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# article

## Rethinking the role of experts and expertise in behavioural public policy

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Nudge and behavioural public policy tools have won support from governments across the world for improving the effectiveness of public interventions. Yet nudge still attracts strong criticisms for promoting paternalism and manipulation as legitimate government actions. To move beyond this divide, this paper offers a comprehensive reorientation, which is necessary because the intellectual foundations of the policy are at fault. A more secure foundation can be achieved by expanding the cognitive scope of behavioural policy, and ensuring that it does not rely on the narrow assumption that intuitive reasoning is flawed and that expert advice is always preferable. This shift in the cognitive range of nudge moves behavioural policy toward citizen reflection and initiative, pointing away from expert-led interventions. It amounts to more than incremental advances in nudge practice. As a result, nudge can escape the charge of not respecting individual autonomy. What we call 'nudge plus' would link more closely with other types of governmental intervention that embrace citizen involvement.

**key words** nudge • behavioural public policy • behaviour change deliberative • governance • nudge • expertise • citizens

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### Introduction

In less than a decade since the publication of *Nudge* (Thaler and Sunstein, 2008) interventions inspired by its insights – and more broadly behavioural public policy – have become an established component of the toolkit of modern governments, even though by no means universally adopted. Nudge is a shorthand for a family of light-touch behavioural public policy tools based on presenting options to citizens to encourage them to follow their long-term interests and to support collective goals. Commonly adopted nudges include default options to favour citizens joining a pension scheme, changing the wording of a tax collecting letter so that the recipient experiences peer pressure to comply, and providing timely reminders to encourage

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attendance at medical appointments (Halpern, 2015). There is much to admire about the way that advocates of nudge have made a large impact on government policy in their willingness to champion evidence-driven trials and to use randomised experiments to test the efficacy of interventions. Proof of concept has definitely occurred.

While nudge-based policies have been shown to improve the quality of public policies, the approach remains controversial. The ethics of using nudge concerns many observers, especially its association with paternalism and manipulation. While many of these criticisms are overblown, we argue that they reflect underlying flaws in nudge, which are not about its practice or implementation, but are at its very intellectual foundations. Nudge's defects may even limit the legitimacy of this kind of governance. For if nudge is going to sustain and secure its place as an additional tool of governance alongside more traditional methods of intervention, it needs to deal with its over-emphasis on the cognitive limitations of humans and too great a reliance on the judgments of experts.

We argue that nudge policy could revisit its intellectual foundations. Thaler and Sunstein (2008, 21–40), the founding figures in the launch of nudge policy, rested their approach on the claim, widely shared by behavioural economists and cognitive scientists, that when people do not engage in fully comprehensive reasoning they are more likely to make mistakes. They argue that humans operate with two types of thinking, one reflective and the other intuitive or automatic (Kahneman, 2011). Intuitive thinking is thought to be second best and adopted because people are too lazy, time-poor or incapable. People can be 'smart' when they use their reflective system but are prone to being 'dumb' when they do not. There are problems with this approach to cognition: it rests on too sharp a divide between reflective and intuitive approaches and fails to recognise that people regularly move between the two. Intuitive thinking is not always so bad and is certainly not dumb. In many circumstances its heuristics or rules-of-thumb dynamics work better than could be achieved through fuller more extended reflection. Gut feeling 'can outwit the most sophisticated reasoning and computational strategies' (Gigerenzer, 2008). We suggest a fresh approach to the dynamics of human decision-making, which is less exclusively focused on its fallibilities and makes more of its possibilities. This approach allows more scope for the reflective capacities of human beings and in doing so opens up a rather different direction in public policy. We describe this approach to public policy as 'nudge plus' and we provide illustrations of the kind of interventions that would form part of this toolkit. The term 'nudge plus' indicates that our argument is not for the overthrow of nudge but for its development. As argued by John (2018), a more citizen-oriented model for behavioural public policy gives nudge advocates an opportunity to address their critics and increase the legitimacy of nudges adopted in the future. This article aims to provide the theoretical framework for this important shift in thinking about behavioural public policy.

Related to this point, we argue that nudge placed itself in one tradition of social problem solving where science and experts are in the lead. Nudge implies that citizens are free to choose but those choices are framed by experts and sanctioned by government officials. This technocratic justification helps to explain why nudge polices face repeated criticism in liberal and open societies. But, as Lindblom (1990) points out, there is another less well-articulated model of social problem solving that

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meets the ideals of ‘a self-guiding society’ that would encourage nudge policy to give greater scope to lay insight and control.

The article starts by noting that the rise and development of nudge implies that its position in policy debates is no passing fashion. Yet, as set out in the subsequent section, persistent worries about the ethical dimensions of nudge policy lead to concerns about whether it can be sustained as a legitimate form of public intervention, especially as it moves into more challenging domains. The heart of argument is then addressed, which is that nudge needs to reorient itself by revisiting its intellectual foundations in order to future proof further progress. The article concludes with some examples of what nudge plus policies might look like.

## The triumph and maturation of nudge

Nudges do not rely on fiscal incentives or overt regulation. They neither command, nor provide a strong economic incentive to citizens to drive change, nor rely on networks or partnerships to deliver outcomes, nor do they necessarily involve persuasion, involving costly efforts to change the minds or outlooks of citizens: ‘To count as a mere nudge, the intervention must be easy and cheap to avoid’ (Thaler and Sunstein, 2008, 6). Nudge works with the cognitive capacities of people to allow information to be absorbed by them more effectively, and provides a signal to act in their own interests. In a time-pressured and complex world, people use a range of shortcuts to make decisions; adapting to those shortcuts needs interventions and information flows that go with the grain of how people think. Mols et al (2015, 83) argue ‘that “nudging”, with its behavioural economics and cognitive psychology underpinnings, represents a distinct...mode of governance. The cornerstone of this mode is a conception of humans as inefficient information-processors...who, in their quest to save precious mental resources, are prone to make erroneous decisions’. Nudges then are about changing the choice architecture of citizens, by reframing the information provided to them, to achieve predictable outcomes of benefit to both citizens and society at large. Much government policy does not recognise the behavioural choices that individuals are making, a set of assumptions about paternalism that ‘become incorporated in the overall policy strategy’ (Viscusi and Gayer, 2015, 1006; see also Lucas and Taic, 2015).

The idea of steering the choices of citizens through ‘better governance’ (Thaler and Sunstein, 2008, 15), which does not rely on costly regulation or financial incentives or other mechanisms, found the ear of policymakers who were responding to the effects of financial crisis of 2007/8 where government was seen as needing to do more for less and at the same time viewed as lacking the legitimacy to pursue more traditional or stronger forms of intervention. During Obama’s presidency (2009–17), behavioural science informed numerous policy measures, in part inspired by Cass Sunstein’s presence in the administration (Sunstein, 2014). In the United Kingdom, the Behavioural Insights Team (BIT), in operation since 2010, advised regularly by Richard Thaler and other academics, used insights from behavioural studies to launch initiatives across a range of policy fields (Halpern, 2015). In 2016, the federal level of government in Australia established the Behavioural Economics Team of Australia ([www.dpmc.gov.au/domestic-policy/behavioural-economics](http://www.dpmc.gov.au/domestic-policy/behavioural-economics)) building on earlier initiatives at the state level. The Netherlands is another site for the influence of behavioural public policy (Feitsma, 2019). The World Bank (2015) published a

report in praise of behavioural change and created a Global Insights Team (<http://www.worldbank.org/en/publication/wdr2015>) that uses psychology and behavioural insights to improve social outcomes. Both the Organization for Economic Co-operation and Development ([www.oecd.org/env/tools-evaluation/behavioural-experimental-economics-for-env-policy.htm](http://www.oecd.org/env/tools-evaluation/behavioural-experimental-economics-for-env-policy.htm)) and the European Union (European Commission, 2016) have shown an interest in collecting cases studies of successful behavioural change and nudge policies. There is no doubt that there is a considerable momentum behind nudge that shows no sign of abating.

In the early phase of the policy programme a number of empirical criticisms of nudge were commonly articulated (for example, Marteau et al, 2011). Many of the interventions were mainly focused on large routine transactions between public agencies and the public, such as tax reminders, court fines, and other communications, usually paper letters or SMS messages. These initiatives have the advantage of demonstrating that nudge interventions can make a practical and financially beneficial contribution to good governance, but they can appear to lack ambition. But this probably was because the circumstances of launching a new programme of work encouraged a focus on the need to demonstrate proof of concept that could in the future be relaxed. The search for quick wins led to the adoption of policies whose value could be readily shown. But there was nothing in principle against nudge policy extending its range. Nudge is well adapted to focus on rights (social rights/entitlements, such as right to vote, right to stand for election, right to complain, right to take up benefits or tax advantages people are entitled to, and a right to switch utility supplier or banks); and there are lots of applications that help to maximise individual wellbeing (not just societal utility), such as healthy-eating nudges which benefit individual health as well as societal health.

Recent reviews of nudge applications show this increase in range (OECD, 2017; Loewenstein and Chater, 2017). Benartzi et al's (2017) review of the costs and benefits of nudging shows costs savings across a range of interventions categorised by security in retirement, education, energy, health, job security, programme integrity and compliance, and home affairs. Chetty (2015) discusses a more pragmatic turn in the use of behavioural insights, with applications to a range of policy tools in fields such as retirement savings, labour supply and neighbourhood choice. Oliver (2013) argues that behavioural science can be used more extensively across the tools of government, using the term 'budge' for less libertarian interventions. Some of the most exciting interventions of recent years have combined both a nudge and an item of regulation at the same time, such as salience and taxation (Chetty et al, 2009). Bhargava and Loewenstein (2015) argue that stronger application of nudges to regulatory policies is where future opportunities lie. Other applications are to decision-making in government, which also has behavioural biases and can be addressed through interventions and is the focus of the new academic field of behavioural public administration (Grimmelikhuijsen et al, 2017; Moynihan, 2018; Battaglio et al, 2018).

Progress continues in nudge policy and, as the 2017 report from Behavioural Insights Team claims, there are signs that the scope and range of interventions is expanding with 'a gradual shift to more complex behavioural challenges' (BIT, 2017, 4). The range of countries and governments willing to use insights from nudge is also increasing. One option would be to let the programme learn from experience and expand. Governments setting the choice architectures of citizens to help them make

better decisions might at first sight seem a benign undertaking, but the potential for doubt becomes clear when one considers who determines the framing, with what awareness from citizens, and to what ends. In spite of the policy successes, there is still a worry that the use of behavioural science manipulates citizens to take choices which they would not want to make and that this might undermine the legitimacy of the policy programme in the long run.

## The persistence of the ethical dilemma

In many ways, a lot of the nudges do not seem to raise many ethical concerns from first blush. What is the real negative impact of letter redesigns for example? These minor changes to the way that government approaches citizens might be pragmatically accepted. There is opinion research to suggest that many citizens find many modest nudge practices acceptable (Sunstein, 2016). As Tannenbaum et al (2017) argue, some of the public attitudes to nudge may be explained by support for the actual policies rather than the tools itself. But even minor activities done without the consent or knowledge of the citizens and with the purpose of manipulating them offends common norms for carrying out public policies, that of transparency and openness. If, as nudge advocates claim, the approach is developing to tackle more complex and sensitive public policy issues, then concerns about the ethics of nudge need to be more directly confronted. While nudge allows for individual choice, it remains paternalistic and potentially manipulative (Dobson, 2011; Goodwin, 2012; Jones et al, 2013; Wilkinson, 2013; Rebonato, 2012; Schmidt, 2017; Leggett, 2014). In spite of the basic idea behind nudge that people are free not to follow the nudge and to take the opposite action if they decide to do so, the paternalistic side is that the public authority is arranging things to influence the choices of individuals. As Anderson (2010, 372) comments about the use of the term libertarian paternalism, 'As Thaler and Sunstein use the term, however, it becomes equivalent to beneficence: when the government acts to improve people's welfare by influencing choices in any way, it is engaging in paternalism' (2010, 372). This is a hard argument to get out of: it may be soft paternalism but it's still paternalism.

Thaler and Sunstein are also vulnerable to an attack that the citizens are not free to choose an alternative option because the choice architecture guided them subconsciously to their own ends. To respond to this criticism, the authors of *Nudge* argue for the publicity principle that 'bans government from selecting a policy that it would not be willing to defend publicly to its citizens' (2008, 244). But critics remain unconvinced. As Anderson (2010) argues, 'the espousal of transparency and publicity constraints comes across as an artificial and ad hoc declaration of values that belies a lack of real interest in the importance of ensuring that those subjected to these subtle forms of state power understand the underlying rationale' (374).

Another general concern about the ethics of nudge focuses on manipulation: people might be encouraged to do things they do not really want to do by an all-seeing government. This issue can turn on how far citizens should be made aware that they are being subjected to a nudge. Certain strong kinds of manipulation could be off limits – those involving strong deception for example – and some of the nudges could be altered to make them less manipulative (see Wilkinson, 2013; Schmidt, 2017). Sunstein (2017) returns to these issues. He maintains his view that there are already many nudges in operation and makes an argument for deciding the

moral content of nudges on a case-by-case basis. He offers public opinion survey findings that indicate that people agree with nudges if they approve of the end being promulgated. The main difference is that partisan affiliation affects their approval rating. Jung and Mellers's (2016) show that the US public tends to favour the more overt nudges. People also prefer the pro-social nudges from the more pro-self ones, such as recycling and other collective goods. Citizens, it could be argued, do not fear nudges and they can accept the idea of being manipulated for their own good.

Even though the fears about the paternalism of nudge are overstated, the long-term legitimacy and effectiveness of nudge would be improved by increasing the amount of citizen choice and reflection within behavioural policies, short of a full-scale think and deliberation. A key way to reconstruct the debate about nudge is to address fully the ethical issues implied by its use. This is desirable on normative grounds. We also have to demonstrate also that it makes sense practically and that a different kind of approach to nudging could be based on a different view of the cognitions than that envisaged in classic nudge theory.

## Revisiting the cognitive foundations of nudge

By focusing on limiting the cognitive demands on the citizen, nudge can suffer from the problem of lack of consent and of too much reliance on the state to consider what is best. But is it necessary to be so negative about the cognitive capacity of citizens in comparison to experts? We argue that by revisiting the cognitive foundations of nudge it is possible to come up with a way forward which is rather different to that of the path chosen by its original advocates. Nudge policy is then freed to take a different direction that relies less on a collection of desirable modifications and more on broader cognitive foundations.

The practice of nudging that has dominated its application in the USA, the UK and elsewhere, is premised on the idea of experts identifying the failing of citizens to achieve rationality in their decisions, developing a corrective nudge and helping those in authority to implement it. As such, key nudge advocates fall into the tradition of welfare economics where a committee of experts ask 'what is good for society from an impartial perspective – the "view from nowhere"'. Explicitly or implicitly, its recommendations are addressed to an imagined benevolent despot' (Sugden, 2013, 1). Experts decide what is the problem, decide how a better outcome could be delivered judged by what citizens would choose if they were more fully rational in their decision-making and give the tools to intervene to those in authority as they have the power to make a difference.

These steps are problematic. First, they underestimate the cognitive capacity of humans. Second, there is too much faith in the role of experts. We propose two correctives. One is focused on expanding the cognitive range when using nudges; the other is to downgrade the role of experts and present nudge as an opportunity to tackle social problems with knowledge from many sources.

### *Expanding the cognitive model*

The distinction between nudge and think (John et al, 2009; 2011; 2019) has been used to identify two types of change strategies: one associated with nudge policy aimed at individuals and the other associated with techniques to encourage collective

consultation and deliberation. But does this mean that nudges and thinks are separate processes? Mols et al (2015, 84) argue that ‘nudging involves attempts to influence behaviour in a way that *precludes* reflection about the pros and cons of alternative courses of action’. We argue that that might apply to some nudges but not to all of them and that indeed many nudges do require citizens to think and indeed reflect. A simple reminder to attend an appointment does demand some reflection. Many interventions that start with a nudge require a degree of think from the individual. In practice, a lot of nudges are not as automatic as they first appear, but have a lot of ‘think’ embedded in them. The recognition that many nudges involve reasoning provides the launch base for a broader argument: the need to revisit the cognitive assumptions that underlie nudge.

Thaler and Sunstein (2008) make a great play about how people do not think like Econs but rather think like Humans. Chapter 1 of *Nudge* provides an enjoyable summary of the ‘biases and blunders’ that afflict humans primarily as a justification for some gentle intervention to improve their chances of making better decisions. The problem is that their analysis remains enthralled in a world where the highest standard of reasoning is that of the Econs. The best reasoning is where the decider has full information, consistent preferences and a comprehensive ability to calculate the best course of action. And given the fallings of human reasoning against that measure what is required is policy interventions that bring people back closer to the fully rational – Econ style – form of reasoning. The goal is to ensure citizens get to what they would have chosen for themselves if they were Econs. Thaler and Sunstein do not celebrate the way that humans reason but rather want to make them closer to their Econ ideal. But why install a form of reasoning that in most contexts of human decision-making is undeliverable as the ideal? In complex, fast changing environments that lack predictability Econ reasoning is not an option. Other forms of reasoning – based on intuition, hunch, or gut feeling – are not second best in these circumstances: they can be better. The starting point we propose, following Gigerenzer, is not to install Econ reasoning as the normative benchmark but rather to use ecological fit as the benchmark. Does the reasoning used fit the task environment?

We can agree that citizens reason – in the sense they have reasons for doing what they do but that those processes of reason are framed by the bounds of their cognitive capacity and the environment in which they are located (Lupia et al, 2000). Thinking is a flawed process, but we should not assume that people are unable to come up with the answers that are right for them. As Gigerenzer (2007, 4) argues, ‘what seem to be limitations of the mind can actually be its strengths...More information, even more thinking, is not always better, and less can be more.’

Thaler and Sunstein tend to assume that bad things happen because citizens are cognitive misers. Yet according to Kruglanski (1996) people are flexible social thinkers who choose between cognitive strategies (that is, speed/ease versus accuracy/logic) based on their current goals, motives and needs. Kruglanski argues that people are neither exclusively cognitive misers nor great reflective thinkers, but in fact motivated tacticians. Put another way, people are strategic in their allocation of cognitive resources and as such can decide to be a cognitive miser or reflective thinker depending on several factors. Cognitive constraints are significant. At best, the cues and shortcuts – central to more intuitive thinking – can work but it would seem reasonable to conclude that they do not work effectively all the time. The key issue then becomes

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under what circumstances are cues and shortcuts in thinking likely to be effective. To explore that issue it is necessary to introduce the idea of the task environment.

As Lupia (2016, 34) comments, 'it is important to realize that what a citizen needs to know depends on what we are asking him or her to do. Competence is defined with respect to a task'. The idea that it is the external task environment that matters, alongside the internal cognitive capacities of humans, stems in part from an insight from Herbert Simon who argues that human behaviour is 'shaped by a scissors whose two blades are the structure of task environments and the computational capabilities of the actor' (Simon, 1948, 7).

Gigerenzer and colleagues have developed this perspective further by offering the concept of ecological rationality which can be summarised as the idea that human reasoning is adaptive rather logical in its motivation (Goldstein and Gigerenzer, 2002). The best type of reasoning is the one that is most suited to the environment or task with which we are faced. Complexity in the environment, and a decision-maker facing shortage of time and challenges to gaining the relevant knowledge, have led to human capacity for using fast and frugal heuristics that rarely follow the rules of formal logic but which are nevertheless relatively successful. Moreover, the use of heuristics is not a second-best strategy – as assumed in the discussion in the previous section of the article – it is most often the best solution. Humans are not hopelessly prone to flaws in their decision-making or reliant on cues from others, but rather adaptable thinkers and the success of their strategies revolves around matching heuristics to the task environment. Given a concern with understanding human political judgement the concept of ecological rationality opens a second sphere for analysis but also for intervention. The 'ecological view actually extends the possibilities to improve judgement' and it could be conjectured that 'changing environments can in fact be easier than changing minds' (Gigerenzer, 2008, 18, 16).

### *Shifting from a technocratic to a self-guiding framing*

There are reasons to doubt the credentials of experts, while not denying them a role. Experts should take care if they claim that they know what citizens would choose if they were thinking more clearly. As Sugden (2013, 534) argues,

Determining what a person would choose, were she perfectly rational, is not just a matter of discovering given facts about her. The concepts of full attention, perfect information, unlimited cognitive ability and complete self-control do not have objective definitions; they are inescapably normative. Just about any intervention that a paternalist sincerely judges to be in the individual's best interests can be justified in this way if the paternalist is allowed to define what counts as attention, information, cognitive ability and self-control. The claim that the paternalist is merely implementing what the individual would have chosen for herself under ideal conditions is a common theme in paternalistic arguments, but should always be viewed with scepticism.

There is a different way to approach the issue of how to use expertise. Instead of getting experts, as is the standard practice of nudge, to decide what is in the best

interests of others, their expertise could be used to support others to obtain the capacities to make their own choices.

More generally nudge needs to be conceived not as a technocratic project and more as a tool for supporting a self-guiding society. Such a shift will allow nudge to put itself in tune with the principles of policymaking in liberal and open societies and will avoid the confusions created by the claims of liberal paternalism. The core argument comes from Lindblom (1990) but finds reflection in other debates about public policy (for example, Hoppe, 1999). Nudge initially was framed by a science-led model where experts on how humans think offer practical ideas drawing on their knowledge to improve public policy. As Lindblom argues, such a science-led model has a long but not always honourable history. Given societal complexity, the limits to knowledge, and that behavioural change measures inevitably tend to require value choices, Lindblom is surely right to suggest a more pluralistic and cautious approach to applying science to policy. The alternative framing which Lindblom refers to as social problem solving for self-guiding societies calls instead for policy to mix insights from experts and public officials with those of citizens and other actors. It is a process where experts are not in the lead but where they are supporters to a process of change driven by citizens and others. It calls for a policy process that is open and dynamic. It looks to a competition of ideas in a never-ending search for solutions to social problems. In many ways, it is compatible with the practice of nudge with its commitment to trialling and testing but crucially it argues that initiating and judging nudges needs to be a pluralistic activity. To borrow the phrasing of Hoppe (1999, 209), we need less focus on ‘speaking truth to power’ and more on ‘making sense together’.

## **Towards nudge plus: examples and proposals**

A programme of nudge plus would meet the charge of paternalism head on by looking not only to experts or governments to lead behaviour change but rather by giving citizens the space and capacity to make changes to their lives (John, 2018). Second, nudge plus would recognise that effective nudges work alongside other influences of people’s behaviour and needs to be presented and applied, not as a standalone policy, but rather as mechanism for helping deliver behaviour change alongside other tools of government. Several ideas about how to develop nudge would seem compatible with the argument for nudge plus based on a broader cognitive foundation than deviations from rationality. In this set of examples and proposals, we have selected some examples of nudges where the cognitive approach is used and applied, such as commitment devices, where the idea is the future reformers might wish to enhance this aspect of nudge. The idea is that not all nudges may have such cognitive possibilities, such as defaults, but some do and these are worth developing.

### *Understanding your role in the system*

Hallsworth et al (2015) randomised SMS messages to outpatients in the NHS with a treatment messages that indicates the costs of missing an appointment and which led to fewer people missing their appointments. This nudge is the activation of a norm of attendance. But it is more than a simply automatic fast thinking process. Rather what is happening is that patients are being asked to reflect about the consequences of their decisions. Entailed in the nudge is the need for the respondent to understand

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the argument that missed appointments cost money. The reminder operates through automatic fast thinking mode to bring the issue to their attention but the behaviour is changed in part because of the slow thinking reflection it stimulates.

It is the case that many nudges can appear to be initially appealing for a fast thinking response but in practice are about stimulating reflection of your role or even duty as a citizen in the production of public services. John and Blume (2017) sought to nudge holders of blue badges, which allow people with disabilities to park their cars in designated places, so it is easier for them to get to shops and public facilities, to renew online which is much cheaper for the public authority, which must issue such badges. The researchers administered a nudge that said that the public authority would save money if people signed up online and use that money to support services. Not all variations in the message worked but one that did required respondents to understand the argument and then to believe the council would spend the saved resources on services. Many standard nudges require some thought on the part of the respondent as they are often seeking to convey an action in a complex public policy system. Consider the very widely implemented nudge to use peer information to change behaviour such as ‘nine out of ten people have already paid their taxes’.

This nudge requires the respondent to understand what this phrase means. As well as following the norm, which might be relatively automatic, the taxpayers might also think about the likelihood of being caught and whether paying up rectifies this problem and which requires a conception about how payment systems work. They need to understand their role in the policymaking system. Information can be provided alongside the nudge so that citizens can understand the linkages. In many ways, nudge opens the way for public information campaigns, which have been questioned as a behavioural policy instrument; but they play a role in helping the public understand policy changes, such as measures to improve public health (Gielen and Green, 2015).

### *Commitment: a reflective process*

In the health world, nudges to change health behaviour often require that the person in the trial has gone through a thought process about their health, as otherwise the trials would not have a chance of working. Consider commitment devices (Thaler and Shefrin, 1981). These are concrete and public commitments people make or are encouraged to make to do an action so as to commit themselves to it. Although the nudge operates through the psychological sense not wanting to go back on a promise, to enter into commitment device requires some degree of thought and understanding of what a commitment device is in the first place. Someone duped into accepting a commitment device, without that process of reflection is likely to reject it further down the line. This has been shown to work in diet interventions, for example where there is just as much focus on getting the individual to consider a commitment device (for example, Volpp et al, 2008). The main issue with commitment devices is getting people to take them up which implies a degree of conscious thought in adopting them (Rogers et al, 2014). This makes commitment devices as superior to other nudges, such as defaults, where the reflective dimension is not explicit. It should be possible to build in commitments in how citizens engage with the policy process in ways that are public, encouraged by more internet-based form of engagement.

### *Aspirational encouragement: kick-starting thinking*

Another example of thought-provoking nudges is the work on aspirations to motivate people to make better choices, such as to go to university. Experimental research shows that people can be influenced by a communication to make choices to attend university. One is a letter to the student from someone in university, which has an effect for attendance at elite universities (Sanders et al, 2017). Silva et al (2016) found that role models, in the form of talks to students, work too. What is going on with these interventions? The student needs to think through a set of linkages that involves the idea that someone like them might attend university. This relates to a wider literature that suggests that it is conscious aspirations that motivate students who need to 'dream' as they consider their futures (for example, Khattab, 2015). These kinds of talks could be applied across many sectors where choices about futures need to be made, such as people considering careers for example.

### *Personalisation: a route to slow thinking*

Personalising nudges is a route to thinking. An example is including someone's name as part of a request to settle court fines (Haynes et al, 2013). This measure might be regarded cynically as a ploy to make the citizen think that someone is taking a personal interest but in practice it could be a way to stimulate the person's interest and engagement with the problem, in that someone in officialdom is taking an interest in them. The general point is that a nudge that addresses you directly is working on your automatic, fast-thinking reflex to pay attention but then is inevitably getting someone to commit to some reflection and conscious thought.

### *Directly encouraging slow thinking*

An evaluation of crime re-education policies for poor youth in Chicago (Heller et al, 2017) from three randomised controlled trials showed the programme Becoming a Man (BAM) programme developed by the Chicago nonprofit Youth Guidance reduced total arrests during the intervention period by 28–35 per cent, reduced violent crime arrests by 45–50 per cent, improved school engagement, increased graduation rates by 12–19 per cent, and reduced readmission rates to a correctional facility by 21 per cent. One key intervention involved getting participants to play a simulation game and the researchers conclude that the positive response they got was 'suggestive support for the hypothesis that the programmes work by helping youth slow down and reflect on whether their automatic thoughts and behaviours are well suited to the situation they are in, or whether the situation could be construed differently' (Heller et al, 2017, 2). Recent work also demonstrates the influence of therapy-based interventions on social outcomes. Blattman et al (2017) have tested whether providing cognitive behavioural therapy (CBT) encourages better outcomes, in terms of crime and violence for unemployed youth in Liberia, which they found to have strong effects. There has been a more general interest in using ideas in CBT as a tool to increase awareness of people's own behaviour changes, influencing initiatives called 'mindfulness', which can be taught and conveyed so as to achieve behaviour change, even targeted to policymakers (see Lilley et al, 2014). What is interesting from the nudge plus perspective is the extent to which the behaviour changes come

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from measures that stimulate reflection and awareness. There are a wide range of applications, and where online tools can encourage this reflection, for example in encouraging people to make better decisions over their finances with the Monzo application developed by BIT (BIT, 2018).

### *Supporting true grit*

In recent years, there has been considerable focus on what characteristics might be associated with long-term behaviour change, or self and societal benefiting behaviour. In the view of Duckworth et al (2007) it requires the development of an orientation akin to determination and playing for the long-term, what they call grit. In studies of health it requires having a mind-set to engage in change (Burd, 2016). Though some of these characteristics might derive from genes or family context, the message from advocates of grit is that individuals can consciously work at getting these advantages. This must involve some thinking and reflection on the part of the individual, even if the later actions might follow more automatically. Effective motivation is essential to behaviour change (see Michie et al, 2011), and this underlying feature can only be promoted by reflection and consideration on the part of the individual.

### *Boost: developing your capabilities*

The boost claim is to support or nudge people where they need capacity to make decisions. In Hertwig's (2017) words, 'The goal of boosts is to make it easier for people to exercise their own agency in making choices.' Whereas in the past doctors tended to dispense their decisions on high for grateful patients to receive, in the days of consumer sovereignty patients get given choices between alternative courses of action, say between different treatments. But these choices require some understanding of statistics and it is easy to make simple mistakes. What Hertwig suggests is giving patients information about the risk of different treatments expressed in natural frequencies rather than in conditional probabilities, so avoiding a need to understand Bayesian statistics. This training strategy has proved effective (Sedlmeier and Gigerenzer, 2001), such as with students (Hoffrage et al, 2000). Other examples include simple rules of thumb to interpret financial investment decisions for retirement, or simple rules to follow for a diet. These interventions aim 'to extend the decision-making competences of laypeople and professionals alike...target the individual's skills and knowledge, the available set of decision tools, or the environment in which decisions are made' (Grüne-Yanoff and Hertwig, 2016, 152).

## **Conclusions**

There are flaws in the foundations of nudge that can be addressed by policymakers. There is no need for nudge to tie itself to the problematic concept of libertarian paternalism or to believe that it is a standalone policy. Like most public policies, there is an element of paternalism in nudge interventions. Effectiveness in public policy usually involves a combination of governmental tools. Nudge does not imply government should avoid standard financial instruments, various forms of regulation, or never use other subtle kinds of policy tools. Rather it is better understood as a way of honing the effectiveness of these tools.

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Nudge policy – as practiced in its first decade – did appear to give a strong priority to smart ideas from experts advising government, leaving citizens as the unwitting victims. Partly for that reason, policymakers should be cautious about changing the gamut of policies to override citizen choices. Decentralist and market-based options can be seen as a way to deal with the limitations of nudge as part of a more general caution with paternalism in all its forms (Lucas and Taic, 2015). We are not so pessimistic about the paternalist side of nudge, partly because of the survey evidence that shows a great deal of support for nudge even when done in secret (Sunstein, 2016). As Tannenbaum et al (2017) argue, some of the public attitudes to nudge may be explained more by partisanship rather than underlying views of the tools itself.

We propose that designers of nudge recognise that citizens are not always cognitive misers but are also capable thinkers. Many effective nudges, whether explicit or not, already incorporate some citizen reflection and deliberation: we propose building on and using that wider cognitive palate in the interventions that policymakers use and in ways in which they approach citizens. There is also good evidence to suggest that nudges do not need to rely on automatic processes, and that thinking about the nudge does not undermine its effectiveness (Loewenstein et al, 2015). Nudge emerged from welfare economics where experts use their smart thinking to save the world. Like many before us in policy analysis we are sceptical about over-claiming from experts and technocrats. We offer another model for tackling social problems that is more in tune with the idea of liberal and open democracies and a self-steering society. We need nudge policy to be developed where citizens, public officials and experts work together to design better ways to tackle public problems (Evans and Terrey, 2016).

We offer nudge plus as an enhancement to the current range of nudge policies. Nudge plus builds on the reflective component that is already implicit in many nudges. It encourages slow thinking at times, so that individuals can reflect on the messages that governments give them from time to time. There is a recognition that the nudger needs to design interventions with these long-term considerations in mind, such as giving citizens the boosts they need to make decisions, or personalising nudges. While nudge plusses fall short of full citizen control of policies and still place responsibility for their design in the hands of bureaucrats and politicians, they are based on having a conversation between the citizen and those who represent the state and government, which acknowledges the democratic foundation of public policies and the autonomy this should entail. We provide a solution that builds on what has been achieved, but recognises the powerful criticisms that have been made and seeks to address them in ways that are practical and do not impose unreasonable costs upon the citizens, who are rightly concerned with leading a life fulfilling private objectives as well as ones that have collective benefit. We hope that further debate about nudge plus policies will prompt their explicit adoption, in ways that might win over the critics of nudge, and develop more legitimacy and support for behavioural public policies in whatever context they are developed. We offer a research agenda to test out new kinds of interventions that reflect the development of the research so far and indicate reforms that can be achieved by incorporating more citizen reflection and a long-term relationship between state and citizens. The result is a broadened agenda for research and policy and behaviour change.

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## Conflict of interest statement

The authors declare that there is no conflict of interest.

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