shown that judges in all courts (including lower courts) have needed to weigh the importance of the interests at stake. The examination of exactly how this balance has been made is where this work is situated.

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[1] See Ronald Dworkin, *Taking Rights Seriously* (Cambridge, Mass.: Harvard University Press, 1977); Aharon Barak, "Proportionality and Principled Balancing" (2010) 4(1) *Law & Ethics of Human Rights* 1-16; Thomas Aleinikoff, "Constitutional Law in the Age of Balancing" (1987) 96(5) *Yale Law Journal* 943-1005; Robert Alexy, "Constitutional Rights, Balancing, and Rationality" (2003) 16(2) *Ratio Juris* 131-140.

The detailed analysis is commenced in Chapter 2, where Giovanella undertakes a comparative doctrinal review of national laws on copyright and file sharing in the three jurisdictions. The constitutional provisions covering the protection of musical works is laid out, showing the development of global thinking in relation to the global issue of file-sharing infringements. The liability of online intermediaries is discussed in detail, which is exceedingly timely given this precise topic is being debated by the European Parliament in 2018 as part of work around the proposed Directive on Copyright in the Digital Single Market.[2]

A similar analysis is carried out in Chapter 3 in relation to personal data protection legislation, in another well-written analysis. The author explains the difference between privacy law and personal data protection/informational privacy (p. 137). She states her belief that informational privacy is the most important form, given the prevalence of the Internet and the fact physical privacy often relies upon informational privacy. This is followed by a discussion of how each of the three jurisdictions protects privacy within its constitution and its laws, before turning to an area of potential controversy: the consent of the data subject regarding the processing of sensitive information.[3] Giovanella refers to consent as "one of the cornerstones of all Italian and Canadian legislation" (p. 190). This section demonstrates her belief that data subjects should be endowed with the ability to choose exactly how their data is disclosed, as a form of "empowerment" (p. 138). The chapter finishes with an explanation of how differently the data

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[2] European Commission, Proposal for a Directive of the European Parliament and of the Council on copyright in the Digital Single Market, available at https://ec.europa.eu/digital-single-market/en/news/proposal-directive-european-parliament-and-council-copyright-digital-single-market (accessed 20 February 2018).

[3] Consent is not required for the processing of *normal* data under the General Data Protection Regulation (GDPR).

protection authorities have approached their roles in each country, grouping Canada and Italy together and offering the US as a comparator.

Chapter 4 contains the progress of cases relating to copyright infringement online and privacy concerns within the three specific countries, before also examining the European Court of Justice's historical approach and giving a comparison of each institution's methods. The chapter commences with the US, because the first cases in this area were brought by the Recording Industry Association of America (RIAA). The US and Canada are shown to have a similar approach – with explicit tests laid out to explore whether and when the user's privacy rights should overcome the rights of the copyright holder to litigate infringement cases. Giovanella shows that, by contrast, Italy has no specific test.

The outcome of the analysis is that America is the friendliest location for copyright holders to litigate in, because their rights tend to prevail over user rights. Italy and Canada seem to fall the other way, where decisions tend to favour the privacy rights of users. In all cases, individual judicial interpretation of the legislation is given a lot of sway, which may lead to inconsistent results and a concurrent effect on legal certainty in this area.

Giovanella concludes her research in Chapter 5, where she returns to her idea of the "conception" of the two rights (p. 296), and her claim that the birth and development of these rights have had an effect on how important judges believe them to be when attempting to balance them. America and Italy are paired in relation to the relatively strong protection of their copyright legislation, while Italy is paired with Canada because of the potency of their information privacy laws. The final section of the work concludes with Giovanella's agreement with the statement from prominent privacy scholars that "EU law

views privacy as a fundamental right, while the US considers it one interest that is balanced against others" (p. 305).[4]

In conclusion, this was a very informative work in a developing area of law. Through a detailed reading of this book, it seems it would be most useful to academic readers in the fields of jurisprudence and intellectual property law, especially those with a comparative strand to their research (although this reader has no doubt privacy scholars may also find it fascinating). The to-the-point analysis of how copyright has developed in these countries in the face of file-sharing infringers and the shadow of informational privacy law, through an examination of the jurisprudential ley-lines that run underneath, gives this work a unique and valuable structure. It would be interesting to see this research updated to reflect the impact of both the Directive on Copyright in the Digital Single Market and the GDPR.

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[4] Paul Schwartz and Daniel Solove, "Reconciling Personal Information in the United States and European Union" (2014) 102(4) *California Law Review* 877-916, pp. 880-881.

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Book review: *The Legal Challenges of Social Media*

David Mangan and Lorna E. Gillies (eds.)
Cheltenham, UK: Edward Elgar Publishing, 2017. 305 pages.
ISBN 9781785364501. £90.00

*Reviewed by Michael Peter Kalule**

DOI: 10.2966/scrip.150118.141

* PhD Student, CCLS, School of Law, Queen Mary University of London

The Legal Challenges of Social Media is the outcome of a research collaboration led by Lorna Gillies and David Mangan at Leicester University's School of Law in December 2013. Broadly, the research topics in this collection cover contemporary problems of social media that intersect with law, politics, and policy. As the editors note, the aim of the book is not to provide an overview of the law but to sketch different interpretational frameworks for readers to engage with challenging issues pertaining to: 1) social media and law; 2) public order in a virtual space; 3) private law responses to social media; and 4) questions concerning cross-border regulation of virtual space.

In Chapter 2, which opens this collection, Andrew D Murray is concerned with developing a framework that maps the rule of law online. According to Murray, rather than analysing questions of regulation from a micro-level perspective, we should view them also from a macro-level perspective — if we are to address wider questions pertaining to culture, morality and values in a global networked context. Subsequently, in addressing the key question of this article as to what the rule of law is, Murray outlines an outward picture of jurisprudence from a globalised perspective. Using examples from extradition case studies and the principle of extraterritorial effects, Murray poses the question of whether or not individuals in one jurisdiction, say, the UK, may be criminally liable for crimes in another jurisdiction such as Nigeria or Thailand. In doing so, he unravels a fundamental flaw in the rule of law online especially with regard to practical legal questions such as legitimacy, foreseeability, interpretation and adjudication. Indeed for Murray, and for the readers, there remains an irresolvable conflict of laws (i.e., internal/external extra-territorial effects), where rule of law is replaced by an overlapping and counter-contradictory rule of laws. This seems to be the result of a tenuous grounding of the notion of the rule of law in sovereign-statist and liberal-positivist thought that requires a commonality of moral cultural experience.

Jacob Rowbottom's discusses in Chapter 3 whether legal controls leave enough space for freedom of expression. He is particularly concerned with how criminal law should respond to digital communications that facilitate harassment, bullying, racism, and sexism. Through an analysis of existing Public Order legal provisions such as section 5 of the Public Order Act 1986 (which makes it an offence to use threatening or abusive words or behaviour) and section 4A of the Public Order Act 1986 Act (which proscribes an intent to cause harassment alarm and distress), Rowbottom is concerned that the catch-all nature of the offences in these provisions is overreaching, as it covers a wider scope than public law in the offline world. As such, these provisions have a tendency to disproportionately truncate the free speech rights, which should afford protection to words that offend, shock, or disturb. In trying to get to the bottom of the courts' reluctance to give freedom of speech its due salience, Rowbottom suggests that the casual, private, and temporal nature of communication on the internet (as opposed to say, real-time, "public" communication in a café) is what profoundly complicates where the line is to be drawn when it comes to online communication. For Rowbottom, a way forward involves moving away from criminal sanctions and adopting more proportionate regulatory approaches such as the right to be forgotten.

In Chapter 4, Ian Walden considers the question of press regulation in a "messy" converging environment. For Walden, an analysis of contemporaneous press regulation must grapple with an understanding of both the traditional printed press and the use of social media by the press. The new press, social media, however, presents challenges with regard to the structure that dislodge traditional regulatory processes. For instance, the emergence of dynamic on-demand audio-visual television-like services coupled with unprecedented ways of receiving and imparting information transnationally has generated areas of uncertainty that cannot be adequately captured by the same regulatory

structures and boundaries that cover the traditional press. Walden thus asks: How then are we to regulate the press in a converged environment? In answering this question, the notion of technology neutrality is proposed. However, even with such an approach, online media services would have to be treated differently, forms of regulatory oversight for example would have to negate statist forms. At any rate, for Walden, online services and social media would have to be governed by a divergent regulatory regime.

In Chapter 5, Daithí Mac Síthigh explores the issue of contempt of court and new media by looking at how the use of the internet and social media has complicated the law of contempt, which relates to the interference with or undermining of the administration of justice. Through an analysis of cases involving high profile public figures, Mac Síthigh shows how the instantaneous, unstoppable publication (by contempt of images and commentary) online via social media can be prejudicial to the accused persons and their convictions. He suggests that the representations of the special nature of the internet in relation to the law of contempt has been exaggerated or dismissed altogether and what is needed is a nuanced/compromised view that recognises the substantial challenges that the internet presents for contempt.

In Chapter 6, Lorna Woods directs the readers' attention to human rights beyond the scope of Article 10 of the European Convention on Human Rights namely the right to freedom of expression. For Woods, Article 10 does not adequately reflect some aspects of social media use. Thus, more attention should be paid to the role of Article 8, (which provides a right to respect for one's private and family life, his home and his correspondence) if we are to provide a coherent framework for the protection of individual rights online. A lot of Wood's reasoning is based on the fact that Article 8 is: 1) related to the development of one's personality and (communal) identity; and 2) broad in scope covering issues such as data protection, private life, family life, home and correspondence.

However, inasmuch as Wood's arguments are compelling, it seems to me that her conceptualisation of freedom of expression and human rights generally is limited and conservative. Arguably, a reconceptualisation of digital rights that seeks to overturn the limits of Article 10 and yet still works within the general liberal human rights framework will inevitably carry with it an inherent, contradictory statist violence (i.e., a liberal-statist-"what-do-we-expect-states-to-do" hierarchisation of humanhood or the human within human rights) that perplexes and limits our conceptualisation of freedom and rights in a global-networked context.

In Chapter 7, Emily Laidlaw looks into the thorny issue of drawing the line between hate speech, offensive or abusive speech, and banter or jokes. The key problem, it appears, is the inherent transposability of speech, namely its ability to take on different subjective incalculable/unprogrammable registers especially in a high-volume cross-cultural digital environment. Regulation of offensive speech would be akin to regulating a slippery slope and it would place an irresolvable burden on social media platforms. Laidlaw argues that we have expected too much from technology companies: We expect them to be socially responsible, culturally sensitive, and yet not too culturally sensitive. For Laidlaw, the challenge (which in my view is a nearly irresolvable one) is for social media companies to innovate delicate governance and regulatory approaches that are effective, context-sensitive, and nuanced, and still allow for one-off remarks.

Robin D. Barnes and Paul Wragg in Chapter 8 address the phenomenon of the troll as a figure who publicly scrutinises, ridicules and probes the (im)morality of public sports figures and personalities. Issues covered here include the privacy-invading and coercive nature of the troll and whether their trolling constitutes a public interest and is thus protected by the freedom to criticise. Indeed, Barnes and Wragg argue that there is a justifiable argument for the troll to interfere with and scrutinise the life of a public figure in politics, arts,

or sports, as a matter of widely shared public interest that outweighs individual privacy concerns. Thus, for sportsmen and public personalities it appears that their individual foibles are fair game.

Edina Harbinja's article in Chapter 9 looks at the issues surrounding the transmission of social media accounts after an individual's death. Generally, a Facebook account is the intellectual property of the service provider, thus neither the Facebook content nor a user's account is the property of the user. Harbinja argues that the law in this area should be updated to allow a dead person's family to acquire IP rights to user content on Facebook without allowing the family access and the use of the actual account. This would preserve post-mortem privacy (presuming that cross-culturally, in a "globalised" context, this is what the deceased person would desire?) allowing them to preserve and control their dignity integrity secrets and memory after death. It remains to be seen whether such post mortem rights are feasible considering that online privacy autonomy and the ownership of IP rights (even of users who are still alive) are still highly contested, and, for the most part, still in the interminable clench of online intermediaries. One thus wonders how/if we can start to look after or think well for our death, if we cannot yet even effectively look after ourselves now, (whilst alive) in the present.

In Chapter 10, David Mangan examines the protection of employers' reputation with regard to communications on social media in the workplace. For Mangan, Social media use presents a troubling scenario for employees who make remarks that the employer deems embarrassing or harmful to their interests. He argues that the punishment of dismissal for such employees' remarks is an extreme measure as in most cases, social media users view the social media space as a distinct place "unconnected to the workplace and analogous to sharing a

beer with friends."[1] Furthermore, another important argument of Mangan's is the fact that extreme dismissal and punishment for remarks made by workers can censor whistleblowing and constructive criticism in the workplace. Consequently, for Mangan, the UK needs to develop more nuances in this regard to ensure that social media remains a space that allows for the participation in activities and enhanced discussions of issues of political and general interest.

In Chapter 11, Andrew Scott examines the liability of online intermediaries with regard to defamatory material. Central to Scott's discussion is the fact that intermediaries (as publishers) are tangentially liable for defamatory content. To this end intermediaries (under threat of legal action) are prompted to act as censors and to take down content regardless of its substance or accuracy. For Scott, treating intermediaries as publishers is a misguided and unnecessary conceptual stretch. It is an "unwholesome layer cake" that curtails (at its diverging intermediary layers/points) the right to freedom of expression and the public knowledge that it facilitates. He suggests a change in defamation law that would allow for a shift in the responsibility of speech adjudication from private parties to public authorities.

In Chapter 12, Lorna E. Gillies seeks to answer the question of how claimants may initiate proceedings to protect their reputation, individual privacy, and human rights in a particular jurisdiction irrespective of where the parties are domiciled. For Gillies the regulation of social media via private international law should progress through a coordinated conceptual approach underpinned by a discourse that allows for a continued balance between the parties' rights to freedom of expression and fair trial. This approach, in Gillies's terms, continues to support the relationship between EU and national human

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[1] *Groves v. Cargojet Holdings Ltd* [2011] CLAD No 257 (76).

rights laws. Perhaps, rather disappointingly, seeing that we are dealing with issues of a globally-networked/cross-border character, the discussion in this chapter centres mostly on EU law and human rights, as they would apply in the jurisdiction of England and Wales. The reader is left to wonder how Gillies's conceptualisation of private International law (vis-à-vis internet regulation) applies to non–EU-citizens; i.e., whether or not non-EU-citizens would have recourse to rights protection under Gillies' current formulation.

The final chapter by Alex Mills focuses on the question of choice of law. Mills uses defamation law as a departure point. For Mills, the problems of determining choice-of-law questions are multiplied online due to the fact that communications will readily cross borders and complicate issues of choice of rules and jurisdiction. For Mills, these problems are almost inescapable for the reason that the existing law is out-dated for being state-centric and territorial. It is therefore unable to deal with borderless twenty-first century regulatory problems. Mills's discussion arrives at a place where he radically challenges and invites the reader to think beyond statist territorial legal orderings and to incorporate online non-state-centric considerations when grappling with recurring cross-jurisdictional regulatory/legal problems. Perhaps, with his incisive formulation, we can start to think of rights and regulation borderlessly and cross-culturally i.e., beyond the political, territorial, cultural and legal confines of the nation-state.

In conclusion, *The Legal Challenges of Social Media* is a significant collection that offers new and multiple frames within which students, academics, practitioners and policymakers interested in internet law, regulation and policy can think around the contemporary challenges of social media and internet regulation in a global networked context.

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Volume 15, Issue 1, August 2018

Book review: *Digital Democracy in a Globalized World*

Corien Prins, Colette Cuijpers, Peter L. Lindseth, Monica Rosina (eds.)
Cheltenham, Glos UK: Edward Elgar Publishing Ltd, 2017. 375 pages.
ISBN 9781785363955. £110.

*Reviewed by Joseph Savirimuthu**

DOI: 10.2966/scrip.150118.149

* Senior Lecturer in Law, Liverpool Law School, University of Liverpool, Liverpool, UK, javiri@liverpool.ac.uk

> The democratic project is to globalize democracy as we have globalized the economy; to democratize the globalism that has been so efficiently marketized.[1]

Digital Democracy in a Globalized World (*Digital Democracy*) is an edited collection of essays which is the product of the efforts of the Law Schools Global League working group on "Digital Democracy" (p. xii). Readers should banish any thoughts about this book containing a manifesto for a gilded age for democracy. And rightly so.[2] Democracy is a word that is not new and the impact of globalisation in promoting its values continues to be hotly debated. Digitalisation is unlikely to relieve us from the challenges facing democracy in a global economy. The open and decentralised nature of the Internet is also likely to exacerbate the blindspots in cultural and political conceptions of democracy.[3] Additionally, the persistence of disagreements over the connection between democracy and globalisation is symptomatic of the longstanding arguments about the relationship between markets, civil society and democracy. Those who control access to resources and platforms for communication in the digital economy possess considerable power and technological capabilities to structure and reconfigure discourses by controlling access to resources and spaces for flows of information. Castell may have been alluding to the problematic nature of blindspots inherent in the economic imperatives and questionable mainstreaming of the Schumpeterian logic of the double helix of democracy and

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1 Benjamin Barber, *Jihad vs. McWorld: How Globalism and Tribalism Are Reshaping the World* (New York: Ballantine Books, 1996), p. xxiii.

2 Sascha Dickel and Jan-Felix Schrape, "The Logic of Digital Utopianism" (2017) 11(1) *NanoEthics* 47–58; Cristina Groeger, "Learning Democracy in a New Gilded Age" (2017) 16(4) *The Journal of the Gilded Age and Progressive Era* 385-387.

3 Richard Sennett, "The Spaces of Democracy" in Robert Beauregard and Sophie Body-Gendrot (eds.), *The Urban Moment: Cosmopolitan Essays on the late Twentieth Century City* (Thousand Oaks, CA: Sage, 1999), pp. 273–286.

globalisation since "the expression of the network of flows whose architecture and content is determined by the powers that be in our world."[4]

Even though it is too early to make judgments about the future of democracy (in both its analogue and digital variants), the collection of essays in *Digital Democracy* aims to provide readers with concrete manifestations of the practice and experience of democracy in spaces mediated by technologies and platform infrastructures. As the title to the book implies, information and communication technologies are creating a truly global society. Contemporary illustrations of the exercise of democratic power or the worrying consequences resulting from the commodification of public and private spaces for democracy and what this implies for the normative conditions critical to the democratic project are not difficult to find. The foregoing observations should by now remind us that the democracy project is vast and attending to the spectrum of decision-making, participation and governance cannot be meaningfully undertaken in one book. The editors of *Digital Democracy* make it clear at the outset that the aim of the book is not to resolve "the question of democracy" in the age of information flows and global technology corporations, but to explore its meanings and its visible indicators in mediated spaces for civic engagement, political interaction and discourse (pp. 4-8).

Digital Democracy has 16 chapters, divided into two main parts lending theoretical and comparative analysis with case studies focussing on a number of countries. There are 27 contributors and each chapter is the product of careful research and supported by extensive footnotes and references. It would have been helpful if a full bibliography was provided at the end of each chapter. The

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[4] Manuel Castells, *The Rise of the Network Society* (Chichester: Wiley-Blackwell, 2010), p. 443. See also Mahzarin Banaji and Anthony Greenwald, *Blindspot: Hidden Biases of Good People* (New York: Delacorte Press, 2013).

six chapters in Part One examine topics such as citizenship, multi-stakeholder governance, and the problems globalisation pose to the integrity of the democratic process. These chapters provide three frames for thinking about the relationship between technology, power and the conditions for democratic discourse and engagement. It is important to recognise the contingency of these techniques when reflecting on the symbiotic character of the interactions that take place within democratised spaces when addressing the difficult policy and regulatory challenges faced when designing technology to serve democratic goals or formulating appropriate responses to prevailing cultural and social conditions (pp. 40-46, 74-76, 84-91, 108-111, 125-132, 154-158). The premise for the discussion in this Part should not go unobserved — technology is now regarded as integral to formulating a vision of a truly democratic global society (pp. 43-52, 67-76). The "technological lens" and data-driven processes assume a pivotal role in managing cultural, educational and technological challenges while at the same time ensuring that implementation issues are resolved and the spaces for democratisation are not hindered by outdated policies or conflicts of interests (pp. 81-84, 111-119, 128-140).

Issues relating to the socialisation of power and the policy challenges confronting jurisdictions are expertly addressed in Part Two. The eight chapters in this Part reinforce the received wisdom that democracies are by nature and definition pluralist (p. 5). Is democracy now dependent on technology (pp. 214-247, 259-269)? If so, what type of utopias are being elevated, and in whose interests (pp. 278-282)? These are some of the questions that may help better problematise the case studies provided in Part Two. The questions may sound academic or esoteric but it is important to be aware that ignoring them can have adverse consequences for individuals and goes to the core of the ambitions of any project that aims to harness the opportunities globalisation provides for democracy (pp. 183-185, 272-273, 315-325, 332-341). The legitimacy of decision-

making, rule-making and control of power which impacts the daily lives of citizens makes it imperative that any version of democracy being promoted must adhere at the very least to establishing the necessary normative and cultural conditions for meaningful participation (pp. 169-179), identifying and engineering deliberative democracy values (pp. 186-198, 207-209), developing strategies to grapple with information asymmetries and power imbalance (pp. 189-191, 210-218), managing cultural expectations and monitoring the quality of democratic engagement (pp. 218-226) and at all times retaining a healthy scepticism to those who regard technology as the modern Prometheus (pp. 230-231, 253-259, 282-298). These chapters provide some granular insights into "ground zero": reflections on the contributions of governments and the private sector to promoting democracy and highlighting some of their limitations. Can we regard these case studies as examples of the democratisation of society and by extension the legitimation of the strategies which invariably involve some element of "trade-off" (pp. 35-37, 49-50, 56-57, 94-95, 118-119, 138-139, 178, 302-307)? Does digital democracy require smart or at least digitally literate citizens?

Answers to both questions cannot be found in *Digital Democracy* owing to a lack of clarity regarding the methodology or conceptions of democracy to be brought into play. Notwithstanding this challenge, Peter Lindseth rightly emphasises the cautious, if not cautionary tone of *Digital Democracy*. While the practical manifestations of technology on spaces for the practice of democracy will be both disruptive and revolutionary, a critique that embraces the "ontological turn" would have been equally insightful (p. 345).[5] Peter Lindseth concludes with the observation in respect of the instrumental value of technology for democracy but recognises the challenge it also poses to societies and

[5] Mihaela Mihai et al., "Democracy, Critique and the Ontological Turn" (2017) 16(4) *Contemporary Political Theory* 501–531.

policymakers (p. 364). The contingency of the instrumental value of technology for democratisation is a theme that runs through throughout the book. If technology is indeed a game-changer, how do we frame the cultural shift that is required and the safeguards implemented when platforms for decision-making and governance are marketised or controlled by those in power? The value of these questions to *Digital Democracy* may not seem readily apparent until one probes closely into the Faustian nature of the space of flows for democracy. Flows of information orchestrated by algorithmic processes leveraging multiple data sets controlled by the State and global elites, may help democratise some aspects of decision-making and participation. Equally, the invisible nature of data driven processes, the logic of commodifying public and private spaces and the design choices of affordances and interfaces can also undermine the very foundations of democracy — the public space for digital democracy requires at a minimum equality of access not only to resources but to participation and decision-making.[6]

We are given a glimpse of the consequences for democracy when spaces for discourse are reconfigured in a way that embeds imbalances in power and information asymmetries — the vote to leave the European Union, the election of President Trump, and the allegedly undue influence by those campaigns. Should we have less digital democracy and more meaningful politics in public spaces for democracy?[7] Is democracy being reconfigured by technologies of power in an environment where the boundaries between politics, economy and markets have become self-referential?[8] Digital Democracy is an invaluable

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6 Jürgen Habermas, "Three Normative Models of Democracy" in Steven Cahn (ed.), *Political Philosophy: The Essential Texts* (Oxford: Oxford University Press, 2005), p. 527.

7 David Runciman, *Political Hypocrisy: The Mask of Power, from Hobbes to Orwell and Beyond* (Princeton, NJ: Princeton University Press, 2010).

8 Michael Walzer, "Philosophy and Democracy" (1981) 9(3) *Political Theory* 379-399.

resource and should be read by everyone with an interest in regulation, governance and politics. It is not a book that will help us answer two important questions raised by the spaces for democracy that are being digitalised and situated in the global marketplace: is democracy possible here and how will the democratic project towards globalised democracy end?[9] That said, Digital Democracy will provide the tools and inspiration to help demonstrate our commitment to democracy.

[9] Ronald Dworkin, *Is Democracy Possible Here? Principles for a New Political Debate* (Princeton, NJ: Princeton University Press, 2006).

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Book review: *Artificial Intelligence and Legal Analytics: New Tools for Law Practice in the Digital Age*

Kevin D. Ashley
Cambridge: Cambridge University Press, 2017. 426 pages.
ISBN 9781316622810. £34.99.

*Reviewed by Jesus Manuel Niebla Zatarain**

DOI: 10.2966/scrip.150118.156

* Professor and researcher, Faculty of Law, Autonomous University of Sinaloa, Mazatlán, Sinaloa, Mexico. Email: jmniebla@yahoo.com

Can we fully represent cognitive legal processes through computational models? This is perhaps one of the most complex yet fascinating questions experts in the area of legal artificial intelligence are trying to solve. In this context, Kevin Ashley's *Artificial Intelligence and Legal Analytics: New Tools for Law Practice in the Digital Age* delivers a comprehensive study aimed at understanding the evolution of this interdisciplinary field. The author begins by presenting a description of early artificial intelligence developments implemented in the legal sphere which, regardless the fact they did not perform legal reasoning *per se*, led to the development of new applications.

An example of the latter are legal AI expert systems. These developments operate in a specific area of legal knowledge and construct a legal outcome through the direct interaction with its user. Nonetheless, these early devices had three primary downsides: first, they did not possess the capacity to represent uncertainty, which leads to incomplete legal data. Second, the process of providing the device with legal rules was time consuming and resource intensive, limiting their potential use. Third, this produced a bottleneck that could not be solved through text analytics. To increase the level of comprehension of this section of the text, further explanation along with additional illustration would have been convenient.

In relation to the previous point, the author clearly describes how researchers in AI and the law complemented the open texture approach implemented by early devices with computational models of legal reasoning (CMLR). This resulted in arguments that included legal text input, prediction of the problem's outcome, and an explanation in terms that were comprehensible by legal professionals with no technical background. Overall, this allowed legal AI to represent human legal knowledge in terms that can be used to develop relevant intelligent tools for the legal field.

On a first look, it is established that the law itself is a domain of rules, susceptible to being presented through computational code interpretable through artificial reasoning. However, features such as vagueness and the open-texture of statutory provisions need to be addressed to create accurate legal reasoning. An approach that delivers this is the emulation of how courts provide their rulings. The process is decomposed into three parts: first, a theory based on previously existing cases that resemble the one currently being analysed is created. Second, these recently created patterns are used to strengthen or weaken an argument. Third, example-based explanations illustrate why an argument can or cannot be applied. It is within this scope that the first section of the book is presented.

The second section of the book addresses a technical aspect – the development of legal tools. Here the author proposes the use of ontologies to properly describe relevant relations within a specific area of the law. This is combined with machine learning techniques, which allows learning from the input received to maximise legal accuracy and operational efficiency. The result of this is evidence that supports the notion that argument-related data could be implemented to support conceptual legal information retrieval through computational platforms.

Here, the author makes a crucial contribution: if models of legal reasoning and argumentation are to have a greater impact on legal practice, they will likely need to do so by including pre-existing commercial and institutional approaches to full-text legal information retrieval and e-discovery (p. 210). The cooperation between legal AI and pre-existing approaches allows the management and processing of case decisions, statutes, and other relevant legal documents, providing tools that may be beneficial for practitioners and students.

In relation to legal documents as source of legal knowledge the importance of machine learning techniques is highlighted by the author. Here,

the device detects relevant patterns to find correlations in new inputs. By this mechanism correlations between the instant case and similar precedents can be established. This by itself is a significant advance: unlike traditional predictive methods that were designed to operate only on Supreme Court decisions, this new approach is capable to represent features obtained from private litigation.

This technical approach supports the development of *cognitive computing*, which functions not by solving the problem presented by one of the plaintiffs but by providing new forms of relevant information that can assist in solving a specific situation. To apply machine learning techniques to legal texts a three-step method is implemented: first, collecting and processing raw data. Second, transforming the raw data into a uniform linguistic element. Third, delivering the document as a feature vector that recognizes particular features in the legal text.

Regardless of the apparent benefits of this approach, at the time of the book's publication, there had not yet been any developments that fully implement the method described. One of the reasons for this is the actual design limitation that legally relevant devices face. To illustrate this, the author discusses two systems, Watson and Debater. The first operates on corpus of text, gathering relevant information that it uses to provide an answer for the question it receives. A downside of this approach is that it only operates on the text provided, which is likely to be too narrow for complex implementations. Additionally, in law it is crucial to provide an argument (the logical description of the reasoning process) that led to an outcome, something that is also not provided by this system. In relation to Debater, it is presented as an improved version of Watson, capable of constructing relevant legal arguments. Apart from this, the author also proposes further adaptation of Watson's operative aspects in order to enhance its operation when applied to the legal field.

At this point, the author establishes that understanding regulatory texts is a fundamental requirement to properly apply the legal rules provided by the legislator. This makes the insertion of legal AI a natural step towards the extraction and correct interpretation of relevant legal data in a large textual corpus. In this scenario, the implementation of different technological methods to obtain relevant data and the use of rule-based approaches to classify statutory provisions from relevant sources are proposed. In this sense, chapter 9 addresses the extraction of logical rules from statements and regulations by implementing deductive and defeasible approaches. Here, the author uses environmental designs to deliver a view of how these techniques operate (through a compliant design).

The third and last section of this book presents the LUIMA (Legal Unstructured Information Management Architecture) design, evaluating its composition and the contribution it makes to any full text legal information system. The outcome provided by this platform outperforms those developed under traditional approaches, since it addresses semantic elements contained in legal documents. This means that the system can distinguish between sentences that represent a rule and sentences that state findings of fact.

Finally, the author recognizes that regardless the current advances and the on-going effort to extract rules from regulatory texts, they are still far from ideal. Nonetheless, the advances obtained are being used in other applications, such as construction of legal abstracts or statutory provisions and the relation between relevant agents according to the nature of the data contained in these texts. A positive aspect of this work is that it properly illustrates the suitability of emulating human cognitive processes and their use in the development of functional legal technology.

In relation to the composition of this book, it provides a comprehensive and user-friendly description of this interdisciplinary area, focusing on the

suitability of developing legal devices based on artificial intelligence. The structure of the work allows users to analyse how representation of legal logic knowledge occurs, and its suitability for computational implementations (pp. 173-175). On this matter, the author provides relevant and understandable illustrations that facilitate the linkage between theory and the development of the techno legal implementations. In this aspect, is worth mentioning the form in which relevant technological approaches, such as machine learning and the extraction of argument related information, were addressed. The author also makes the transition to current technology in a continuous and reader-friendly form, highlighting current methods of information retrieval that increase the quality of the legal outcome provided. However, some recommendations can be proposed to this work. To increase the clarity of the illustrations provided, further explanation is suggested, especially for audiences that lack a computer science background.

In summary, *Artificial Intelligence and Legal Analytics: New Tools for Law Practice in the Digital Age* is a fundamental work for those of us who are interested in the intersection between intelligent technology and the legal field, and its promising future.

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Book review: *Reinventing Capitalism in the Age of Big Data*

Viktor Mayer-Schönberger and Thomas Ramge
London: Basic Books, 2018. 288 pages. ISBN 9780465093694. £25.00

*Reviewed by Wenlong Li**

DOI: 10.2966/scrip.150118.162

* PhD Researcher, School of Law, University of Edinburgh, UK, wenlong.li@ed.ac.uk

After a phenomenal bestseller *Big Data: A Revolution That Will Transform How We Live, Work, and Think,*[1] Viktor Mayer-Schönberger, professor at the Oxford Internet Institute, continues his inquiry into contemporary technological issues. In this new book, *Reinventing Capitalism in the Age of Big Data*, his previous thoughts have been extended and reformulated with a focus on the evolution of capitalism. Unlike *Big Data* written half a decade ago, *Reinventing Capitalism* opens up a socio-economic perspective and aligns big data analytics with other technological aspects such as artificial intelligence and machine learning.

As before, Mayer-Schönberger co-authors with an experienced journalist, Thomas Ramge, who writes for *The Economist*. His first-hand observations and skilful narrative have significantly contributed to the book's readability, presenting intriguing debates with a wealth of examples, stories and anecdotes. This will aid the reader in grasping the transition of market and multidimensional implications that the authors aim to reveal in this book.

In addition to the authors' respective expertise, the combination of their strengths makes this book highly valuable for academics from various fields and friendly to readers who have a general interest in the role of information in a data-driven economy.

Both authors are big believers in the market and their argument that rich streams of data will fully grease and transform the market is noticeable throughout the whole book. The initial chapter ("Reinventing Capitalism") serves as a summary of all core arguments scattered in the book.

Chapter 2 ("Communicative Coordination") sets out the foundational basis for evaluating the market (and firm) efficiency, that is, the ability to coordinate human activities. The authors urge readers to perceive market, in

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[1] Viktor Mayer-Schönberger and Kenneth Cukier, *Big Data: A Revolution That Will Transform How We Live, Work, and Think* (John Murray 2013).

essence, as a decentralised means of human coordination. In this regard, market has achieved a perceptible but limited success subject to limited flows of information and crippled decision-making. In comparison, the firm is an alternative model that has a centralised structure and has shown a competitive advantage since the beginning of the 19th century. *Reinventing Capitalism* side firmly with the decentralised model that market represents in the era of big data, artificial intelligence and machine learning, predicting that data-rich markets will become the new dominant vehicle for human coordination, with centralised (albeit highly automated) firms fading away in the long run.

What follows is a detailed account of the competition between these two models for coordinating human activities, with two chapters respectively on each side. Starting from the market, whereas Chapter 3 ("Money and Market") explains the rationale behind temporary success of conventional markets, Chapter 4 ("Data-rich Markets") brings to light the ongoing transition from money-based markets into data-rich ones. The authors stress the informational role of money that information about our preferences had been condensed into price, a single-dimension parameter easy for market participants to convey and process. As a conveyor of information, money has brought conventional markets to temporary blossom, but it also restricts the market's ability to achieve an optimal level of coordination.

In Chapter 3, the authors identify two main problems of the conventional, money-based markets. In the process of information condensation, we lose much information that we were once unable to handle. Further, this process may help address information overload, but does not improve our processing power. As a result, before big data analytics, artificial intelligence and machine learning come into existence, we were still unable to tame the complexities or to accelerate information processing.

The authors suggest in Chapter 4 that we escape from this straitjacket of money when embracing rich streams of data flowing through the market. In doing so, the issue of oversimplification can be remedied by ever-evolving technological tools that enable us to master big data. In particular, three aspects of technological advances are manifested, underpinning what the authors call "data capitalism".

First and foremost, to categorise or systematise a wide variety of data, data ontology is a crucial element of data-rich markets. While the most intelligent minds are still struggling in identifying the right ontology, the authors' argument that in the long run "data will drive data ontologies" (p.70) may provide some relief for the many. In order to find the optimal transaction partner in a certain market, we are also increasingly relying upon technological assistance such as matching algorithms. While these algorithms cannot eliminate information asymmetry in every market, our cognitive limits are increasingly irrelevant because algorithms can and are good at doing the jobs for us. Additionally, what makes this book different from the previous *Big Data* is the emphasis on the development of adaptive systems fuelled by machine learning. This thread of arguments is recaptured and extended in Chapter 8 where the authors explain how an effective feedback loop would help overcome our cognitive biases and give a competitive edge to market participants.

The rise of market may consequently lead to a decline of the firm as the dominating structure to organise human activity, and the following two chapters make a shift from the market to the firm. In a similar structure, Chapter 5 ("Companies and Control") sparks an alert among firms regarding the challenges of data-richness whilst chapter 6 ("Firm Futures") suggests creative solutions for firms of various kinds.

Chapter 5 is full of insights about why the centralised structure that firms represent, once sufficiently effective in a data-scarce society, has been heavily

disrupted by the tide of data richness. Chapter 6 furthers this line of thought and, by citing numerous case studies, sheds light on two distinct evolutionary paths: increasing automation at almost all levels of organisation or developing a market-like organisational structure. It is interesting to note that these two paths respectively respond to two problems of conventional markets identified in Chapter 2. In this chapter, the authors do not expressly favour one over another, only suggesting that corporate futures may lie with the optimal combination of the two.

Apart from a detailed account of data capitalism, *Reinventing Capitalism* also includes quite some normative insights. A full package of solutions starts to emerge from Chapter 7 on, engaging various areas of law and policy.

Structurally, chapter 7 ("Capital Decline") is where two parallel narratives — from money to data and from market to firm — intersect in this book. Considering the weakened role of money, both informationally and pecuniarily, in many markets, the authors offer a careful observation of the struggle of the financial sector in which firms incorporate technological tools or merge with tech start-ups.

As mentioned earlier, Chapter 8 ("Feedback Effect") is an extension to the third pillar of capitalism, *i.e.* machine learning, originally portrayed in Chapter 4. Further to the "scale effect" emerging since the age of Industrial Revolution and the "network effect" notably fuelled by social media, the authors identify a third "feedback effect", characterised by the advanced machine learning systems using feedback data to teach themselves. As the authors point out, "the scale effect lowers cost, the network effect expands utility, and the feedback effect improves the product". (p.163)

In response to the main problem of feedback effect, that is, the monopoly of feedback data by incumbents leading to systematic biases, the two authors innovatively propose a progressive data-sharing scheme, requiring companies

whose market share reaches a defined level offer a randomly chosen portion of feedback data to competitors (notably start-ups) in the same market.

Deviating from the previous thread of market power, Chapter 9 ("Unbundling Work") perplexingly takes a topical turn, revitalising the theme of automation and its impact on human labour. Bearing in mind the departure from this thread suggested in Chapter 2, and the intertwining between automation and data richness revealed in Chapter 6, readers may wonder why the authors revisit this issue and how it fits with the previous discourse. Manifestly, the societal anxiety that automation would ultimately replace human labour is so widely discussed that it makes the perceived threat to human participation an inescapable issue for this book. This connection is however not very explicit in the texts and a roadmap making it more explicit would help readers connect the dots.

Despite this structural complexity, *Reinventing Capitalism* has opened up a timely and useful discussion on regulatory responses to a highly automated society. In this chapter, the authors explore both distributive (from the "robot tax" to the "wealth tax" and then to the "tax in data") and participatory (retraining of workers) schemes, suggesting an alignment between the two through a creative tax credit system. Thinking deeply about the role of humans in an automated society, the authors' atomic view of "job" and proposal of downplaying money in employment shed some lights on the way we define and rebalance elements of work. This process of "unbundling work" leads us to the Universal Basic Income (UBI), a radical idea complementary to distributive and participatory schemes explored before.

After the diverse, interdisciplinary narratives regarding various aspects of data capitalism, it is inspiring to see that *Reinventing Capitalism* ends with a humanity issue. In the final chapter ("Human Choice"), the authors make enquiries about what really makes us human and how humans live in the future.

Remarkably, they draw a response to a futuristic vision rekindled with the rise of artificial intelligence, a utopia where machine will overcome resource scarcity, essentially leading us to a communist society Karl Marx described nearly a century ago in the wake of the Industrial Revolution. With a reference to scarcity of time that exists forever, the two authors defend their argument that we should place our trust in the renaissance of market instead of the magic of automation. Whereas automation makes it possible to leave boring, preliminary choices to machines, data-rich markets ultimately empower us to make enjoyable, meaningful, and ultimate choices —in other words, "we [should] choose to choose" (p. 219). *Reinventing Capitalism* wraps up with a paradigmatic turn for humanity, echoing its original proposition that "the ultimate goal of data-rich markets is not overall perfection but individual fulfilment, and that means celebrating the individuality, diversity, and occasional craziness that is so quintessentially human" (p. 15).

The wide coverage of almost every controversial issue in relation to data capitalism gives *Reinventing Capitalism* a massive and holistic view of the contemporary capitalist society, increasingly digitised and automated. Nevertheless, the book's strong advocacy of market has almost inevitably lessened the accounts of market failure and regulatory responses. The proposed data-sharing scheme and the tax in data, for instance, are analogous to the newly created right to data portability in the General Data Protection Regulation. Unfortunately, this book stops short of further substantiating its proposals in reality and aligning with existing schemes. In addition, some technical issues determining the feasibility of those proposals are left unaddressed, such as interoperability.

Despite these potential improvements, it is fair to say that *Reinventing Capitalism* has made a convincing case for the emergence of data capitalism. The book's interdisciplinary approach will attract readers of various background and

assist, among others, economists, lawyers, HR developers, industry leaders and scholars in looking beyond their defined expertise for a better understanding of money, data, market and firms.