

**[Cambridge University Press, 2021]**

Significant shifts in the technical feasibility of data collection and analysis have facilitated the rise of 'big data': datasets of increasing scale and complexity can now be leveraged to extract inferences about individual data subjects, from likelihood to buy a product to propensity to commit crime. *Data-Driven Personalisation in Markets, Politics and Law* sets out to explore the issues to which this novel phenomenon gives rise. The volume is composed of seventeen essays, including the editors' introduction and conclusion, which draw out overarching themes. Although the majority of the authors are legal scholars, the focus is interdisciplinary, and the introduction describes the volume's 'particular contribution' as being the creation of 'room for the voices of subject-matter experts from various disciplines'. This interdisciplinary undertaking is to be welcomed, but it comes with deep methodological challenges. Ensuring that critique carries across disciplinary bounds is no mean feat, and the authors achieve it to varying degrees.

A good example of a digestible and insightful contribution is Nick O'Donovan's (chapter 4). It applies an economic lens to explain how data-driven personalisation gives rise to 'network effects': one user's adoption of a product makes it more valuable to others. The more data platforms accumulate, the better the personalisation, and therefore the service, for other users. Challenger businesses, which lack such data, will 'struggle to offer a personalised service', resulting in stifled innovation and restricted consumer choice (p. 82). However, O'Donovan suggests that markets characterised by strong network effects are *more efficient* when highly concentrated, 'as they operate in effect as natural monopolies' (p. 83). Measures aimed at facilitating competition may thus 'result in products that consumers find less useful' (p. 83). O'Donovan goes on to propose potentially more promising policy options, which are targeted at the relevant network effects.

Another good example of a chapter providing accessible insights for all readers is Pamela Ugwuodike's (chapter 11). She provides a Foucauldian analysis of personalised 'risk scores' in the criminal justice context, arguing that unfair algorithmic outcomes can 'operate as mechanisms of epistemic domination': ostensibly neutral 'risk scores' feed into criminal justice discourse, and thus shape our collective understanding of risk and riskiness. Furthermore, algorithmic predictions produce self-fulfilling prophecies, as individuals adopt their assigned labels. In the longer term, the absence of algorithmic transparency and contestability might tend to undermine the legitimacy of the criminal justice system as a whole. Ugwuodike argues that predictive criminal justice technology does not, therefore, merely 'deliver an account of "reality"', but rather 'reflexively interacts with it', ultimately *changing* both the subjects under its purview and society at large (p. 201).

These more philosophical contributions are complemented by chapters providing more practical case studies. Keith Syrett's discussion (chapter 9), for example, situates healthcare personalisation within a broader context characterised by a jurisprudential shift towards patient autonomy. By showing how discourse, law, and technology interact, Syrett's chapter gives Ugwuodike's analysis further concrete expression.

Similarly, Marc Welsh (chapter 3) also draws on Foucauldian ideas, arguing that the 'construction of the data-self' marks a shift to corporate, rather than state-based, forms of government power. Governance (the 'conduct of conduct', p. 58) takes place through knowledge of the individual and the population, and 'big tech' takes on state-like capacities and functions of government. In another example of a helpful but tacit pairing, concrete instances of the shift described by Welsh can be found in Daithí Mac Síthigh's chapter (12): Mac Síthigh describes how some the 'particularly sustained

objections' to an Alphabet subsidiary's 'smart city' proposal in Toronto centred on whether the company would 'perform functions in substitution for local government' (p. 211).

In combination, the chapters thus provide rich and multifaceted explorations of similar theoretical concerns. There are also instances of authors considering substantively similar practical issues from different theoretical angles. Like Ugwu-dike, David Gurnham (chapter 8) considers the use of predictions in the criminal justice context, but rather than looking at the impacts of such scores, he questions whether sentencing informed by risk scores should be countenanced *at all* in light of liberal justice values such as desert and moral agency. Gurnham stresses that this is not a new question: data-driven personalisation is simply a more sophisticated iteration of established actuarial risk assessment techniques.

Ugwu-dike's, Gurnham's, and Welsh's theoretical arguments are easy to follow for a non-philosopher. Some chapters, however, adopt a level of abstraction which makes their practical significance difficult to discern for those outside the field. Alun Gibbs (chapter 16), for example, argues that personalisation technologies threaten the use of language to make decisions: '[w]hat we build with personalisation technologies is not part of our shared resource of language but is instead determined by data-sets which are capable of being interpreted by AI algorithms' (p. 278). Gibbs suggests that this poses a fundamental threat, because 'language makes possible the personhood and agency that is bound up with social meanings and solidarities', and these are 'the building blocks of the wider understanding of constitutionalism as a political way of life' (p. 282). The impact of this threat, however, remains unclear: the very existence of the volume seems to indicate that we *do* have the language to 'think about the technologies of personalisation and what may be appropriate uses for them', which is Gibbs' 'ethical call' (p. 278). Perhaps the concern is the *explicability* of algorithmic outcomes, but if so, that is not made clear.

Other chapters are similarly abstract. Kieron O'Hara's chapter (2) distinguishes 'digital modernity' from 'modernity'. Whereas individuality, which is central to modernity, is expressed via *choice* in the 'analogue' version, digital modernity 'preserves individuality as a central value' but expresses it through *personalisation* (p. 42). O'Hara suggests that while modernity is a 'present tense narrative', in which choices are based on current preferences, 'digital modernity' has a 'subjunctive mood': choices are made from a diminished list, with individuals nudged towards a predicted option (pp. 43-44).

What does the shift to a 'subjunctive mood' mean in practice? The last sentence of the relevant section states that '[t]he subjunctive world that digital modernity creates is the *context for the valorisation of personalisation*' (p. 44, emphasis added), which might seem to indicate that the mood shift has opened the way for data-driven personalisation – but from the rest of the discussion, it seems that personalisation has given rise to the mood (through restriction of choice), rather than the other way around.

O'Hara goes on to consider how harms are also understood differently in digital modernity. He suggests that while the 'locus of harm under modernity... is the self', in the 'subjunctive world of digital modernity', what matters is the 'well-being of the avatar': the *digital* self (p. 46). This results in a 'decoupling of ideas of harm... from the lived experience of the individual' (p. 50). Personalised medicine, for example, focuses on improving an individual's 'medical data' by reference to risk factors such as smoking and drinking, but these are divorced from the 'the subjective experience[s] of the individual', such as 'going to the pub, or enjoying the camaraderie of a cigarette... outside the office' (p. 47). Moreover, one person's actions can harm another person's avatar: by driving rather than

walking, an individual ‘drags down total mortality data’, and thereby lowers life expectancy of every avatar in the population (p. 48).

The underlying concern seems to be that policy decisions might be made on the basis of ‘the state of an individual’s or an environment’s data, not on the thing itself’ (p. 41). The chapter gives the example of projected increased life expectancy for future generations in South Korea being interpreted as a policy success, despite only affecting the welfare of future avatars. Such successes might legitimise ‘paternalistic nudging’, and the underlying concern seems to be that policy choices which guide individuals away from ‘smoking, being lonely, [or] driving instead of walking’ could be aimed at tackling ‘dastardly derelictions of duty to the avatar’ rather than the health of real individual (p. 48). The argument is not entirely convincing, however, without concrete examples of health-based policies adopted with disregard for the health of real and existing populations.

The abstract nature of certain chapters could have been counterbalanced by the practice-focussed voices of ‘technologists’, which were excluded from the volume (p. 25). An indication of the value of such voices comes from Konstantinos V Katsikopoulos’ contribution (chapter 15), which draws on computer science literature to argue that powerfully simple algorithmic models can, in some instances, perform better than personalised recommendations which rely on big data.

Although technologists are excluded, there *is* space for lawyers in the volume. The contributions of Michèle Finck (chapter 5), Normann Witzleb and Moira Paterson (chapter 13), and Joost Poort and Frederik Zuiderveen Borgesius (chapter 10) explore the limits of the General Data Protection Regulation (GDPR). Witzleb and Paterson focus on micro-targeting in political campaigns, highlighting the weakness of a regime which only looks at inputs, rather than outputs. Poort and Zuiderveen Borgesius consider empirical research on public acceptance of ‘personalised pricing’, and its legal treatment. Finck highlights the limits of the GDPR’s consent-based framework – a theme which is also taken up by TT Arvind (chapter 6) and reprised in Jacob Eisler’s conclusion (chapter 17). Arvind broadens out the discussion of consent by considering the role of contract law. Callado-Rogriguez and Kohl (chapter 7) further develop the discussion of existing legal frameworks by considering the limits of discrimination law, while Andrew Charlesworth (chapter 14) highlights the need for such binding legal frameworks in the first place, exposing the limits of voluntary self-regulation based on ‘ethics’.

Together, these chapters provide a helpful overview of some major legal tools and their limits, and they complement and cross-reference each other well. There are, however, some missed opportunities: while chapters 6 and 7 seem to imply that ‘consent’ provides a *carte blanche* for data processing (pp. 116-117, 129), for example, Finck highlights that consent may be invalid under the GDPR if not ‘freely given’ (p. 98). An examination of the limits of this concept could have enhanced Arvind’s contribution further, particularly in light of his conclusion that the GDPR’s other tools could be effective if ‘freed from the framework of consent’ (p. 119).

Some overarching themes emerge from the volume, in particular the state-like power that personalisation provides to technology companies, and the inadequacy of ‘consent’ to protect autonomy in a personalised world. Since many of the contributors draw on the same theoretical frameworks, however, division of the volume *into* themes is difficult. The book is divided into four ‘parts’, but this structure is of limited utility (and consequently has not been followed in this review). Part II, for example, is entitled ‘Personal Autonomy, Market Choices and the Presumption of Innocence’, and is described as foregrounding ‘the voices of legal scholars’ (p. 27) – but chapters elsewhere in the book also have a strong legal focus, particularly chapters 9 and 10. Part 3, in which these two contributions appear, is entitled ‘Applications: From Personalised Medicine and Pricing to Political Microtargeting’, and is rather vaguely described as ‘situat[ing] data-driven personalisation

with various social domains and disciplinary discourses' (p. 28). In short, the selective reader is best advised to pick contributions on the basis of title, rather than by reference to the 'parts'.

In conclusion, the volume presents a collection of voices from diverse fields to tackle a pressing example of personal data being used to shape the world. The application of different lenses highlights the pertinence of a broad range of existing philosophical concepts and legal frameworks. Ultimately, most of the contributions point towards the need for policy changes: as the conclusion highlights, the collection is essentially a 'call to understand the potential of law to counter-balance the impact of personalisation on the social order as a whole' (p. 303). The book is therefore recommended for lawyers and policymakers, but the more abstract contributions should be read alongside the more practical.

Aislinn Kelly-Lyth  
University of Oxford