Policy-led Virtue Cultivation: Can we nudge citizens towards developing virtues?[1]

Forthcoming in: *The Theory and Practice of Virtue Education* (eds. Harrison and Walker)

Abstract

This chapter examines what role, if any, new governmental behaviour-modification policies, commonly known as *nudges*, might play in cultivating virtues. It distinguishes between two types of nudge – *automatic-behavioural* and *discernment-developing* – and shows that what divides them is the ability of the latter, which the former lacks, to play an educative role in developing practical reason. In so doing, it outlines and defends what it calls the *socio-ecological account of critical habituation*. It thus provides an answer to the question of whether virtue-cultivating nudges are possible, while remaining neutral on whether virtue cultivation is, or under what conditions it may be, a permissible aim of liberal-democratic states.

I. Introduction

In recent years, policymakers have become increasingly interested in a set of behaviour-modification techniques, now commonly known as *nudges*, grounded in and justified by reference to evidence from the cognitive and behavioural sciences.[2] This evidence suggests that a significant part of our everyday behaviour and decision-making is the result of the interplay of cognitive heuristics and situational factors, making it more automatic and context-dependent than classic accounts of human agency allow. Such knowledge has made it possible to design "choice architecture" to work with the grain of these psychological processes, with the aim of promoting individual and social well-being (Thaler and Sunstein 2009). The task for political theorists, in

---

[2] In May 2010, the United Kingdom established the Behavioural Insights Team within the Cabinet Office, its mandate being "to help the UK Government develop and apply lessons from behavioural economics and behavioural science to policymaking" (it was semi-privatized in early 2014). In late 2015, President Obama issued an Executive Order directing federal agencies to incorporate behavioural and social science into their policymaking logics; and the establishment of the Social and Behavioral Sciences Team followed soon after. Other countries, such as Germany and Australia, have created similar policy teams.

response to this new policymaking logic, is to examine what forms of nudging are morally permissible, or even morally required, within a liberal-democratic state. Let's call this the *permissibility question*.[3]

One way of thinking about this question that has not yet received any attention is to examine the interaction between this trend in policymaking and the move in moral philosophy toward a renewed interest in virtue and the consequences of this for how we think about moral improvement. On a virtue-ethical account, arguably the most plausible answer to the permissibility question is that these interventions into citizens' beliefs and behaviour would need to be compatible with creating and sustaining the conditions conducive to developing the virtues and leading a virtuous life. According to this view, the welfare-promoting aim of nudges would be understood in terms of promoting one's ability to live a flourishing life by supporting the cultivation of virtues.[4]

This chapter does not offer a defence of this ambitious response to the permissibility question; nor does it offer a judgement on its merits. Rather, it examines the *possibility question*: Can nudges play a role in the development of virtues?[5] This question is a good place to start for anyone who might wish to defend a virtue-ethical answer to the permissibility question. But, importantly, it is also of wider interest. It will be of interest to those who, although they assess the permissibility of nudges on different grounds, are attracted to their potential as a means of cultivating *liberal virtues*, such as toleration, respect and reasonableness, which some deem necessary to ensuring the

---

[3] Much work has been done in this regard, e.g. Bovens (2009), Hausman and Welch (2010), Sunstein (2016).

[4] This is very different to the standard view in the nudge literature, which views these interventions as a means of helping people to satisfy their (informed or rational) preferences (Thaler and Sunstein 2009).

[5] Some have recently addressed a similar question with respect to the law. Brownlee (2015), for instance, argues that the law can set a moral example that we have good reason to emulate – a conclusion that she claims is noteworthy given the law's potential to shape our moral thinking. The question about choice architecture has a similar claim to significance given what we now know about how "socio-ecological" factors can shape our beliefs and behaviours (Hurley 2011). Indeed, part of a complete answer to the question concerning the law as a model of virtue would need to consider the issue of how legal institutions are structured, which would overlap to some extent with the question of this chapter.

stability of liberal political institutions (Rawls 1971, Macedo 1990).[6] It also has some underexplored

relevance for the burgeoning philosophical debate over *moral enhancement*.[7]

A few scoping considerations need to be mentioned at the outset. The focus of this chapter

is on the possibility of using nudges to cultivate virtue in *adult* citizens within liberal-democratic

states. This differs, to some extent at least, from the focus on virtue development in educational

contexts taken by many of the other contributions to this volume. For Aristotle, there are two

main institutions involved in the development of virtues: the family and the state. In much of the

contemporary debate, the role of the latter is discussed in relation to the character education of

children, usually within schools. This chapter leaves the issues relating to the upbringing and

schooling of children, and the attendant questions concerning the earliest stages of virtue

development, to one side. It explores how the way in which the state makes policies, particularly

how they intentionally design choice environments in light of the recent psychological evidence (a

policy lever known as *choice architecture*), may or may not be able to steer (or *nudge*) its adult citizens

in the direction of virtue development.[8]

Concentrating on adults in liberal-democratic states has an important implication for the

kind of virtue development processes under investigation, namely, it focuses our inquiry on the

development of practical reason. Consequently, it would include as part of virtue development

only those habituating practices that can be categorized as what Sherman (1989) calls *critical*

habituation, i.e., those that actively engage a person's own critical capacities.[9] There are some reasons

---

[6] Also, see the debate between McTernan (2014) and Callan (2015).

[7] This has focused nearly exclusively on *biomedical* forms of moral improvement, thereby neglecting the institutional options that have also been opened up by the cognitive science evidence.

[8] There is, of course, the interesting question about using choice architecture within traditional educational contexts in order to develop virtues during childhood. I leave this issue aside for the purposes of this chapter, with the expectation of a few indicative remarks in the conclusion.

[9] I accept that this view is not uncontroversial. It departs from what some would consider the standard interpretation Aristotelian virtue development, which views it as a two-part process: the first part, during childhood and youth, focuses on non-intellectual habituation and the second, directed at (well-raised) adults, focuses on the development of the intellectual virtue of practical reason (Burnyeat 1980, Curzer 2002). On this interpretation, the period of habituation has ended once you become an adult and from then on virtue cultivation is all about intellectualisation via practical reason. This draws the distinction too starkly in my view and, as a result, this interpretation would incorrectly rule out certain means of learning that would fall into the category of critical habituation. Furthermore, *contra* Burnyeat (1980), Aristotle seems clearly to speak against this temporal confinement of habituation to childhood when he states that "they [i.e., citizens] must, even when they are grown up, practice and be habituated to [virtue]" (1180a2-3). Of

to be sceptical about choice architecture playing a role in virtue development. For one thing, nudges tend to be understood as interventions designed to modify out automatic behavioural responses, which thereby promote certain targeted behaviours irrespective of the motivation or intentionality of the citizens on whom they act; and this appears to be at odds with developing character states that are "at once modes of affect, choice, and perception" (Sherman 1989: 5). It is also the case that advocates of choice architecture make no claims about its potential for the conversion of behaviour into virtuous dispositions; hence, any expectation of such might be demanding more than are able, or designed, to deliver (Connelly 2014: 229).

Remaining sensitive to these worries, this chapter argues that choice architecture is able to play a role in the policy-led development of virtues. After outlining the potential means and the proposed end of this inquiry in more detail (section II), it distinguishes between two types of choice architecture design – automatic-behavioural and discernment-developing nudges – according to their virtue-cultivating potential (section III). By drawing a distinction between these two ways in which such interventions might affect and shape their target's automatic responses to situations, it is able to provide a more nuanced assessment of the possibility question. The chapter then examines in more detail the role that discernment-developing nudges might play in critically habituating citizens into better discerning the relevant particulars of a situation, while remaining appropriately modest about the scope of this role (section IV).

II. Choice Architecture and Virtue

Before we can assess what role choice architecture might play in cultivating virtues, we need a clearer view of both the proposed means – nudging – and the proposed end – virtue. Let's

---

course, this brief justification will not be found satisfactory by those committed to a different view. But, it is not clear how much is at stake here, at least for our purposes in this chapter. Both Burnyeat's and Sherman's interpretations contend that virtue cultivation in adults is characterized primarily by the development and exercise of practical reason. The difference lies with the fact that Sherman thinks this (ideally) characterizes *all* virtue development, while Burnyeat thinks it only characterises virtue development at the more advanced stage, that is, after the person has formed good habits via non-intellectual habituation during his or her childhood and youth. For more on the conflicting interpretations of Aristotle's account, see Kristjánsson (2006: 108-115). I also thank Kristján for pressing me to clarify this point.

begin with the former. To understand what choice architecture is and how it works, it is important to have some knowledge of the psychological evidence at the heart of the shift towards behavioural insight-led policymaking, because this approach is grounded in, and is intended as a political response to, a particular empirical theory.

The dual-process theory of cognition, which underpins much of contemporary psychology and neuroscience, maintains that the human brain functions in ways that invite a distinction between two kinds of processes: the *nonconscious* "fast thinking" of the automatic system and the *conscious* "slow thinking" of the reflective system (Kahneman 2012). The key finding is that, contrary to our self-image, it is the automatic processes that are "the secret author" of much of our behaviour (ibid: 13). This insight has spawned a large empirical literature on the *automaticity* of behaviour, which refers, broadly speaking, to "the control of our internal psychological processes by external stimuli and events in our immediate environment, often without our knowledge or awareness of such control" (Bargh and Williams 2006: 1). The large and ever-growing body of evidence from the cognitive sciences, as well as other disciplines such as behavioural economics, has provided the basis for a more "socio-ecological" account of human behaviour (Hurley 2011).

Although nonconscious, automatic processes have many advantages – e.g., they can act as "fast and frugal" short-cuts to the behavioural responses that would have been selected via slower, deliberative processes (Gigerenzer and Goldstein 1996), issues arise because these cognitive heuristics also make us prone to producing *biases* in certain behavioural environments. These "predictable irrationalities" (Ariely 2009) result from the interplay of numerous different heuristics with seemingly trivial socio-ecological factors, such as the way in which information is presented, options are arranged, or default rules are set. They have thus been shown to affect important life decisions, as well as more everyday ones.[10] The way in which a risk is framed, for example, can affect people's choices about whether or not to have potentially life-saving surgery (*loss/gain framing*

---

[10] Blumenthal-Barby and Krieger (2014) identified 19 distinct types of cognitive biases and heuristics in a recent review of 214 empirical studies.

effect).[11] Similarly, whether or not people are saving towards a (work-based) pension has been shown to be heavily dependent on what type of default rule their employer adopts, in particular, whether that scheme is opt-in or opt-out (*loss aversion bias*).[12] And a similar effect has been found with respect to organ donation registration (*status quo bias*).[13] These and many other examples have shown us that seemingly insignificant changes to environmental settings can have a significant impact on the choices people make.

With respect to political theory and policymaking, the crucial insight to take from this is that the state, simply by virtue of its legitimate role and status, is inevitably involved in the business of structuring "the landscape of choice" in which its citizens navigate their lives (Ben-Porath 2010).[14] Since the state cannot avoid influencing its citizens' behaviour in this way, and since there may be better or worse ways of designing public policies with respect to individual and social welfare, advocates of choice architecture contend that the state should think about how it structures its policy landscape.[15] Using behavioural insights as a means of designing policies that are more effective at modifying citizens' behaviour in welfare-promoting ways seems to provide an attractive middle road between the coercive and educative strategies in the policymakers' toolkit. The contrast with coercion is made explicit in the definition of a nudge as "any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or

---

[11] Studies have shown that patients are more likely to choose surgery if the risk is given as "90% survival rate" rather than "10% morality rate", even though these are rationally equivalent. This is because: "In terms of the associations they bring to mind – how System 1 reacts to them – the two sentences really 'mean' different things" (Kaheman 2012: 363).

[12] For more information, see the "Save More Tomorrow" programme developed by Richard Thaler (Thaler and Sunstein 2009, Chapter 6). The Pensions Act 2011 made this type of programme part of the law in the UK, amending the legislative framework to require employers to automatically enrol employees in a pension system and to make contributions to that scheme.

[13] This is illustrated well by the difference in organ donation rates between two similar European countries, Germany and Austria. In Germany, which has an opt-in system, only 12% of citizens have given consent; whereas in Austria, which uses a presumed consent (opt-out) system, 99% of people are on the register.

[14] As, of course, are other actors; but these are not our focus here. Note an important difference here from Sunstein's claim that "*Choice architecture is inevitable*" (2014: 118, emphasis in original). The term *choice architecture* seems appropriate only when a choice environment has been deliberately designed. There is a morally-relevant difference between the landscape of choice being deliberately created the way it is and its being deliberately created the way it is *as a landscape of choice*, i.e., with the aim of nudging people's behaviour in a particular direction. Choice architecture suggests, and requires, the latter. Hence, governments could inevitably be involved in structuring the landscape of choice without being inevitably involved in choice architecture.

[15] This *structuring* sometimes occurs directly, via the intentional shaping of the policy landscape (as with nudging), and sometimes indirectly, due to the social and economic arrangements that the state permits through its laws.

significantly changing their […] incentives" (Thaler and Sunstein 2009: 6). The contrast with more traditional liberal strategies, such as rational persuasion, is also clear: while some nudges can be "educative", choice architecture is distinguished by the fact that it acts primarily on the automatic, rather than the deliberative, level of thinking. Although this category of state influence has been linked with paternalism (in the form of "libertarian paternalism"), it is important to note that nudging can, in principle, be used as a means of modifying citizens' beliefs and behaviour for both prudential and moral ends, that is, as a way of making the target's own life go better and as a way of guiding them toward acting morally.

With this in mind, let's shift our attention briefly to describing the proposed end in our present inquiry, virtue development. As noted above, there has been a renewed interest in the role of virtue within moral philosophy in recent decades (Carr, Arthur, and Kristjánsson 2017). Those interested in the roles that sensitivity, motivation, and character might play in morality and living well often find Aristotle's account of virtuous living a fertile starting-point for their accounts. Interestingly, Aristotle's conception of human psychology – which forms the basis for his account of virtue – is also bipartite, in a manner that parallels the modern-day scientific theory outlined above. It posits a nonrational part (*to alogon echon*), concerned with perceptive and affective response, and a rational part (*to logon echon*), concerned with reasoned reflection.[16] Both are cognitive elements, as in the dual-process theory of cognition. For Aristotle, this means that both are potential sites of virtue: in simple terms, the nonrational part is the site of character (and the site of the *virtues* of character when its activity is "infused with reason") and the rational part is the site of the intellectual virtues. For our purposes, we are primarily interested in virtues of character; but, as insinuated above, the process of developing these virtues cannot be separated from the intellectual virtue of practical reason (*phronēsis*), at least not in the cases of adult citizens that are our focus.

---

[16] My argument does not require or rest on this similarity; though it is interesting to note the apparent parallels. Others have argued that modern neuroscience vindicates Aristotelian ethics (Thiele 2013).

According to Aristotle, virtue is a dispositional characteristic – a habit (*hexis*) concerning actions and reactions involving choice (1106b36-39).[17] So it cannot be attained through right action alone: to act rightly is to act rightly in both affect and conduct, thereby requiring a certain level of perceptive and affective engagement as part of the practical reasoning process. Virtuous behaviour is produced "according to the right reason" (*kata ton orthon logon*) (1138b24), and this follows from a process of perceptive discernment (Nussbaum 1990) that means that the motivating reason is felt "at the right times, with reference to the right objects, towards the right people, with the right motive, and in the right way" (1106b20-22). Accordingly, virtues are context-specific: the virtue of courage, for instance, consists in the right mix of caution and boldness, with this *golden mean* being different in different situations (1116a10-15). It is practical reason that determines where the mean lies in each specific context and that, as a result, manages the other virtues by discerning which are required by a specific situation and in which proportions (cf. 1144b16-17). There is also "a humbler condition" that Aristotle does not hesitate to label virtue too (1103a24): it is an *êthos* – that is, a character state – acquired via the process of non-critical or "mechanical" habituation, which is a prerequisite for the subsequent conversion into a full (or more global) virtue (Fortenbaugh 1975: 51-2).[18]

Of particular interest in assessing the question of "how and by what sources does virtue arise?" (*EE* 1216b10-22), then, is the process by which we are to discern the morally salient features of a situation that we take to be relevant to our choice-making. The perceptive and affective responses of the nonrational part – something akin to the processes of the automatic system – are simply parts of expressing virtue, since "character is expressed in what one *sees* as much as what one *does*" and "our emotions affect how and what we see" (Sherman 1989: 3-4, 49).[19] 'How to see' becomes as much a matter of inquiry (*zētēsis*) with respect to virtue cultivation as what

---

[17] All in-text references relating to Aristotle are to his *Nicomachean Ethics* (2009), unless otherwise specified.
[18] Also discussed at *Pol.* 1340a15 and *Rhet.* 1389a35. More will be said about this in the next two sections.
[19] For example, the *phronimos* not only avoids discriminating against people of other races; she perceives the reason for not acting in this way because she feels the wrongness of race-based discrimination.

to do (1112b22, 1142a35-b2); and experience develops the faculty of practical perception by 'giving us eyes to see correctly' (1143b10-14).[20] Accounts of virtue based on this Aristotelian picture are, as a result, concerned with educating both the deliberative and affective sides of perceptive response through habituation.

III. Two Types of Nudge: Automatic-Behavioural and Discernment-Developing

Our central question is: Can nudging have any role to play in this process, namely, the practice of virtue education? At first sight, it might appear not. The main problem, briefly highlighted earlier in the chapter, is that nudges are behaviour-focused. Indeed some have described them as interventions that, by operating on cognitive biases, "effectively change human behaviour in desirable directions without changing their moral reasoning, dispositions, or motivation" (van Ijzendoorn and Bakermans-Kranenburg 2011: 23). Knowing that people tend to have a status quo bias, for instance, means that we can use this to create defaults that "steer people's behaviour in the right direction" (Sunstein 2014: 17), e.g., we can change the printing default from single-sided to double-sided for environmental reasons.[21] These types of nudges exploit automatic cognitive processes in a way that does not provide an opportunity for virtue cultivation, because they seek to generate the 'right behaviour' apart from (or, at the least, regardless of) the corresponding right motivation. More than this, in such interventions the choice architect usurps the practical reasoning process: they assume the perceptive and deliberative tasks, and then present the choice environment in a way that is conducive to bringing citizens' automatic responses into line with what the choice architect considers to be the right behaviour (even while leaving the formal possibility of opting-out of such behaviour intact).

---

[20] The significant role given to this perceptive aspect of practical reason is stated most clearly at the end of *NE* II: "But up to what point and to what extent a man must deviate before he becomes blameworthy it is not easy to determine by reasoning […]; such things depend on particular facts, and the decision rests with perception" (1109b18-23).

[21] As an example, Rutgers University's paper consumption fell by 44% when it adopted this policy (Egebark and Ekstrom 2016).

So we might understand some nudges as operating in the following way: The prudentially and morally salient features of a certain situation have been discerned ahead of time by the policymaker, who has then designed policy according to relevant behavioural insights that specify how the target behaviour can be predictably achieved. Essentially, in decreasing the sizes of plates in order to reduce people's calorie intake, the choice architect is hoping that the resulting behaviour parallels that outcome that would have resulted if customers had acted out of the virtue of temperance. Similarly, in using visual illusions in traffic control measures (i.e., narrowing the side-lines on a road in order to produce something akin to an optical illusion that results in driver's automatically reducing their speed), policymakers are seeking to replicate in these road-users the driving behaviour of those possessing the virtue of prudence.

The problem, with respect to virtue cultivation, is that this behaviour is *ecologically-dependent*: the policy modifies our (automatic) behaviour when we are in the particular environments to which the policy applies, but it does not outlast this because it fails to modify how we see the reasons for behaviour. Such policies alter the way we automatically respond to the situation at hand, but not in a manner that requires or develops the exercise of the aspects of practical reason that are characteristic of virtuous action and reaction. Accordingly, these *automatic-behavioural nudges*, as we might collectively call them, are ruled out as candidates for policy-led virtue cultivation.

Nonetheless virtue, and its cultivation, has an interesting and complex relationship with automaticity (Snow 2009, especially Chapter 2). Although Aristotelian moral psychology specifies that virtue requires a particular link between motivation and action, which is not met in the case of automatic-behavioural nudges, Aristotle also claims that virtues entail (automatic) perceptive and affective responses to salient situational factors and that virtuous dispositions to see, feel, and act in particular ways need to be habituated so that they become stable dispositional responses that are automatically triggered in relevant situations. Some nudges could have a role to play in educating these processes by altering how a person *sees* a situation – perhaps by making relevant reasons more salient, so that they are more easily perceived, and/or by helping to obscure some

distracting features of the situation, thereby "hinder[ing] hindrances" to perceiving the relevant features (Connelly 2014: 228).

For instance, the traffic-light system for displaying the nutritional information of food items is designed to alter the way in which we consume by highlighting salient health information via a means that can be easily noticed and interpreted. This works by engaging our automatic cognitive processes: the colour red elicits a feeling of danger and conjures up the mental picture of a red traffic light, thereby denoting the message 'stop'; while green has the opposite effect, signalling 'go' and including an impression of health. We are therefore able to make a more informed decision, in light of the information that the automatic system has highlighted as salient to this consumer decision (i.e., there is a health-based reason to buy this over that, due to the relative nutritional value of the former, and this can be weighed against other reasons, such as cost). Over time, this learning process would result in the formation of healthy-eating habits that are, ideally, not reliant on environmental support of this kind. This type of informative nudge might be considered an example of educating the *deliberative* side of perceptive response.

Another way of altering how a person sees a situation relates to the affective side of perceptive response. On the Aristotelian account it is assumed that emotional responses are ways of perceiving or being sensitive to particular circumstances, which makes them an indispensable part of recognizing the prudentially and morally salient features of a situation. So-called *active choosing* nudges might offer a good candidate, in certain circumstances, for bringing this affective perception into play when it might otherwise have remained inactive. For instance, prompted choice policies for organ donation registration might be so effective at changing people's behaviour because the simple act of asking people to choose may support practical reasoning, often with emotions playing a role in the process of reasons-responsiveness.[22]

---

[22] Aristotle understands affective responses as cognitive phenomena that are open to reason (1102b14, 1102b26–1103a3); the process of cultivating the dispositional capacities to feel emotions such as guilt, compassion, and fear appropriately is bound up with learning how to discern the particulars of situation that warrant these affective responses (Sherman 1989: 167).

Similarly, in a recent study Hedlin and Sunstein (2016) tested experimentally how active choosing policies fare in terms of their effectiveness at bringing about pro-environmental behaviour, as compared with automatic enrolment in green energy. They report that: active choosing led to higher enrolment in the pro-environmental behaviour; active choosing caused participants to feel more guilty about not enrolling in the green energy program; and the level of guilt was positively related to the probability of enrolling. Although at first sight these findings might be taken as showing that this behaviour change is motivated by a desire for guilt-avoidance, it can be argued they are best understood as demonstrating that active-choosing nudges place people in an environment in which the affective side of their perceptive response brings their behaviour in line with "whatever they believe morality requires" (Hedlin and Sunstein 2016: 137). On an Aristotelian interpretation, the emotions experienced – anticipated guilt, in this case – lead people to recognize and care about the objects of moral consideration (i.e., activating their latent environmental concerns). This in turn can lead them to form evaluative beliefs about what morality requires, and these beliefs "yield reasons for action which fall within the motivational structure of specific virtues" (Sherman 1989: 31). Thus, this kind of choice architecture might be considered an example of developing the *affective* side of perceptive response.

Together, the nudges that could work to develop perceptive response, in order to better discern the aspects of a situation that are relevant to choice-making, offer a category that we might call *discernment-developing nudges*.[23] What unites this category, as well as what distinguishes them from automatic-behavioural nudges, is that they focus on behaviour modification by inducing *active*, rather than passive processes in the target. Recall that virtue is a *hexis* concerned with choice. The active/passive distinction parallels another important distinction with respect to our understanding

---

[23] It may be the case that, for some, this category of choice architecture would appear to fall foul of what R.S. Peters has called the "paradox of moral education": habituation and intellectual training are both inevitably needed in the process of virtue development, but yet there is an *apparently* inevitable opposition between them (Peters 1981; see Curren 2000: 205-212). Peters himself thinks that this paradox is resolvable, however; as do others (e.g., Curren 2000, Sherman 1989). Of course, the idea of critical habituation is based on the view that the skills of critical reasoning can, to some extent at least, be learned via the habituation process (more on this in the following section). For more on this issue, and the potential for resolutions to the paradox within Aristotle's work, see Kristjánsson 2006.

of the term *choice*: on the one hand, it is common to regard a choice as the particular behaviour, among the set of behaviour-options available to her, that the agent in fact undertakes, regardless of the process by which this came about; on the other hand, a choice is also commonly used to refer to the behavioural outcome that follows from the process of the agent making a choice or choosing, which, in the case of virtue, requires perceptive and affective engagement to discern the particulars relevant to this practical reasoning process. Automatic-behavioural nudges can improve choices in only the first sense; the situational improvements produce certain behaviours in individuals via a process that they are only passively engaged in. Discernment-developing nudges, by contrast, aim to improve choices and choice-making in the second sense, by using choice architecture to create conditions that allow people to be actively involved in the process of choosing how (or whether) to modify their behaviour in light of the salient reasons as they relate to them. This active dimension is crucial in making the case in favour of the virtue-cultivating potential of this kind of choice architecture, which is the focus of the next section.

IV. Virtue-Cultivating Nudges: A Socio-Ecological Account of Critical Habituation

Distinguishing between different kinds of nudges in this way supports an account of critical habituation (Sherman 1989), *contra* a mechanical conditioning theory of habituation (Curzer 2002). On this view, Aristotle's statement that "we become just by doing just actions, and temperate by doing temperate actions and brave by brave actions" (1103a1-2) is seen as an abbreviation of a series of stages that he takes to be required for the habituation of character, since:

> "…action presupposes the discrimination of a situation as requiring a response, reactive emotions that mark that response, and desires and beliefs about how and for the sake of what ends one should act. We misconstrue Aristotle's notion of action producing character if we isolate the exterior moment of action from the interior cognitive and affective moments which characterize even the beginner's ethical behaviour." (Sherman 1989: 178)

It is for this reason that automatic-behavioural nudges, such as those which automatically enrol us as pension savers or organ donors or green energy users, fail to have the virtue-cultivating potential that is available to discernment-developing nudges (hereafter, '*DDNs*'). But more needs to be said about precisely how *DDNs* can help in the process of cultivating virtue. This is because a sceptic might ask: how does, for instance, recognizing the reasons to choose the green energy program over the standard one help to cultivate (pro-environmental) virtue? And how does this make it more likely that people will display that virtue in different choice contexts, e.g., in recycling or transport choices?

These questions get to the heart of an issue that has been exercising those interested in the Aristotelian model of the theory and practice of virtue education. Much attention has recently been directed to specifying the often-overlooked developmental stages of this theory (Sanderse 2015). For present purposes, part of this requires addressing the potential situation-specificity of the virtuous actions that result from *DDNs*; for, even if these kinds of choice architecture can direct people towards (actively) acting rightly, there is a certain modularity to this behavioural learning which makes any resultant virtue only a "local virtue" (Chen 2015).

The distinction we have drawn between different kinds of nudges offers one type of response to the sceptic, because it naturally situates the role that choice architecture could play in virtue cultivation within a developmental account of perceptive and affective capacities. *DDNs* aim to cultivate the specific virtues primarily through supporting the conditions for the development of practical reason. Practical reason is the virtue needed to manage the other virtues, since it discerns and judges which virtues are required by a specific situation and in what proportions. If nudges are able to support the development of this intellectual virtue, this offers a means of converting local traits into more global traits, by enabling people better to perceive that "*this* is a *that*", i.e., that the current situation (e.g., concerning recycling) is an instance that demands a similar response to a previous situation (e.g., concerning energy programs) (Sherman 1989: 41).

It is true that *DDNs* will only play a limited role in this process over the course of a person's lifetime. As was mentioned in the introduction, Aristotle views the family and the state as the two main institutions involved in virtue development (1142a 9-11). Choice architecture of course represents only one part of the state's policy toolkit. But as part of this wider state approach, and in the particular contexts in which this approach is favourable vis-à-vis alternatives, *DDNs* can support the process of critical habituation of character. This policy-led process of virtue development is supported by Aristotle's claim that habituation is an indispensable part of learning at all ages: "they [i.e., citizens] must, even when they are grown up, practice and be habituated to [virtue]" (1180a2-3).

In my view, the psychological evidence on which choice architecture is based, rather than showing that we are irrational, as some contend, supports Aristotle's claim that "[o]ne's own good cannot exist […] without a form of government" (1142a 9-10; also, see Curren 2000). This claim follows from the collaborative nature of his account of practical reason: among other things, the practical wisdom of individual citizens comprises, to some extent, the *political wisdom* of the state (1141b23). And this acknowledgment has "obvious implications for the resources available for ethical perception and choice" and its policy-led development (Sherman 1989: 54). In particular, this collaborative model allows that the experience and expertise required for virtuous action can be *borrowed exogenously* from others (1143b13), which is something that plays a significant part in the critical habituation process. It supports the idea that there might be a "public ecology" of virtue (cf. Hurley 2011); and that "structures of virtue" might be incorporated to some degree into the design of public policy frameworks (cf. Rozier 2016 on this idea within public health ethics).

DDNs appear, therefore, to offer one means by which the state could critically habituate character. As highlighted in the previous section, this *socio-ecological account of critical habituation* has two interrelated dimensions: the deliberative and affective sides of ethical perception – the shaping of our propensities to think and feel, and therefore to act, in ways that better promote prudential goals and moral norms. The first dimension habituates deliberative processes relating to our ability

to perceive the reasons that apply to us in particular situations. By presenting information in particular ways, the state can guide people towards being more aware of and sensitive to the salient aspects of a situation. The second dimension relates to emotion education: the process of affective sensitization plays a decisive role in the gradual consolidation of moral character – and the situational modification used by *DDNs* can constitute an important facet of such a sensitization process.

In this way, we can respond adequately to the sceptic, while at the same time retaining a level of modesty concerning the limitations of virtue-cultivating nudges. Certainly, the virtues cultivated by *DDNs* will fail to meet the conditions necessary for full virtue. But this does not undermine their virtue-cultivating potential: for, it is part of having virtue to be able to perceive, and affectively respond to, the circumstances necessary for the specific virtues; and it is this that *DDNs* can help to develop.

V. Conclusion

This chapter has examined the issue of when, if at all, choice architecture might be used as a means of policy-led virtue development. It has argued that certain nudges, namely, those that are able to develop our critical ability to discern the particulars of a situation (discernment-developing nudges), do have virtue-cultivating properties, while others act on their target in ways that are not compatible with them playing an educative role in the development of practical reason (automatic-behavioural nudges). It has argued that *DDNs* offer a means by which the state could critically habituate character, and has labelled this the *socio-ecological account of critical habituation*.

The chapter has remained agnostic concerning the question of whether, or under what conditions, *DDNs* (or any other nudges, for that matter) might permissibly be employed by governments in liberal-democratic states for the purpose of virtue development or moral education, more generally. It has focused on the use of nudges with respect to adult citizens, and so has not discussed the potential role that nudges might play, and do already play, in the

educational contexts in which the discussion of character education most often takes place. This, of course, was the purpose of the chapter; but, nevertheless, there are interesting questions to be explored, both empirically and philosophically, relating to the possible *classroom* uses of choice architecture in developing whichever character traits are deemed morally and civically desirable *qua* members of society and intellectually necessary as regards educational performance.[24] This case is interesting because, since the interventions would be aimed at children and young people, it might allow both automatic-behavioural and discernment-developing nudges. As a result, there would need to be some discussion about how to weigh purely mechanical conditioning processes against other options that tap into and develop students' critical reasoning abilities, which would return us to the ongoing debate of the nature of habituation briefly discussed earlier in the chapter (Kristjánsson 2006: 108; see fn.9).

---

[24] The Behavioural Insights Team have established an 'Education and Skills' team who have been exploring, empirically, ways in which choice architecture might positively affect student outcomes; though, this has mainly been focused on reducing absenteeism in schools, drop-outs rates at colleges, and improving results, rather than developing character traits (with the exception of their interest in cultivating what Duckworth (2016) calls *grit*, which she describes as having two elements, perseverance and passion). Though it has a slightly different focus, arguably the most explicit statement of the educational goals to result from the psychological evidence has been outlined by Gigerenzer, who has argued that school curricula should be reformed so that statistical and risk literacy are "taught as early as reading and writing are" (Gigerenzer 2010: 469). Although he does not frame it in these terms, this is because, given our heuristic-based thinking, the development and exercise of practical reason requires that people have the relevant competencies necessary to understanding the particulars of a situation and to decision-making in conditions of uncertainty.

Bibliography

Ariely, Dan (2009), *Predictably Irrational: The Hidden Forces that Shape our Decisions*, London: Harper.

Aristotle (2009), *The Nicomachean Ethics* (trans. David Ross), Oxford: Oxford University Press.

Aristotle (2011), *The Eudemian Ethics* (trans. Anthony Kenny), Oxford: Oxford University Press.

Bargh, John, and Williams, Erin (2006), 'The Automaticity of Social Life', *Current Directions in Psychological Science* 15(1), pp. 1-4.

Ben-Porath, Sigal (2010), *Tough Choices: Structured Paternalism and the Landscape of Choice*, Princeton: Princeton University Press.

Blumenthal-Barby, Jennifer, and Krieger, Heather (2014), 'Cognitive Biases and Heuristics in Decision-Making: A Critical Review Using a Systematic Search Strategy', *Medical Decision Making* 35(4), pp. 539-55.

Bovens, Luc (2009), 'The Ethics of *Nudge*', in T. Grune-Yanoff and S.O. Hansson (eds.), *Preference Change: Approaches from Philosophy, Economics and Psychology*, Theory and Decision Library A 42, Springer.

Brownlee, Kimberley (2015), 'What's Virtuous about the Law?', *Legal Theory* 21(1), pp. 1-17.

Burnyeat, Myles (1980), 'Aristotle on Learning How to be Good', in A.O. Rorty (ed.), *Essays on Aristotle's Ethics*, Berkeley: University of California Press, pp. 69-92.

Callan, Eamonn (2015), 'Debate: Liberal Virtues and Civic Education', *The Journal of Political Philosophy* 23(4), pp. 491-500.

Carr, David, and Arthur, James, and Kristjánsson, Kristján (eds.) (2017), *Varieties of Virtue Ethics*, London: Palgrave Macmillan.

Chen, Yi-Lin (2015), 'A Situationist Lesson for Character Education: Re-conceptualising the Inculcation of Virtues by Converting Local Virtues to More Global Ones', *Journal of Philosophy of Education*, 49(3), pp. 399-417.

Connelly, James (2014), 'Idealism, the Common Good, and Environmental Virtues', in T. Brooks (ed.), *Ethical Citizenship: British Idealism and the Politics of Recognition*, Basingstoke: Palgrave Macmillan, pp. 224-244.

Curren, Randall (2000), *Aristotle on the Necessity of Public Education*, Oxford: Rowman and Littlefield Publishers.

Curzer, Howard (2002), 'Aristotle's Painful Path to Virtue', *Journal of the History of Philosophy* 40(2), pp. 141-162.

Duckworth, Angela (2016), *Grit: The Power of Passion and Perseverance*, London: Vermilion.

Egebark, Johan, and Ekström, Mathias (2016), 'Can Indifference Make the World Greener?', *Journal of Environmental Economics and Management* 76, pp. 1-13.

Fortenbaugh, W.W. (1975), *Aristotle on Emotion*, New York: Harper and Row.

Gigerenzer, Gerd, and Goldstein, Daniel (1996), 'Reasoning the Fast and Frugal Way: Models of Bounded Rationality', *Psychological Review* 103(4), pp. 650-669.

Hausman, Daniel, and Welch, Brynn (2010), 'To Nudge or Not to Nudge', *Journal of Political Philosophy* 18(1), pp. 123-136.

Hedlin, Simon, and Sunstein, Cass (2016), 'Does Active Choosing Promote Green Energy Use? Experimental Evidence', *Ecology Law Quarterly* 43(1), pp. 107-141.

Hurley, Susan (2011), 'The Public Ecology of Responsibility', in C. Knight and Z. Stemplowska (eds.), *Responsibility and Distributive Justice*, Oxford: Oxford University Press, pp. 187-215.

Kahneman, Daniel (2012), *Thinking, Fast and Slow*, London: Penguin Books.

Kristjánsson, Kristján (2006), 'Habituated Reason: Aristotle and the 'Paradox of Moral Education'', *Theory and Research in Education* 4(1), pp. 101-122.

Macedo, Stephen (1990), *Liberal Virtues: Citizenship, Virtue, and Community in Liberalism*, Oxford: Oxford University Press.

McTernan, Emily (2014), 'How to Make Citizens Behave: Social Psychology, Liberal Virtues, and Social Norms', *The Journal of Political Philosophy* 22(1), pp. 84-104.

Nussbaum, Martha (1990), 'The Discernment of Perception: An Aristotelian Conception of Private and Public Rationality', in M. Nussbaum, *Love's Knowledge: Essays on Philosophy and Literature*, Oxford: Oxford University Press, pp. 54-105.

Peters, R.S. (1981), *Moral Development and Moral Education*, London: George Allen & Unwin.

Rawls, John (1971), *A Theory of Justice*, Cambridge, MA.: Harvard University Press.

Rozier, Michael (2016), 'Structures of Virtue as a Framework for Public Health Ethics', *Public Health Ethics* 9(1), pp. 37-45.

Sanderse, Wouter (2015), 'An Aristotelian Model of Moral Development', *Journal of Philosophy of Education*, 49(3), pp. 382-398.

Sherman, Nancy (1989), *The Fabric of Character: Aristotle's Theory of Virtue*, Oxford: Clarendon Press.

Snow, Nancy (2009), *Virtue as Social Intelligence: An Empirically Grounded Theory*, London: Routledge.

Sunstein, Cass (2014), *Why Nudge? The Politics of Libertarian Paternalism*, London: Yale University Press.

Sunstein, Cass (2016), *The Ethics of Influence: Government in an Age of Behavioural Science*, Cambridge: Cambridge University Press.

Thaler, Richard, and Sunstein, Cass (2009), *Nudge: Improving Decisions about Health, Wealth and Happiness*, London: Penguin Books.

Thiele, Leslie (2013), 'Brain Sculpting as Moral Practice: A Neuro-Aristotelian Approach', in F. Vander Valk (ed.), *Essays on Neuroscience and Political Theory: Thinking the Body Politic*, pp. 119-139.

Van Ijzendoorn, Marinus, and Bakermans-Kranenburg, Marian (2011), 'On Embodied and Situational Morality', in D. de Ruyter and S. Miedema (eds.), *Moral Education and Development*, Rotterdam: Sense Publishers, pp. 13-30.