Epilogue: The Legitimacy and Practicability of EU Behavioural Policy-Making

Alberto Alemanno and Anne-Lise Sibony

Nudge and the Law took as a point of departure the growing interest, in both policy and academic circles, towards the use of behavioural sciences in policy-making. Our goal was to explore the major implications of such use for the legal system, in particular that of the European Union.

In this conclusive chapter we do not intend to summarise each individual contribution; rather, we aim to draw lessons on what EU law can learn from behavioural sciences from the examples reviewed in this volume. These lessons can be organised in two major lines of enquiry, which characterise the incipient nudge debate generally. Section I explores when is it legitimate for public authorities to use psychology and other related behavioural sciences to inform policy. Section II examines how can, in practice, behavioural insights be incorporated into the decision-making processes. While not all individual contributors have expressly addressed these queries, they have—if implicitly—taken a stance on those issues, which are central to the emergence of behavioural informed intervention. In line with the declared objective of our editorial venture, in this conclusive chapter, we strive to unpack our contributors’ major findings in order to provide a European perspective over both the issues of legitimacy and that of practicability of behavioural informed action. Where needed, we contrast it with the US-dominated nudge debate. Finally, we offer some conclusive remarks aimed at sketching the future research agenda of European scholars interested in the integration of behavioural sciences into the law.

I. Legitimacy

Given the portrayal of behavioural regulation as an instrument of an emerging manipulative, nudging state, the legitimacy debate surrounds—and sometimes monopolises—the public discourse prompted by nudging. It is therefore no surprise that a great deal of academic attention has been paid to the philosophical,
ethical and other abstract implications of such a prospect. The major concerns involve autonomy, dignity, and moral development as well as a less defined risk of manipulation. Several contributions to this volume build on this literature and add to the legitimacy debate by offering a European or, more specifically, an EU-oriented analysis.

In this section, we first build upon the reflections gathered in this volume around the issue of legitimacy of behavioural intervention in an attempt to reformulate the legitimacy debate in light of the European perspective (A). In particular, we discuss the need to rethink the relationship between autonomy and deliberation in the light of the notion of ‘choice architecture’ and that of ‘mental bandwidth’ (B). We claim that, given the inherent constraints to our own ability to choose, autonomy should be rethought. Several contributors to this volume share this conclusion and advance some recommendations to this purpose. We then highlight the importance of cultural differences in shaping the socio-legal context in which we discuss the legitimacy of behavioural interventions (C). Differences in administrative, legal, political and philosophical culture contribute to the formation of very different contexts, which in turn influence the legitimacy discourse on both sides of the Atlantic. We refer to this multifactorial and multifaceted phenomenon as cultural differences in regulatory philosophy. Finally, some concluding remarks highlight why and how the EU appears less likely to offer strong resistance to the use of behavioural insights in its own legal order based on legitimacy grounds.

A. Autonomy and the Inevitability of Choice Architecture

Autonomy is a central concern in any discussion on behavioural intervention. The classic ethical debate surrounding nudge starts with a principled defence of normative individualism, that is the ability to order our lives according to our

---


Epilogue: Future of EU Behavioural Policy-Making

decisions, which governs our modern constitutional states. Critics of behavioural policy-making argue that nudging constitutes an infringement on individual autonomy because, despite its choice-preserving promise, it inevitably involves an unacceptable substitution of individual preferences with government preferences. Such substitution—they claim—is only legitimate in a very limited set of circumstances. In the case of less visible behavioural interventions, this objection seems particularly strong.

According to this view, autonomy is reduced every time a policy intervention leverages an element of individual decision-making process other than deliberation. In particular, the claim is that autonomy is unacceptably reduced when a person could not uncover the manipulation even if she used her best effort to activate reflective thinking. In line with this argument, many object to any intervention aiming to change consumption patterns of energy, alcohol, or food by altering the defaults or providing information.

However, to fully address this critique of nudging it is necessary to unpack its premises, in particular the relationship it assumes between autonomy and deliberation. As highlighted by Baldwin, public nudging is not a monolith and must be broken down into at least three different categories depending on the impact of public intervention on individual autonomy. According to this perspective, first degree nudges consist of ‘mere’ provision of information (eg labelling), second degree nudges rely on biases and heuristics but can be detected (eg defaults), whereas third degree nudges shape decisions and preferences in a manner that is ‘resistant to unpacking’ (eg vivid warnings). If analysed against the autonomy critique, the first two categories of nudges appear less problematic than the third one. In general terms, this is the case because while the first two categories of nudges are predominantly directed to System 2, third degree nudges target instead System 1. The latter nudges being the most insidious, often acting at the visceral level, emerge as one of the most Machiavellic forms of intervention.

In the case of defaults, the possibility of an opt-out seems apt to address the liberal reservations typically associated with regulatory limitation of autonomy.

---

8 In this volume, ch 4 by Anne van Aacken expresses this view. On the difficulties associated with identifying these circumstances, see Conly (n 1).
9 R Baldwin, ‘From Regulation to Behaviour Change: Giving Nudge the Third Degree’ (2014) 77 MLR 831.
10 See in this volume, ch 3 by M Quigley and E Stokes, and ch 10 by A Alemanno. See also B Bogart, Regulating Obesity (Oxford, Oxford University Press, 2013).
13 See, eg Rebonato (n 1); White (n 1) ch 4.
By definition, a default rule—such as automatic enrolment in a pension scheme—enables the addressee to opt out and decide not to save. If the (formal) possibility to choose is the issue, surely that possibility still exists. Yet, according to some, this is insufficient to legitimise the underlying manipulation of a default change. Individuals should still be allowed to exercise actual choice regardless of the context in which they are called upon to make that choice.

The classic counter-argument to this perspective is that choice architectures have to be determined one way or another since neutral default scenarios do not exist. Thus, contrary to conventional wisdom, default rules such as automatic renewal for a magazine subscription, although typically disguised, do not fall from the sky but are the fruit of a deliberate choice of businesses. Therefore, behaviourally informed intervention can be legitimised by the need to offset the negative consequences stemming from the established defaults that do not promote the greater good but only the interests of the relevant industries. This is what underpins the regulatory strategy known as ‘debiasing through law’. As Jolls and Sunstein point out, this strategy is legitimate to address clear cases of errors (eg perception of risk different from statistical risk). Beyond this safe harbour—where behavioural intervention can hardly be criticised as a violation of autonomy—the legitimacy debate needs to take place on all interventions that more broadly seek to rely on behavioural insights in the pursuit of objectives considered legitimate by the public authorities. The whole space of behavioural intervention open to debate—from straightforward debiasing cases to more complex cases for intervention—is what we call public nudging. Public nudging is characterised by the intention to help people correct errors they may be subject to and avoid short sightedness in their choices. We find it helpful to have an additional, specific label for public interventions that respond to exploitative use of behavioural foibles by market forces. We call this ‘counter-nudging’. This notion tries to capture our belief that, when discussing legitimacy concerns about behavioural public intervention, regulation of private influence ought to be distinguished from pure government influence on people. This is because, as argued in the introductory chapter, these two types of behavioural intervention raise different objections and call for different levels of scrutiny.

---

14 ibid.
15 For the most recent formulation, see Sunstein, 'The Ethics of Nudge' (n 1).
19 As illustrated in our introductory chapter, these are circumstances in which even libertarians may agree on state intervention insofar as this may promote—rather than threaten—individual freedom. See in this volume, ch 1 by A Alemanno and AL Sibony.
20 See in this volume, ch 1 by Alemanno and AL Sibony.
21 ibid.
B. Autonomy and Individual Deliberation

In this volume, several contributions touch upon the relationship between autonomy, deliberation and legitimacy of public intervention. The classical autonomy arguments are presented by van Aaken. She argues that invisible nudges operating on the fast, unreflective, emotional system of thinking ‘entail a subtle form of manipulation by taking advantage of the human tendency to act unreflectively and, to that extent, are inconsistent with demonstrating respect for individual autonomy’. This argument assumes that conscious individual reflection is the touchstone of autonomy and asserts that, as a result, influencing individual decisions by targeting System 1 constitutes in itself an infringement on autonomy.

To see in what sense autonomy could be limited by behavioural intervention, one ought to consider not only the meaning of ‘autonomy’, but also that of ‘restriction’. To use an analogy with competition law, a restriction of competition is appraised in the light of the competition that is reasonably possible on a given market. This entails taking into account the constraints resulting both from market characteristics and existing regulation. There is only a restriction of competition if undertakings distort through their behaviour whatever competition can reasonably be expected in the context. Where no effective competition is possible, whatever undertakings do is not a restriction of competition. Similarly, a realistic appraisal of what counts as a restriction of individual autonomy on the part of public authorities should take into account what can reasonably be expected of humans making a decision in a given context. In other words, how much autonomy is likely to be exercised in a given context should matter when assessing whether and how much behavioural intervention restricts autonomy.

For instance, when purchasing a song online, extremely few people would deem it worth their time to read 68 pages of terms and conditions. In such a situation, it is entirely reasonable to assume that little attention will be expanded in making the decision to engage in the transaction. Behavioural consumer protection laws could prohibit lengthy text and mandate instead very short statements or icons. In a case such as this one, the objection to behavioural intervention in the name of autonomy seems entirely abstract and outright unconvincing. It is of course possible to argue that, by giving up on providing consumers with all the information needed to make a fully informed choice, behavioural consumer protection deprives individuals of an opportunity to exercise their autonomy. It is possible but lacks either common sense or good faith. The more reasonable view is that there is no restriction because consumers would in all likelihood not have availed themselves of the possibility of making a fully informed decision. Since life is too short to devote our time pondering upon every singly choice we face, our understanding of autonomy should be less idealised. Perhaps deliberation is not the only hallmark of autonomy.

22 Chapter 4 in this volume by A van Aaken.
We recognise of course that not all cases are as simple as the disproportionately lengthy terms and conditions. Where individual differences in behaviour are large or where their magnitude is unknown, it is difficult to assess what would ‘in all likelihood’ have happened. Only progress in empirical behavioural knowledge will bridge this analytical gap. Our point here is only to address what we feel is an overbroad use of the notion of ‘restriction of autonomy’.

Equally, we do not want to suggest that mandatory simplified disclosure is a miracle cure. People may of course still ignore information given to them in simplified, smarter form. Yet, if anything, such mandated simplification makes it more likely (not less) that the addressees—consumers in this case—will consciously take it into account and make a minimally but sufficiently informed decision. In this sense, harnessing the power of fast thinking—in our example by mandating more efficient communication of information—increases (from a very low baseline) the probability that autonomy is meaningfully (if not fully deliberatively) exercised.

Holding, on the contrary, that ‘autonomy’ is reduced every time intervention targets System 1 amounts to the paradoxical view that individual decision-making deserves, in principle, the same degree of protection against interference by government, irrespective of whether deliberate reflective choice or automatic decision-making is at stake. To embrace this argument leads to severing the link between autonomy and deliberation. Autonomy, then, would be characterised by the freedom to determine one’s goals—even mindlessly—and without distinction between immediate goals and possibly conflicting higher order or long-term goals. To us, this seems a singularly confusing and rather abstract notion of autonomy. Only individual choice fetishism can support such an overbroad understanding of the notion. Intuitively, some choices deserve more protection than others.

Behaviourally inspired interventions take it for granted that individual’s choices often do not reveal stable preferences. They maintain well-being as the normative criterion but detach the definition of well-being from individual, autonomous choice. This disconnect causes unease but overstretching the concept of autonomy begs the question of its real boundaries. For this reason, defining autonomy in terms of an absolute right to set one’s preferences over a range of outcomes is not very helpful. We propose instead to rethinking autonomy as a specific way of making decisions in a given context.

Under this view, a whole range of behavioural interventions would be neutral vis-à-vis the exercise of autonomy. Such would be the case of intervention that aims to change the outcome of individual decisions (eg to foster enrollment in a pension plan or joining an organ donor register) but does not purport to change

---


25 For a broader claim that, if we allow public authorities to make (certain) decisions for us (eg by changing the defaults), we gain not only in personal welfare but also in autonomy see, eg Conly (n 1). See also on this point, Sunstein, ‘The Ethics of Nudge’ (n 1).

26 This is however not necessarily true vis-à-vis other values, such as dignity. See McCrudden (n 3).
Epilogue: Future of EU Behavioural Policy-Making

how the choice is actually made. Nudging people when they would not deliberate does not reduce autonomy. Behavioural interventions rather steer behaviour within the sphere that people navigate using System 1. Nudges improve navigability in life: they do not awaken rationality but do not reduce the sphere of deliberation either. This seems to be true for all three types of nudges identified by Baldwin. Yet, besides behavioural interventions targeting either System 1 (framing, vivid warnings) or 2 (provision of information), there seems to exist a fourth category that seeks to prompt a switch from System 1 to System 2. Examples include reminders, but also choice prompts aimed at triggering a deliberative, instead of an automatic, choice. 27 This last category of measures (‘System 2 wake up!’ measures) are more intrusive because by prompting active choosing they interfere with the process of decision-making. 28 It may of course be legitimate to awaken rationality. It enhances autonomy in the classical sense, because it seeks to extend the domain of deliberation, but it is nonetheless intrusive. This is because, unlike mere nudging, it interferes with a second order choice: the choice of a mental process (automatic vs deliberative). Given the limited number of decisions we can take fully deliberatively, we need to select the instances for which we keep our scarce deliberative resources. This second order ‘choice’ is often unconscious though it can be made conscious. The decision-making pattern of an individual is shaped by environment and by experience. 29 It may be viewed as more intimate and more identity-defining than preferences regarding outcomes (think for example about reading/not reading an instruction manual: mostly this is experienced as a personality trait with which interference is not welcome). Although this is an empirical question in need of investigation, individual attitudes towards alternative ways of making a decision may well prove more stable than preferences. If this is so, the question is whether a meaningful notion of autonomy should include the freedom for every individual to decide what decisions she wants to take reflectively and what decisions she is happy to take automatically. This would seem to be a stronger defence of autonomy and one that would apply beyond nudges to other forms of behaviourally oriented intervention.

In this line of thinking, interference with cognitive processes—and in particular with the balance an individual strikes between decisions driven by System 1 and those shaped by System 2—should raise more legitimacy concerns than interference with preferences regarding outcomes. 30 In line with a more orthodox view,

27 Note this is not a new modus operandi for public intervention. Cooling off periods rely on the natural re-awakening offered by the granting of time ex post choice.
28 One may observe that also defaults, depending on how they are framed, might induce the regulatee to come to realisation that she might opt out and therefore trigger a switch from System 1 to System 2 decision process.
29 For an accessible account of such switches, see J Lehrer, How We Decide (Houghton Mifflin, 2009).
30 This is because preferences, unlike what is assumed in neoclassical economics, are not stable and do not characterise an individual. Decision-making patterns owe more to a person’s personality and life history. They constitute individual characteristics in a much deeper sense than preferences, which can be transient and superficial. As such, they deserve to be interfered with only with caution.
van Aaken in her contribution expresses the opinion that ‘It is hard to justify a state keeping its citizens in the “fast thinking” mode in cases where a “slow thinking” mode can be initiated.’\(^{31}\) The difficulty with this argument is scarcity of attention.\(^{32}\) We simply do not have the cognitive resources to take all the decisions slowly. Therefore, we—either individually or collectively—need to decide what set of decisions we take deliberatively and what set of decisions we take automatically.\(^{33}\) If people constantly had to make choices deliberatively, their autonomy would in fact be reduced.\(^{34}\) Therefore, respecting individual differences in the way people manage their limited ‘mental bandwidth’—to use the terminology of Mullainathan and Shafir\(^{35}\)—would seem a better, and more demanding agenda for those who wish to object to behavioural regulation on principled grounds. For our part, we think that interference with decision-making processes can be justified on policy grounds. Our point is that this kind of interference is the one that deserves more careful scrutiny than interference with so-called preferences, because ‘preferences’ are a construct that does not capture well what deserves protection from government interference both because those are often not deeply ingrained and because they are often the product of market forces.

As previously observed, and contrary to conventional wisdom, not all behavioural interventions target System 1 only. Many target both System 1 and System 2. Smart information disclosure requirements, for example, are specifically designed to ensure that choices are informed.\(^{36}\) They rely in part on the functioning of System 1 to catch our attention but do seek to prompt reflection about our preferred course of action in a way that dull disclosures do not (because they are ignored). In a situation of lack of information, limited information or bias, such behavioural interventions do not infringe individual autonomy.\(^{37}\) Under the classical view of autonomy (which is inherently related to deliberation), they rather make the decision more autonomous by rendering it more deliberative than the heteronomous decisions taken under the influence of choice architectures designed by corporations to serve private interests. Under the procedural view of autonomy just outlined, there is no reduction in autonomy when interventions seek to steer behaviour within the sphere that people navigate using System 2. Such is the case not only for the provision of information and defaults—which target System 2—but also for reminders and prompt choices—which although target System 1 aim at awakening System 2.


\(^{32}\) Mullainathan and Shafir (n 5).

\(^{33}\) In the absence of a collective decision, it is the market alone that is set to shape—through advertising and other marketing techniques—how individuals strike a balance between their deliberative and automatic selves.

\(^{34}\) Sunstein, ‘The Ethics of Nudge’ (n 1).

\(^{35}\) Mullainathan and Shafir (n 5).

\(^{36}\) Sunstein, ‘The Ethics of Nudge’ (n 1).

\(^{37}\) However, while a nudge might be justified when it helps countering a behavioural bias, such a bias is not a necessary justification for a nudge-type intervention. Sunstein, ‘The Ethics of Nudge’ (n 1).
This discussion shows that individual autonomy is in need of a rethink. Although autonomy is a fundamental value, its operationalisation in an age characterised by a rapid increase in cognitively-intensive tasks requires more nuanced views as to what individual decisions deserve protection from interference by government. As a matter of fact, not all decisions are equally deliberative. Normatively, it is not equally important that all individual decisions be taken more reflectively. This implies that prompting deliberation, while often viewed positively, does not always enjoy the same degree of legitimacy. Autonomy, if it is to remain a meaningful value, should not require conscious, active and deliberative choice all the time. The protection of autonomy, which ought to be provided by constitutional rules, needs to be devised in a flexible way so as to allow individuals, businesses, and public authorities to deal with bounded rationality in the pursuit of their respective legitimate goals.

In other words, those concerned with autonomy should not confine their argument to the abstract availability of choices; they should consider the distinct imperative to respect the balance between those decisions we want to take deliberately and those that we prefer to take automatically. It is for each individual to strike a balance between these modes of decision-making. Arguably, this is a dimension of individual autonomy that deserves closer consideration in the discussion on the legitimacy of public nudging and perhaps more generally. As we cannot realistically decide everything in life in a deliberative manner, deliberation cannot be the touchstone of what we value and protect in individual decisions under the name of autonomy. Instead, the focus should shift to when and how we accept to be assisted or influenced in our decision-making, either by private or public intervention. In this perspective, behaviourally informed intervention will appear problematic in far fewer circumstances than is generally thought because it generally improves navigability of choices. This revised perspective on autonomy does not however legitimise all behavioural interventions. If this were the case, the new perspective would be useless as it would amount to neutralising autonomy as a normative criterion to assess the legitimacy of public intervention. This is not what we have in mind. Rather, we invite lawyers and philosophers to look into what could be called a procedural conception of autonomy—where the term does not refer to legal procedures but to decision-making procedures. Future research should aim at identifying more precisely what restricts autonomy in a world in which autonomous decisions cannot realistically be equated with decisions taken in a fully deliberative manner.

C. Publicity and Collective Deliberation

A related but distinct element in the autonomy discourse is the level at which the relevant deliberation takes place. In the classical argument just discussed, the focus is on individual deliberation. Yet, one critical question for behaviour change strategies in any policy area is how targeted population groups are collectively involved
in the decisions that are taken as well as in the associated development, implementation, monitoring, and evaluation of strategies. As noted by Jolls and Sunstein,

there is no reason to think government would have to conceal or make ambiguous its efforts to correct people’s errors. Citizens need not be disturbed to learn what government is doing, and there is no reason for regulators to keep their efforts secret.\textsuperscript{38}

Over and beyond error-correcting intervention, a ‘publicity principle’ should apply to all choice architects, public and private alike.\textsuperscript{39} Since lack of transparency is what renders an action ‘manipulative’, the publicity principle emerges as the most promising strategy to avoid behavioural interventions being dismissed as ‘manipulations’.\textsuperscript{40}

Several contributors to this volume highlight the importance of developing behavioural inspired approaches capable of enhancing people’s capacity to deliberate and make conscious decisions.\textsuperscript{41} Quigley and Stokes identify the most immediate consequences flowing from the adoption of a behavioural informed approach in EU law. They warn that turning to behavioural science for greater effectiveness and legitimation may bring its own set of ambiguities, which need to be properly addressed, not glossed over. In particular, they argue that nudging may exacerbate tensions between, on the one hand, efforts to improve the visibility and evidence base of EU action, through procedures such as regulatory impact analysis (RIAs) and, on the other hand, reliance on behaviourally savvy interventions based on non-transparent manipulation of choice environments. In our view, such conflicts between transparency and efficacy, when they arise, need to be dealt with in an open and transparent manner. It would be worth asking people in Europe (and perhaps elsewhere) if they would in principle, or in specific instances, consent to laws and regulation that take their fallibility into consideration. Our hunch is that they may very well do (we realise that this is a difficult claim to test as framing of the question would be crucial).\textsuperscript{42} After all, most citizens—despite widespread present and optimism biases—do not think of themselves as supercognisant \textit{hominis oeconomici}.

Feldman and Lobel offer an additional and converging argument in favour of openness and publicity. They base their claim in favour of designing more conscious behavioural interventions on grounds of procedural justice and on the expressive function of the law. In their view, when the law creates a choice

\footnotesize{\textsuperscript{38} Jolls and Sunstein (n 18) 231.}
\footnotesize{\textsuperscript{39} R. Thaler and C. Sunstein, \textit{Nudge: Improving Decisions about Health, Wealth and Happiness} (New Haven, Yale University Press, 2008) 244.}
\footnotesize{\textsuperscript{40} This is however not to deny that even with full transparency there is a risk of some degree of manipulation. Sunstein, ‘The Ethics of Nudge’ (n 1).}
\footnotesize{\textsuperscript{41} See in this volume ch 2 by Di Porto and Rangone, ch 3 by Quigley and Stokes, ch 4 by van Aaken, as well as ch 13 by Feldman and Lobel.}
\footnotesize{\textsuperscript{42} The European Commission Joint Research Center entrusted one of us (Alemanno) to run a mapping exercise aimed at gaining an understanding of the practice, perceptions and institutional designs of behavioural informed approaches across the EU. A report is expected to be published by the end of 2015.}
architecture, there is a risk that its expressive function is de-activated. As a result, the law would shape behaviour but not its underlying values. This, they argue, does not only reduce deliberation; it may also change the function of the law.

While we are aware of the limits of current EU practice of RIAs, we believe nevertheless that a fully-fledged regulatory impact assessment, inclusive of RCTs, would constitute the privileged framework for incorporating behavioural considerations into EU policy-making. A revised framework for impact assessment should be equally open to the consideration of all regulatory tools, as traditional tools initially put in place with no particular regard for behavioural insights may very well prove behaviourally sound.\(^{43}\) Within this process of regulatory analysis, behavioural considerations may not only allow policymakers to consider a broader set of regulatory options and test their effectiveness through RCTs, but also to empower citizens to have a say through the public consultation process accompanying IAs. This might increase the accountability of the regulatory outcome and most importantly address the ‘manipulation’ concern often raised vis-à-vis nudge-type interventions.

D. Cultural Differences in Regulatory Philosophy

At a very general level, the sentiment on the relationship between governmental action and autonomy, although largely underpinned by political philosophy considerations, is considerably shaped by culture. As Europe and the United States differ considerably in relation to their general perception of libertarian arguments, the legitimacy debate surrounding the behavioural intervention presents different contours. ‘Many Americans abhor paternalism’.\(^{44}\) This is why in the US it makes sense to brand nudging as ‘libertarian paternalism’: ‘libertarian’ makes paternalism more acceptable. In Europe, fewer are bothered by paternalism and tagging a policy proposal as libertarian is a lot less likely to constitute an effective marketing strategy. Indeed, such branding may well be counter-productive as, in many European countries ‘libertarian’ is considered extreme and even ‘liberal’ is loaded with antisocial connotations.\(^{45}\) Libertarian and liberal are polarising rather than consensual terms in the public debate.


\(^{45}\) Libertarianism is a comparatively extreme form of liberalism that emphasises the value of individual autonomy and liberty. See E Mack and GF Gaus, ‘Classical Liberalism and Libertarianism: The Liberty Tradition’ in GF Gaus and C Kukathas (eds), Handbook of Political Theory (London, Sage, 2004).
Europe does not only offer a specific institutional context, posing its own challenges for testing, implementing and embedding behaviourally informed policies. It is also a unique, composite polity, in which, as the above example suggests, words do not always carry the same connotations or even meaning than in the US. Such differences in word use are not only of academic interest. They can have practical consequences, notably because what is politically realistic creates an often implicit filter through which even scholars view what lessons from behavioural sciences could profitably be put to use in the sphere of rule-making. In the US, scholars who present their research as behavioural law and economics may have ‘trimmed their sails’ by discarding from their analysis insights from psychology that support policy intervention of a kind they are not keen to advocate or do not judge politically viable. In Europe, where there is only a niche market—with less demand and as a result less supply—for non-paternalistic policies, the same filters are less likely to apply. The EU may well offer waters where it will be possible hoist the behavioural sails more fully. This is all the more so that legal culture in Europe appears welcoming to behavioural insights. More specifically, as Cserne points out, one distinctive characteristic of EU law is its goal-oriented nature and broad reliance on purposive, consequence-based legal reasoning (‘effet utile-style’). These traits are not only compatible with but compellingly calling for a non-formalistic, empirically-driven approach to law. In brief, it almost comes naturally, especially in the light of the objectives pursued by the Union, to look at EU law as a policy instrument for the pursuit of a better life.

The technocratic character of EU law-making constitutes a further relevant characteristic to assess the porousness of EU legal system to behavioural insights. Behavioural informed intervention is inherently technocratic, and it does not require per se the participation of citizens. Yet given the dual democratic legitimacy of the EU—which lies in both representative and participative democracy—the top-down, technocratic-like intervention might prompt resistance to nudging. Therefore, the legitimacy of this particular form of behavioural informed intervention depends on citizens’ acceptance of the technocratic and ‘manipulative’ nature of the policy as well as on citizens’ trust in the ‘choice architects’. In other words, the legitimacy critique boils down to the question of how comfortable citizens are with having experts and bureaucrats designing policies that reorient

---

46 See also in this volume, ch 1 by A Alemanno and AL Sibony.
47 See the discussion in ch 13 by Y Feldman and O Lobel.
49 Using the singular does not suggest that the legal culture is uniform across Europe. On diversity within European legal culture, see G Helleringer and K Purnhagen, Towards a European Legal Culture (Nomos, Hart Publishing, 2014).
50 See in this volume, ch 12 by P Cserne.
51 Art 3 TEU reads: ‘The Union’s aim is to promote peace, its values and the well-being of its people’.
the exercise of their individual autonomy.\textsuperscript{53} At this juncture, cultural differences between Europe and the US certainly play a role: while this deserves closer attention from political philosophers and political scientists and possibly a few qualified, Europeans appear on the whole more tolerant of paternalist bureaucrats than Americans.\textsuperscript{54}

To sum up, while there is common ground between the EU and US when discussing the legitimacy dimension of behavioural intervention, the normative baselines for approaching it are clearly different. Given its socio-legal and political context, the EU is less likely to offer strong resistance to the use of behavioural insights in its own legal order. While institutional practice does not yet show widespread use of cognitive based regulatory intervention, the growing interest for behavioural studies at EU level—but also in a growing number of Member States\textsuperscript{55}—does lend some support to our claim.

II. PRACTICABILITY

Once the legitimacy concerns have been overcome, the remaining questions pertain to how to effectively integrate behavioural sciences into policy-making. In other words, how can behavioural insights be used given the current state of science on the one hand and legal constraints on the other? That is what we mean for practicability of behavioural informed intervention.

While behavioural sciences demonstrate the limits of rational action and provide a better understanding of human behaviour, there is no ready-made framework for incorporating their insights into policy-making.\textsuperscript{56} This represents a challenge for both legal scholars, whose job is to design bridges between behavioural insights and the law, and policymakers, whose mission is to walk those very same bridges when making laws. Policy-making is context dependent. Policymakers should have regard to the scientific validity underlying behavioural findings. Yet this aspiration to scientific rigour does not lead to a unique model of behavioural policy-making and the different cultural and social settings will play a role.\textsuperscript{57} Operationalisation

\textsuperscript{53} We have addressed this concern and attempted to offer a solution in the previous section, (C) ‘Publicity and Collective Deliberation’.


\textsuperscript{55} See in this volume, ch 1 by AAlemanno and ASibony.


\textsuperscript{57} According to Dunlop and Radaelli, however, they also exist as endogenous factors shaping the integration of behavioural insights into policy-making. This would be due to nine different biases that may affect the outcome of regulatory impact assessment and, in particular, play to the detriment of the ‘do nothing’ option. To correct this activism bias, they argue that it is important to include behavioural insights in training of the policymaker and make concrete proposals on how this can be done. See ch 6 by CDunlop and CRadaelli.
of behavioural insights therefore calls for an analysis of two distinct dimensions: methodological challenges of behavioural policy-making and institutional requirements.

A. Methodological Challenges to Ensure Effectiveness

The promise of behavioural informed policy-making is to increase effectiveness of policies. However, critics put forward that one should not be too quick to infer improvement of policy outcome from the use of generalisations of existing empirical studies. In fact,—as demonstrated by Feldman and Lobel—science provides many more insights than just the few lawyers tend to focus on when they first discover a field such as behavioural studies. The gist of the critique is common to any legal use of science; it consists in a sound questioning of the proper inferences that can be drawn from empirical studies to inform the law. Issues to consider pertain to relevance of empirical data for legal use, internal and external validity of studies, as well as robustness. All of these issues deserve to be put in perspective. The history of using science in law tends to repeat itself and is made up of cycles of irrational hopes on the part of lawyers that science will help solve the problems they face, followed by disappointment when it becomes clear that science answers different questions. To break this cycle, policymakers and lawyers need to adjust their expectations of what science can bring to their pursuits and recognise how much still needs to be decided without the support of science.

In relation to legal use of behavioural insights, five major difficulties arise. First, the ecological (or external) validity of experiments can be questioned: behavioural sciences are fundamentally empirical and extant studies do not always analyse heuristics and biases in contexts that are relevant for regulation. For example, consumers in a supermarket do not necessarily behave like students who are required to perform tasks on a computer in a lab. As a result, it cannot be assumed that real life agents fall victims of the very same cognitive errors made by experimental subjects or that they do to the same extent. This limitation is difficult to overcome because we lack a theory of cognitive function that could help predict how real life decisions are taken. Because rational consumers with certain specific preferences and irrational consumers can end up making the same choices (eg of credit

58 See ch 13 by Y Feldman and O Lobel.
59 See ch 3 by M Quigley and E Stokes.
60 An experiment is said to have external validity when its outcome can be generalised to a real-world setting, outside the laboratory. It is said to have internal validity when the outcome of the experiment is not due to external factors that were not taken into account and measured in the experiment, ie when it reliably establishes a causal relationship between variables.
61 Robustness describes the possibility to reproduce experimental results with different data sets.
card contract or phone plan), policymakers cannot know which fraction of the observed behaviour is the product of bias rather than rational choice. A distinct but related concern about ecological validity is to do with the fact that relatively little is known about the sensitivity of the human cognitive and emotional foibles to cultural differences. This issue is particularly weighty in the European context, where the same legislation applies from Portugal to Poland. More studies will be needed to distinguish universal from culturally-sensitive biases before the results of studies conducted in one country can be extrapolated to others.

Second, the temporal dimension of influencing mechanisms is often overlooked. Many studies document immediate effect of context on decision but leave open the question of how lasting the effects measured are. This is exemplified by mandatory information schemes, such as pictorial warnings used in tobacco products. The effectiveness of warnings tends to decrease over time as the novelty effect wears off. More critically, the specific effects of behavioural-change policies are difficult to discern from those stemming from the overall policy action, which may also include non-behavioural-informed action.

Third, studies that evidence the existence of a bias are rarely informed about how widespread that bias is in the population. This is generally referred to as the heterogeneity problem. Citizens differ in the degree to which they display various biases, due to individual characteristics but also experience. Actual consumers are more experienced than experimental subjects insofar as the latter usually face the experimental task for the first time. Individuals also differ materially in their cognitive styles, some being more analytical and others more intuitive. In addition, the current behavioural studies commonly test for one bias at the time. However, given the possibility that several biases affect an agent’s choice at the same time, policymakers should be aware of the ‘many bias’ problem. Moreover, behavioural studies may not indicate how intense a distortion of decision patterns the bias causes. This raises the question of whether debiasing intervention is warranted where one lacks knowledge about the extent of the problem to be cured. From a policy standpoint, the issue is not only whether the benefits exceed costs. Distribution effects are also difficult to assess: if, for example, one seeks to protect consumers from making a certain type of mistake, the intervention will likely impose costs on regulatees and, ultimately, on the consumers who did not need the protection in the first place, because they might be capable of debiasing themselves.

Schwartz, ibid, names this problem ‘observational equivalence’: rational consumers and irrational consumers behave in ways that are ‘observationally equivalent’ from the point of view of the regulator.


See, eg Schwartz (n 64).

Fourth, public authorities seem to lack a full picture of the fields of behavioural research that must shape the policymaker’s toolbox. ⁷⁰ This is largely due to a narrow reading—sometimes use ⁷¹—of the relevant behavioural literature that has been studied by the proponents of behavioural informed policy-making and taken up by governments. As result of such a selective understanding of behavioural insights, policymakers may enact limited and sometimes inadvertent policy recommendations that are based on a partial view of the scope and potential of the various branches of psychology. Trade-offs between different types of solutions are pervasively present in the adoption of policies addressing social challenges. In order for policymakers to become wiser consumers of the discipline of judgement and decision-making, ⁷² they must be better trained to recognise these trade-offs.

The fifth challenge posed by legal use of behavioural insights is linked to what may be called the granularity gap. Legal rules are general. Psychologists focus instead on context-dependence: they study how various contextual parameters influence decisions. Yet, the law needs to be written to apply in a variety of contexts. Rules cannot distinguish beyond a certain level of detail and, due to the inherent coarseness of legal categories (e.g., professional seller and consumer), they cannot account for a myriad of circumstances, which may weigh on individual decisions (e.g., the colour of the background of an e-commerce website, the music in a restaurant). This implies that a wealth of behavioural knowledge might be too detailed to appear on the radar of lawyers, who observe the world through a low-resolution screen.

To address these concerns, it has been proposed that behaviourally informed interventions be tested prior to any large-scale and general implementation. ⁷³ The aim of a behavioural study is to gain a better understanding of how people act and sometimes think and feel too. Several methodologies are currently used for putting policies to test. The most widely used method is surveys. They consist in questioning a large sample of individuals about their attitude, beliefs and expectations through a questionnaire. While the way in which the questionnaire is framed may greatly influence the outcome, surveys generally score high in terms of external validity as they capture what people ‘out there’ think. Yet, because stated preferences may not coincide with revealed preferences (the intention–action gap), surveys are not always the best instruments to predict how people will act in practice. Experiments constitute a second method, which partly addresses the major limitation of behavioural surveys. An experiment reconstructs in the controlled environment of a lab a decision context that bears some resemblance to a policy relevant situation. It is then designed to measure how subjects respond to a change.

---

³⁰ See ch 13 by Feldman and Lobel.
³¹ Bubb and Pildes (n 48).
³³ The leading guidance is offered by the UK Behavioural Insights Team and is called EAST (Easy, Attractive, Social and Timely). See UK Cabinet Office/NESTA, ‘EAST, Four Simple Ways to Apply Behavioural Insights’ (2013).
in one element that mimics a policy choice. This enables us to draw conclusions on the effect of the manipulated element on participants’ actual behaviour. By identifying cause-and-effect relationships, experiments may provide reliable results that are replicable in different places and at different times. Because laboratory experiments involve relatively small samples, it is crucial that they be designed so as to ensure their representativeness of the real world. However, ideally, behaviour should be observed in its real environment as opposed to laboratory settings. The methodology enabling such an observation is generally referred to as randomised control trial (RCT). In line with a feature of medicine established since the last century, this methodology is aimed at empirically testing different policy options, measure and compare outcomes. RCTs are specific experiments in which the efficacy of an intervention is studied by comparing the effects of the intervention on a population that is randomly divided into groups. The groups are exposed to a differential course of treatment: one of them—the control group—is not treated (or receives a ‘placebo’), whilst the other group—the intervention group—is exposed to the ‘treatment’. The impact of the intervention is then measured by comparing the results in both groups.

The rationale behind the extension of RCT from the pharmaceutical sector to that of public policy-making must be found in the promise of highly effective results of behavioural intervention at low cost. A behavioural intervention is said to ‘work’ when it is capable of producing the desired change in behaviour on the targeted population. It is against this backdrop that controlled experiments on new regulatory measures are set to become the new benchmark to assess the real impact of a proposed governmental intervention. The emerging use of RCTs in policy-making is therefore perceived as an approach capable of assessing in concreto the impact of regulatory measures, in contrast to conventional regulatory impact analysis (RIAs). RIAs are traditionally performed on the basis of prospective, and therefore theoretical, calculations of costs and benefits.

It is, however, not always possible to run RCTs and therefore other methods, such as survey, experiments as well as qualitative research techniques, can be used to appraise new behavioural policy proposals.

---


78 These include several research methods, used in qualitative behavioural sciences, such as focus groups, semi-structured interviews and participant observation.
Although no specific methodology to assess behavioural informed interventions has imposed itself, the use of RCTs and other supporting evidence might contribute, by becoming easily reproducible in different jurisdictions, to render behavioural policy-making scalable in nature. While the methodological difficulties that we have illustrated in this section seems to mitigate the universalistic narrative that is currently characterising the nudge discourse and facilitating its rapid diffusion, they also urge the scientific and policy community to embrace a culture of policy testing.

B. Institutional Design of Behavioural Policy-Making

The question of how to best organise the integration of behavioural policy-making within current governmental settings is also particularly relevant in today’s cognitive based regulation debate. The UK, being the first mover, seems to have set up the golden standard for behavioural institutional design: a dedicated unit, the Behavioural Insights Team (BIT), initially placed within the Cabinet Office, and made of few experts, specialised in several behavioural disciplines, who work in direct contact with the different government departments. When advising public administrations or charities on the integration of behavioural insights, the BIT relies on a wide range of practical measures to change citizens’ behaviour, spanning from re-wording the content of letters sent by public authorities to taxpayers to using small ‘thank you’ gifts to reward charitable donations. An institutional experience whose development appears almost antithetical to that of the UK can be observed in Denmark, where a bottom-up organisation, called iNudgeU, animated by academics, civic advocates and behavioural professionals, has created a self-proclaimed Danish Nudge Network. Interestingly enough, while the BIT has acquired its autonomy from the Cabinet Office and been granted a private sector status, the Danish Nudge Network has progressively been incorporated into the Danish Government. If they differ in the chronology and direction of change between public and private sector, both experiences however have in common that

82 A similar experience emerged in Norway where the Stordalen Foundation launched green nudges.
83 The Unit still provides services to the UK Government but also to private sector entities and foreign governments. www.behaviouralinsights.co.uk/.
a dedicated unit has been created. An alternative or complementary model would be to educate policymakers in government departments on a wider scale.\footnote{CR Sunstein, ‘Nudging: A Very Short Guide’ (2014) 37 Journal of Consumer Policy 583, 587.}

Across Europe, the level of nudge awareness is very diverse:\footnote{At the time of writing the European Commission is engaged in a mapping exercise aimed at collecting practices of behavioural policy-making across its Member States. Its outcome is expected to be published in the form of a report by the end of 2015.} in many countries, the initial excitement about the novelty of behavioural sciences and its innovation potential has not yet reached the policy-making circles, let alone legal academia. We might call this the pre-nudge stage, meaning that the eponymous book has not yet been widely read. A second circle is made up of countries in incipient nudge stage, where awareness of behavioural regulation is present but restricted to very restricted circles. In this category, Germany\footnote{In Germany, the Government announced it was hiring psychologists, behavioural economists as well as anthropologists to test new methods of ‘efficient government’, P Plickert and H Beck, ‘Kanzlerin Angela Merkel sucht Verhaltensforscher’, FAZ, 26 August 2014, www.faz.net/aktuell/wirtschaft/wirtschaftspolitik/kanzlerin-angela-merkel-sucht-verhaltensforscher-13118345.html.} and France\footnote{www.modernisation.gouv.fr/les-services-publics-se-simplifient-et-innovent/par-des-services-numeriques-aux-usagers/le-nudge-au-service-de-ction-publique.} have shown some sign of interest for behavioural policy-making, but, at the time of writing, it is not clear whether they will go as far as to set up dedicated units. In the Netherlands, the Scientific Council for Government Policy (WRR) recently published a report entitled Policy-Making with Knowledge of Behaviour.\footnote{Thanks to Frederik Borgesius for the translation and for bringing this to our knowledge. The report (in Dutch) is available on the WRR website: www.wrr.nl/publicaties/publicatie/article/met-kennis-van-gedrag-beleid-maken/.} The UK, and partly Denmark, represent a more mature nudge stage, where cognitive based interventions are tested, used and publicly debated. No country seems to have reached a post-nudge stage yet. Of course, these stages—and possibly others that would need to be added—form a continuum. In addition, there may be different styles of nudge maturity. In the European context, the development of Member State expertise about behavioural regulation progresses in parallel with developments at EU level. In time, this may raise questions regarding the federalism of behavioural regulation.\footnote{See ch 3 in by M Quigley and E Stokes.} In particular, it will be interesting to observe whether and how behavioural arguments may be brought to bear on subsidiarity appraisal, for example, if Member States can establish that, in some policy areas, different behavioural patterns justify regulation at national rather than at EU level.

In the meantime, the European Union established a ‘Foresight and Behavioural Insights Unit’, which is located within the EU Commission Joint Research Centre. The unit’s raison d’être is to centralise the efforts currently undertaken by some Directorates General of the EU Commission, such as DG Consumer Protection and Health (SANCO), to integrate behavioural insights into EU policy-making. By overcoming the current institutional fragmentation, the unit is expected to develop a robust methodology and to foster a behavioural mindset among the
EU Commission civil servants. It remains to be seen what influence this institutional effort will have into the EU administrative culture and whether it will affect the national level. For the time being, the EU ‘Nudge Unit’ has not yet decided which of the various institutional design models to embrace—if any. Given the EU constitutional and institutional specificities, one cannot rule out that the EU will develop a new, autonomous model.

Also the OECD is showing some interest for behavioural approaches to regulation. After the publication of a report on Behavioural Economics and Policymaking, the OECD is set to include ‘behavioural economics’ in its 2015 Regulatory Policy Outlook. One may therefore expect the OECD to recommend its members to tap into the potential of behavioural findings when conceiving their better regulation agenda. Given the OECD’s success in promoting innovative regulatory approaches, its embrace of behavioural regulation could be instrumental to the diffusion of a behavioural orientation to governments of its member countries.

The benefit of behavioural insights is not reserved to rich countries. The World Bank placed behavioural approaches at the centre of its World Development Report 2015. By integrating a behavioural perspective on development policy, this report provides a richer understanding of why people save, use preventive health care, work hard, learn, and conserve energy. It provides a basis for innovative and inexpensive interventions and highlights the following elements for policy attention: the role of choice architecture; the scope for social rewards; frames that influence whether or not a norm is activated; information in the form of rules of thumb; as well as opportunities for experiences that change mental models or social norms.

While it might be too early to salute the emergence of a global behavioural policy-making movement, there is clearly a common trend among this set of recent initiatives taking place at national, European and international level.

III. CONCLUSIONS

Contributions to Nudge and the Law individually and collectively demonstrate that the dominant policy models in the EU are based on a rather naïve understanding of what drives behaviour. These models assume people tend to make insightful, well-planned and informed decisions guided by considerations of personal utility. This assumption seems shared across policy areas. Behaviourally informed policy-making is instead cognisant of the role played by framing and defaults, by the gap between intention and action as well as by the many other perceptions, impulses, judgements, and decision processes that characterise human decision-making. It

92 For an analysis of the political economy of nudging, see HW Micklitz, The Politics of Behavioural Economics, 31 January 2015 (on file with the editors).
is against this backdrop that behavioural insights, by providing a more nuanced, realistic account of how people make decisions, may offer European Union law a fertile ground upon which it can develop more effective, less costly policies making life easier for most citizens.

Yet the promises accompanying the emergence of behavioural policy-making must be analysed—in the European Union as elsewhere—in the light of the two most serious sources of reservations that this phenomenon has prompted thus far: its legitimacy and practicability.

The legitimacy challenge for behavioural regulation can be viewed through the prism of two trade-offs: first, between the desire to preserve autonomy and the inevitability of ‘choice architecture’ and, second, between the aspiration to reflective decision-making and the reality that ‘mental bandwidth’ is a scarce resource. The framework that is needed to approach these challenging trade-offs should include the need not only to respect individual deliberation but also openness and collective deliberation. This is where the practical challenges of behavioural policy-making, and more specifically, those of institutional design reside.

Although there is no single ready-made framework for incorporating behavioural insights into policy-making, several efforts have been undertaken to assist policymakers in determining whether and how to consider behaviour when legislating. On the one hand, policymakers are increasingly getting acquainted with several methods for conducting behavioural studies, such as experiments, survey, and RCTs. On the other hand, while no institutional framework emerges as preferable over the others, several options exist to design institutional settings capable of ensuring some behavioural consideration in policy-making. Policymakers can count on several institutional approaches when it comes to refine their understanding of human behaviour in the policy process, be it a dedicated unit within government or a looser network of experts providing on-demand advice to government.

The current approaches display shortcomings: the lack of a cognitive theory, the absence of a framework for deciding in face of heterogeneity at the population level and the difficulties to extrapolate from extant behavioural studies. They also share a positive common feature: they strive to inject a culture of testing and experimentation into policy-making. As such, they belong to a broader trend aimed at inserting evidence into policy-making in order to invest limited public funding into those policies that ‘work’. This trend is effectively conveyed by the title of a recent book: *Show Me the Evidence*. Rather than relying on anecdotal evidence or, what is worse, emotions, behaviourally informed regulation tends to emerge as more evidence-based than conventional regulation. Importantly,

---


94 Yet this is not to suggest that policymakers should automatically infer from behavioural studies that ‘everyone is crazy or everyone is sane’. Policymakers must realise that in the absence of a cognitive theory they cannot sensibly make inferences from subjects’ laboratory choices to real life context. Schwartz (n 64).
behavioural sciences broke the monopoly of economics as the only social science that is recognised as relevant and useful by policymakers. That is where the major promise of behavioural regulation lies in today EU’s policy-making: a more open and evidence-informed approach to policy development.

Several constitutional traits of the European Union suggest that its policy-making could not only accommodate but also benefit from the integration of new bodies of evidence, such as behavioural sciences. First, the goal-oriented drive behind EU policy-making seems particularly prone to empirically driven approaches to law. Second, the fact that EU legislation is initiated by the Commission, a technocratic, non-elected body endowed with sizeable resources and largely insulated from immediate political pressure, may be conducive to evidence-based experimentation. Third, the tension existing between the competence of the EU and that of its Member States, which is typical of any federal system, might find comfort in the integration of a body of knowledge capable of injecting fresh empirical guidance on how to draw, interpret and operationalise that demarcation line. The appeal of behavioural-informed approaches should not lead us to underestimate the significance of their effects on legal systems. While behavioural considerations may allow policymakers to consider a broader set of regulatory options and test their effectiveness through RCTs, their use should be subject to public as well as constitutional scrutiny so as to increase the accountability of the regulatory outcome.

Despite the potential role that behavioural insights might play in informing EU policy-making, research on the proper and appropriate use of behavioural insights in policy-making is still in its early days. In Europe, a lot of work remains to be done. Without ruling out that they may be similarities with questions discussed in the US context, this volume demonstrates that the approach undertaken by the US-dominated scholarship on behaviourally informed intervention is not always best suited to address legal and policy issues in the EU. It is by keeping in mind this caveat that we hope to have made a case for more joint involvement of EU legal scholars and empirical researchers into this promising interdisciplinary field of study. Lawyers may indeed significantly contribute to development of behavioural policy-making. First, by complementing the role played by economists or other experimental researchers—in particular psychologists—, they can raise a set of legally relevant questions in the design of behavioural experiments. Second, lawyers may contribute to provide context to the conception and execution of those experiments thus contributing to render them less abstract and more policy-relevant. Third, lawyers as well as other actors involved in the legal

96 We echo here the call of Tor for an increased breadth of behavioural law and economics (beyond the US and beyond the fields of law that have drawn most scholarly attention so far). A Tor, ‘The Next Generation of Behavioural Law and Economics’ in Klaus Mathis (ed), European Perspectives on Behavioural Law and Economics (Heidelberg, Springer, 2015) 17.
profession, such as judges and policymakers, may also offer a privileged yet largely unexploited sample for some behavioural testing.\textsuperscript{97} They may contribute to encourage true cross-cultural behavioural studies by broadening the sample so as to render it more representative. To sum up, behavioural informed intervention needs lawyers as much as lawyers need behavioural considerations in their action.

It is in the light of the above that we hope that the chapters of this volume will be of use to future scholars. We view them as invitations to engage with the research agenda that we have strived to outline in this volume with the help of our contributors.

\textsuperscript{97} Student bodies have come to be the predominant study population for many psychology and behavioural researchers. However, a recent survey of the psychology and behavioural economics literature suggests that American college students are outliers, quite atypical of the world population. See ‘The University Student as a Model Organism’ (2010) 13 Nature Neuroscience 521.