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The Rationality Paradox of Nudge: Rational Tools of Government in a World of Bounded Rationality

Martin Lodge and Kai Wegrich

Abstract

Nudge and the wider behavioural economics approach has become increasingly dominant in contemporary political and policy discourse. While much attention has been paid to the attractions and criticisms of Nudge (such as 'liberal paternalism'), this paper argues that Nudge is based on a rationality 'paradox' in that it represents an approach that despite its emphasis on bounded rationality does not reflect on its own 'limits to rationality'. The paper considers the implications of this paradox by considering mechanisms that influence government decision-making, and mechanisms that lead to unintended consequences in the context of policy interventions.

Introduction

One of the key mega-trends in contemporary governance has been the enthusiastic embrace of 'behavioural economics'. Far beyond the UK, the US and Australia, the Nudge agenda has been enthusiastically endorsed by governments of all colours and international organisations. As any social movement, Nudge can also rely on its own manifesto, namely Nudge by Richard Thaler and Cass Sunstein (2008, also Sunstein 2014) and, more recently, its own 'rags to riches' biographies by US and UK-based proponents (Thaler 2015, Halpern 2015a). Nudge may represent just one of a whole plethora of behavioural economics-informed instruments seeking to shape the behaviour of individuals. However, it has also come to stand for a much wider fascination in applying behavioural economics in government (see Oliver 2013a, 2015, Baldwin 2014). This paper points to a fundamental paradox at the heart of Nudge, namely that an approach that places bounded rationality at the heart of its thinking reflects so little about the limits of its own rationality.

This paper refers to Nudge as a convenient shortcut to point to the whole range of initiatives that have been justified by reference to behavioural economics. The literature has increasingly differentiated between nudges, budes, shoves and other kinds of interventions (Oliver 2015, Ogus 2010), based on criteria such as levels of coerciveness and transparency. We subsume these different categories under a broad Nudge label as our argument is not about differentiating different intervention types informed by behavioural economics. Instead, we focus on the underlying assumption that policy-makers using these kind of approaches proceed as if they were better equipped to overcome their own limits to rationality.

Nudge embraces an understanding of human decision-making that is defined by bounded rationality (i.e. the notion that decision-making is characterised by constraints on individuals')

cognitive capacities and resources in processing, often limited, information). It therefore represents a natural bed-fellow of the contemporary behavioural economics agenda that has flourished over the past few years (see also Amir and Lobel 2008), despite the long-standing interest in bounded rationality in the social sciences (see Simon 1947). Nudge resonates with the contemporary fascination in risk and loss aversion (Kahneman and Tversky 1979), decision-making biases (Kahnemann 2011, Ariely 2008, Gigerenzer 2014) and the politics of 'happiness' and cognitive behavioural therapy (Layard and Clark 2014).

Furthermore, the Nudge book is of particular interest given the politically and academically exposed position of its authors, especially Sunstein (as US President Obama's regulation supremo until 2012). In the UK, the (subsequently part-privatised) 'Behavioural Insights Team' (or Nudge Unit) has played a similarly influential role at the centre of the UK government and on the international conference circuit. Nudge, and behavioural economics, allows those believing in micro-economics and those assuming in social norms to pursue joint interests regardless of underlying normative differences (Rostain 2000). In addition, Nudge offers the opportunity to bring together those who believe in non-interventionist governance and those seeking to realise 'optimal' outcomes through intelligent design. It therefore combines the promise of 'cheap government' in an age of depleted financial resources with the promotion of 'choice' in an age of increasingly heterogeneous societies that no longer tolerate 'one size fits all' policies. Finally, Nudge also offers the promise that once the right nudge has been chosen, individuals will choose optimal solutions by themselves without requiring costly enforcement activities.

This paper challenges the Nudge agenda by pointing to a basic paradox: it asks whether an approach that offers 'rational' policy-making to address problems resulting from bounded rationality can overcome the limits of bounded rationality itself (see also Klick and Mitchell 2006: 1622). In doing so, this paper deviates from the range of critical responses to the Nudge movement (Leggett 2014, Mols et al 2015, Oliver 2013b, Hausman and Welch 2010, Yeung forthcoming). One strain of criticism has focused on Nudge's philosophical foundation in 'libertarian paternalism' (Rizzo and Whitman 2008). This criticism has focused on the possibility of a 'libertarian paternalism' in the first place, and on the rather diverse, if not inconsistent, set of examples of interventions put forward by Thaler and Sunstein (Baldwin 2014: 832, Yeung 2012, Oliver 2015). A further strain has argued that nudging is an act of non-transparent manipulation where accountability structures are deliberately left unclear (see Bovens 2008, Wilkinson 2013, Rizzo and Whitman 2009). Nudging is therefore seen as potentially problematic when assessed in the light of basic principles of liberal democracy. A third strain, applying to behavioural economics' informed approaches in general, is to attack a perceived 'theory-free' reliance on a view that 'the data speaks for itself' (Harford 2014). A further strain considers the assumptions underpinning Nudge, and contrasts them with different paradigms regarding individual decision-making and understandings of autonomy (Waldron 2014, Yeung 2012, Hove 2012, Rostain 2000), criticism that individuals are not 'cognitive misers' (Mols et al 2015) and arguments that behavioural economics assumes 'too

much irrationality' and operates with 'its own empirically false model of behavior' (Mitchell 2002: 9-10).

Whereas considerable criticism of Nudge (and behavioural economics) has focused on competing ideas regarding understandings of rationality and human motivation, this paper develops a different argumentative strain by dealing with the rationality assumptions of Nudge on its own terms. Nudging assumes a world in which individuals are boundedly rational: decisions are affected by confirmation biases, loss aversion, and openness to optical manipulation. People make sub-optimal choices due to (the perception of) too high transaction costs and 'weakness of will'; it is therefore assumed that individuals inherently prefer to improve their choices. In other words, sub-optimal choices are a result of 'reasoning failure'. For example, US survey data suggests that individuals fail to register as organ donors, even when they are generally in favour of doing so (as reported in Abadie and Gay 2006: 600-1, also see Department of Health and Human Services 2013). Similarly, they fail to sign up to health-care or pension plans, despite the realisation that basic coverage is likely to be insufficient in old age (Madrian and Shea 2000; Choi et al. 2001). They consume sugar- and calorie-rich drinks despite knowing about their content. Or, in the context of lesser developed countries, individuals are reluctant to allow their children to enjoy regular schooling due to short-term economic need, despite knowing the importance of education for their offspring. In sum, short-run benefits drive out much higher long-term benefits, or distrust and lack of information make seemingly irrational behaviour rational. In addition, Nudge has been used to support compliance (and cheapen enforcement) by exploiting social norms: it is argued that by personalising messages, individuals are more willing to pay taxes and parking fines on time (or with less delay).

Such sub-optimal choices, or 'reasoning failures', are a product of underlying choice architectures. Nudge devices change the basic settings of the so-called choice architecture (Sunstein 2014). The latter might be the result of previous policy decisions, or they may be the consequence of market incentives. Any social situation contains choice architectures and therefore nudges. By intelligently changing the choice architecture, humans are put into a position to act according to their preferences without facing major opportunity costs (Thaler and Sunstein 2008: 109). They continue to satisfice (i.e. make choices based on a limited set of criteria, Simon 1947), but achieve more desirable outcomes, for themselves and for wider society. In addition, they are usually not required to choose how to obtain the desired outcome: in the world of Nudge, individuals are free to 'opt out' rather than 'opt in'. Thus, individuals eat more healthily when encountering appealing fruit and vegetables rather than chocolate bars or bags of crisps, they cause less splatter when incentivised to undertake

target practice in male urinals, and they happily donate organs. They send children to school as attendance is linked to cross-linked support packages.¹

While fiddling around with choice architectures may be regarded as being highly paternalist (by those believing in the decision-making competence of individuals) or as too individualistic (as it believes in the power of nudge without considering the power of business to manipulate and pressurise), it has much wider implications: it suggests that those deciding on choice architectures and on dominant psychological mechanisms are equipped with perfect rationality, or, at least, superior rationality to that of individual citizens (Rizzo and Whitman 2008, Waldron 2014). Nudge assumes that the benevolent rational decision-maker can identify 'rational' behaviour and therefore also 'sub-optimal' choices arising from bounded rationality.

Interventions are therefore justified through 'paternalism'; nudged choices are claimed to reflect the 'real' preferences of nudged individuals. Decisions are taken on the basis of being 'evidence-based', often backed up by 'gold standard' random control trials (John et al. 2011, John 2011). Thus, decision-makers have the evidence base to make decisions as to how individuals can be manipulated, they are equipped with the persuasive authority to convince others regarding the superiority of nudging relative to other interventions, they are able to address potential interaction effects with other policies that apply to a particular problem, and they can make sense of the multiple motivations that apply to human behaviours. In other words, at the heart of Nudge is a basic paradox: it assumes bounded rationality, but offers a 'comprehensive' vision of rationality to address problems caused by bounded rationality.

This paper explores this 'rationality paradox' at the heart of Nudge in three steps.² First, we suggest that not only individuals' but also governments' decision-making is boundedly rational. Such limitations affect policy interventions in general and are therefore not specific

¹ Typical nudge tools, according to Thaler and Sunstein (2008) are defaults (exploiting tendencies for humans to display inertia), persuasive, campaigning and counselling strategies (to persuade individuals), design options (to make 'suboptimal' choices less convenient), commitments (by relying on social norms), transactional shortcuts (to reduce process-related costs to do 'the right thing'), information mechanisms (to trigger people's reactions), and warnings and reminders (to discourage behaviours). Yeung (2012) suggests that three key types of Nudges can be distinguished in *Nudge*: those working as 'defaults and anchors', 'physical design' and 'deliberation tools'. Oliver (2015) highlights certain decision-making biases, such as present bias (heavy discounting of the future), reference points and loss aversion, disproportionate weightings of small and large probabilities and, finally, identity utility, namely the positive utility individuals gain from being associated with objectives/ organisations they value. On experiments using 'defaults', see Moseley and Stoker (2015).

² This paper does not seek to expand on a further line of critical engagement with behavioural economics, namely understandings of rationality and assumptions regarding human behaviour. As noted by Rostain, behavioural economics appeals to those who believe in 'homo economicus' and those who point to the importance of social norms. Others have further pointed to the importance of group identities in shaping individual behaviour (Mols et al 2015, Haslam 2014, Turner 2005). Such a debate overlaps with discussions regarding notions of the value of individual autonomy (for example, Lindenberg 1988, 2001, Lindenberg and Steg 2007).

to Nudge. However, they are specifically problematic for Nudge given the behavioural economics-related argument that it is aware of bounded rationality. Second, we explore in more detail how bounded rationality affects the rationality of Nudging. We do so by looking at how the introduction of Nudge is faced with the limits of bounded rationality in a setting that is characterised by organisational and political logics on the one hand, and how Nudge is confronted by limits of bounded rationality in individual decision-making on the other. Finally, we point to the implications of our argument for the Nudge and wider behavioural economics agenda. In doing so, we are not developing an empirical argument given the limited, and problematic evidence base. Instead, by highlighting the basic paradox at the heart of Nudge, we are primarily concerned with the rationale of Nudge.

The Rationality 'Paradox'

Nudge assumes that individuals and organisations have the capacity and motivation to change. It assumes that we know what people want. The capacity demands are small (in the eyes of nudge enthusiasts) as individuals simply follow paths chosen for them. In this sense, Nudge is different from those tools that seek to bring rationality into decision-making, whether this is via performance management systems, cost-benefit analysis or rational budget programming systems. Nudge does not seek to reduce irrationality in government decision-making through procedures; instead, it seeks to reduce irrationality by exploiting irrationality at the level of the target of public policy, the individual, by either harnessing unconscious biases or by encouraging individuals to be more reflective in their choices.

The attraction of Nudge is based on being both familiar and seemingly novel at the same time. It is familiar in that it recognises the bounded rationality-induced limitations in human behaviour that the enforcement and implementation literatures have been emphasising for some time (Sunstein's own numerous seminal contributions to the regulation literature being a primary example). It is novel in that it places its emphasis on information and incentives as a tool to manipulate individual rather than organisational behaviours. As such, it fits a social science agenda that seeks to discover human psychology (or to promote Cognitive Behavioural Therapy at the expense of other therapeutical approaches). It also fits a political agenda that pretends to be evidence-based in order to find seemingly low-cost high-intelligence measures.

Before exploring the consequences of the rationality paradox at the heart of 'nudge' and other behavioural economics-informed initiatives in executive government, it is critical to consider the justification for proposing the 'rationality paradox' in the first place. After all, governments may not be suffering from bounded rationality in general, or, somewhat differently, may suffer from other dysfunctional symptoms that have nothing to do with bounded rationality.

The first line of argument to claim that governments are more rational than individuals relies on the superior resource base of governments. Governments possess processing capacity that go far beyond those of individuals. These superior resources involve finance (ordinary individuals do not have the same amount of cash to spend on research and espionage), knowledge (individuals do not have the capacity to access networks of expertise to offer insight as to what to do with certain threats), organisation (individuals do not have armies of sitting and standing bureaucrats, consultants and academics at their disposal to gather information, to analyse it, and effect choices), or authority (individuals usually have not got the legitimacy to prohibit or permit certain activities). In addition, governments are, within limits, able to constrain their behaviour through the generation of procedural safeguards (such as impact assessments) and the establishment of particular organisations (e.g. central banks to reduce the time inconsistency problem in monetary policy). In other words, the key characteristics of bounded rationality, the resource limitations on individuals that lead to potentially sub-optimal choices, are overcome through superior resources and procedural and other safeguards; governments do not suffer 'reasoning failures' as individuals do.

The second line of argument to claim that governments do not suffer the kind of bounded rationality that individuals do suggests that governments' limitations in their decision-making cannot be treated in the same way as the limits on individual decision-making. Governments are less prone to information asymmetry and processing problems. Failure, i.e. sub-optimal choices emerge due to the exercise of 'power'; for example, because of the election-seeking behaviour of politicians, organisational politics within the executive, the successful capture of policies by concentrated interests, or other kind of distortions that might occur in the policy-process. Policy-making, according to this perspective, is about strategic, and rational actors. Their interactions may lead to flawed outcomes, but these are due to institutional incentives or interest group constellations, not about bounded rationality per se. Somewhat relatedly, the study of 'blundering governments', such as the one presented by Anthony King and Ivor Crewe (2013), is largely about inbuilt constitutional weaknesses, namely over-centralisation, in the British policy-making machinery rather than inherent limits to knowledge and administration.

Neither of these two lines of argument offers a real challenge to the view that governments are similarly bounded in their rationality as are individuals. Individual actors and actors inside government (and those trying to access government) pursue strategic aims. These actors, however well-resourced, are boundedly rational (Pierson 2000, Miller 2000). Actors are myopic, they are resource-dependent on other actors, they seek to protect their organisational and individual turf and reputation (otherwise known as 'intended rationality', Jones 2003: 397), display a decision-making bias towards risk aversion and negativity bias, they deal with multiple audiences both within and outside their own organisation, and they are attached to particular values, symbols and rituals (March and Olsen 1983, Stark 2014, 6 2014). Both deal with uncertainty and the need to rely on heuristics (which need not be inferior under conditions of uncertainty, see Gigerenzer 2014). Individuals as governments

interact with others whose capacities and motivations are not always easy to observe or estimate. Indeed, the notion of 'reasoning failure' suggests that Nudge assumes well-intentioned, but poorly informed individuals. However, much government activity is about dealing with the ill-intentioned (and, often, well-resourced - such as drug dealers).³ Both individuals and governments face so-called wicked issues (i.e. multi-dimensional problems with irresolvable trade-offs, Rittel and Webber 1973) on a day-to-day basis, therefore further highlighting inherent cognitive and value-based trade-offs that characterise decision-making.

Such a set of claims is hardly novel in the study of (public and private) organisations. For example, Herbert Simon (1947) notes how organisations face considerable information processing and decision-making challenges. The metaphor of 'garbage-can decision-making' has also signalled the limits of 'rational' policy-making: actors pay partial attention, attendance is fluid, preferences are unclear, and solutions 'are actively looking for a question' (Cohen et al 1972: 3). Informed by the view that governments' activities are best characterised as being shaped by bounded rationality, others have highlighted the partial attention that governments pay to any one issue at particular times (Jones 2003, Baumgartner and Jones 1993), how default policy settings have their own 'policy inheritance' effect (Rose 1990), and how the 'logic of appropriateness' shapes individual and organisational behaviours and decisions (March and Olsen 1983). Furthermore, organisations' learning is said to be biased towards confirming rather than challenging existing ways of doing things (March et al 1991). Christopher Hood has also highlighted limits of administration that are part and parcel of the boundedly rational nature of government (Hood 1976): some of the limits are due to inevitable time-lags, others about genuine uncertainty, and others about costs of acquiring and searching for information. The standard litany of problems in executive government, such as control, co-ordination, or implementation are about boundedly rational actors pursuing their strategic objectives in the context of limited information or genuine uncertainty. Issues of 'multi-organisational sub-optimisation' (Hood 1976) emerge as organisations dealing with standard-setting, information-gathering and behaviour-modification operate in dispersed arenas, are concerned about their reputation, and focus on those activities that are of immediate importance to them.

Furthermore, even though governments have arguably more resources on tap than (most) individuals (or networks of individuals), this does not mean that 'reasoning failure' cannot occur in government. For example, much has been said about the importance of 'better evidence' and introducing 'gold standard'-type research into the world of real policy-making (John 2013). However, the search for 'evidence-based' policy-making is inherently about limited searches: trials, however gold-standard, incorporate value and methodological choices in addition to political priorities. Whatever effort may have gone into designing 'gold standard'-type experiments, the actual results from experiments are, at best, trivial.

³ For a different analysis of an ill-intentioned and well-resourced 'rational maniac' in the area of professional cycling and doping (Lance Armstrong), see de Bruijn et al 2015).

Experiments themselves are often based on flimsy foundations as social experiments are more complex than the (supposedly) controlled environment of medical trials - even if one tries to ignore the highly problematic selection biases that underpin medical trials⁴: can undergraduates who are paid to spend some time in 'laboratories' really be seen as real-life equivalents? More broadly, whether laboratory settings can ever capture the specificities of social situations remains questionable (see also Rostain 2000: 984-8). Even if the contemporary agenda has moved towards 'field experiments' (James and Moseley 2014), it remains questionable whether 'real life' field experiments can overcome challenges in terms of scale, time, contamination effects and such like. More broadly, trials might be appropriate to assess the effectiveness of individual interventions when treated in isolation; however, they are far more problematic when it comes to combinations of factors and instruments, as well as when accounting for the role of organisations in the implementation of policies (see Lodge and Matus 2014).

For both individuals and governments, intentional action can therefore quickly lead to unintended consequences. Unintended consequences (that are not necessarily undesirable) emerge from a range of sources (Merton 1936: 900). Bounded rationality, for Merton, is about high transaction costs⁵, dealing with limited knowledge, error-prone assumptions and an 'imperious immediacy of interest'. The latter is defined by short-term interests driving out long-term concerns, considerations about interdependencies, moral implications and the possibility of interaction effects (such as counter-learning) (see also Hood 1976, Sieber 1981). Similarly, Charles Lindblom (1959) noted how resource constraints made any strategy that was not incremental both normatively and practically undesirable. Again, as the authors of these works suggest, these decision-making biases apply to both organisational and individual decision-making.

This is not to say that trialling policy interventions is meaningless or that all government action will inevitably lead to unfavourable results. It also does not mean that individuals are inherently better placed than governments to make decisions (see, in contrast, Viscusi and Gayer 2015). However, it suggests that actors in government are similarly boundedly rational as the individuals whose decision-making they seek to manipulate. In other words, individuals and governments suffer from 'reasoning failure' (as termed by Nudgers): individual as well as government decision-making is inherently about transaction costs, it is about uncertainty, it is about error-prone assumptions, and about short-term biases, and intended rationality. Both governments and individuals make decisions under conditions of bounded rationality, and therefore the consequences of the 'rationality paradox' at the heart

⁴ See 'Medicine's deadly gender gap' <http://www2.macleans.ca/2012/04/30/medicines-deadly-gender-gap-2/> (last accessed 21 November 2015); 'A Drug Trial's Frayed Promise' *New York Times*, 19 April 2005 (http://www.nytimes.com/2015/04/19/business/seroquel-xr-drug-trial-frayed-promise.html?_r=0), last accessed 21 November 2015.

⁵ Merton named these 'the economic problem of distributing our fundamental resources' (Merton 1936: 900, his emphasis).

of Nudge deserves greater attention. One final objection to this argument could be that Sustain and Thaler do consider such limits to rationality. Their article 'A Behavioral Approach to Law and Economics' contains two pages subtitled 'Behavioral Bureaucrats' (Jolls, Sunstein and Thaler 1998: 1543-5), highlighting concerns about populist governments and self-serving bureaucrats. Their argument there is that insulation from volatile publics and behavioural economics 'might produce some improvement' (p. 1544). They conclude the section with an acknowledgement that governmental intervention may 'make things worse rather than better. What we are suggesting is that facts, and assessment of costs and benefits, should replace assumptions that beg underlying questions' (p. 1545). A similar belief in 'facts' established by clever evaluation design is put forward by Halpern (2015b: 148) when discussing the problem of 'fidelity in implementation' (namely discretionary decisions by frontline bureaucrats). To explore these under-explored issues, this paper probes further into the rationality paradox of Nudge. In the next two sections therefore focus on the mechanisms that impact on policy instruments, such as Nudge. Without considering these mechanisms, any conversation about Nudge or other tools informed by behavioural economics lacks an appreciation of bounded rationality in executive government.

Organisations, tool choice and bounded rationality

In an ideal setting, government agencies would rely on 'evidence-based' Nudge-informed strategies, they would avoid policy 'knee jerks' to media-feeding frenzies (Hood and Lodge 2005), and carefully consider costs and benefits of various regulatory options. Bounded rationality in an organisational and inter-organisational context stands in the way of adapting supposedly superior policy strategies given path dependencies, established constituencies, jurisdictional turf battles between organisations, and confirmation bias that puts a premium on default strategies. This political context is hardly specific to Nudge. However, supporters of Nudge pay little attention to these sources of 'irrationality', nor how these generic factors in executive government may impact on the Nudge agenda itself.

How, then, is Nudge organised within the context of executive decision-making that is characterised by both inertia and knee-jerking? And, more importantly, is it able to withstand the kind of organisational processes that are associated with bounded rationality? One typical strategy for any reform approach has been the creation of special units at the heart of government that are supposed to advance a particular agenda. As noted, the then UK Conservative-Liberal Democrat government established a 'nudge unit' inside the Cabinet Office (officially named the 'Behavioural Insights Team') in June 2010 after the general election and change in government. This unit was supposed to advocate Nudge thinking across government, whether it was in the way in which regulatory reform proposals might be recast, charity payments could be increased (at a time when public money for charities was being slashed), healthy school meals were encouraged, or in the way in which letters to tax offenders were written to reduce delay in payments (see also Behavioural Insights Team

2014).⁶ A similar ‘Nudge unit’ was being established in the German Chancellery in early 2015. The second orthodox approach has been to force all decision-making through procedural methodologies and thereby force nudging onto the agenda for policy-making. As noted in the institutional design literature (Lodge and Wegrich 2012), the hardwiring of particular procedures ensures that for decision-makers their ‘decks are stacked’ in particular ways, leading them to make decisions within a desirable choice set.

These two orthodox ways of trying to integrate high intelligence policy ideas into the daily low intelligence life of executive decision-making have usually led to limited results, because of Merton’s ‘imperious immediacy of interest’. This ‘imperious immediacy of interest’ can be separated into four key phenomena within any social organisation: loose coupling, marginalisation, incrementalism and decomplexification. The underlying mechanisms operate on the basis of how attempts at integrating ‘new’ initiatives into organisations face resistance on the basis of group- or structure-based constraints. The former dynamic points to issues of acceptance and rejection of particular interventions by group of actors with their own (professional) worldviews. The structural constraint dynamic points to issues of how new interventions are integrated into bureaucratic contexts that are rule-based and specialised. These mechanisms and resultant phenomena are not mutually exclusive, nor are they jointly exhaustive, but they capture a substantial variety of potential dynamics that lead to unintended effects. These mechanisms are not exclusive to Nudge, but apply to policy interventions more generally. Table 1 summarises the argument.

Table 1

	<u>Group constraints low</u>	<u>Group constraints high</u>
<u>Structural constraints high</u>	<p>Incrementalism</p> <p>Small scale change to existing policies</p>	<p>Loose coupling</p> <p>Lack of penetration into existing policy</p>
<u>Structural constraints low</u>	<p>Marginalisation</p> <p>Attention crowded out by more urgent matters</p>	<p>Decomplexification</p> <p>Over-simplification leads to ‘pure’ solutions that fail to reflect complexity</p>

Loose coupling emerges as a result of high structural constraints that reduce the opportunities to alter policy settings and the presence of high group constraints that lead to resistance against ‘unwanted’ ideas. Loose coupling therefore refers to a lack of co-ordination between different organisational logics that exist within government. Different units and departments

⁶ The Behavioural Insight team ‘corporatised’ itself in 2014, joining the charity Nesta and being part-owned by the charity itself, the staff and the government.

within government have varied views as to their priorities and limited resources. They also develop distinct sectoral identities and highly selective perceptions on social situations given their frequent exchanges with key constituencies. As a result, the politics within executive government are defined by the struggle between dispersed units, anxious to maintain their autonomy. Unsurprisingly, therefore, any attempt at imposing an organisational solution on to such dispersed setting will be received with scepticism, if not rejection - solutions are rejected on the basis of both policy-commitments within an organisation and lack of 'hierarchical' fit within the organisation. For example, Nudging will hardly appeal to civil servants in energy portfolios who are in close relational distance with large-scale energy firms. Having to 'nudge proof' policy initiatives will be seen as unwelcome to anyone, whether they are working in areas such as shop opening times, maternity leave or bovine tuberculosis. Similarly, forcing procedural devices into decision-making processes is unlikely to automatically raise the profile of Nudge in government. Compromises between and within departments are more likely to be about budgetary allocations and the carving up of jurisdictions to address the bare necessities of ministerial reputation and blame management. Such a setting is not necessarily open to the introduction of procedural devices to force Nudge on to the table. This is particularly the case when Nudge-champions in government are anointed from the ranks of junior civil servants whose eyes are on the quick ascent up the career ladder, not on picking fights with more senior officials in their own or a different department. Outside appointments to such units usually require the backing of very senior politicians to be granted any audience within government. In other words, the normal organisational life within government allows only for a loose coupling of the Nudge agenda to the 'real world' of decision-making unless some political heavy-weight forces the agenda on to reluctant parts within the executive. However, once that heavy-weight has found a different playground, has been promoted upwards or sideways, or has bitten the proverbial dust, Nudge is likely to 'bounce back' into its loosely attached status.

Marginalisation defines a process that leads to a similar outcome to loose coupling, but the underlying mechanism is different. Here, the proposed intervention is just one of many other important issues that decision-makers have to consider in a generally fluid environment characterised by a lack of constraints. In other words, structural and group constraints are low and issues and initiatives rise and fall. Therefore, Nudge gets marginalised as other policy entrepreneurs and priorities take over, whether this is because of the value-basis of much policy-making, because of the ambiguous evidence that allows for a range of 'evidence-based' strategies to be considered, or because politicians prefer 'visible' policy strategies to achieve credit-claiming media headlines. A strategy that relies on non-transparent manipulation of peoples' preferences, whether it is stickers given to schoolchildren to reward them for 'healthy' meal choices or the insertion of carefully worded sentences into official government communications, is hardly the kind of material that allows politicians to blow their own trumpet. In turn, Nudge is less likely to suffer from marginalisation in those areas where the stakes are particularly low - when both the costs

and benefits of regulation are widely distributed across constituencies, for example, initiatives to deal with food waste.⁷ But those are arguably areas where intervention might be least important in the first place.

Incrementalism in decision-making in government also stands in the way of a comprehensive introduction of Nudge into policy-making. The underlying process here is one in which structural constraints are high: existing policies and commitments allow for only minimal procedural adaptation on the basis of political demand. After all, Nudge is supposed to be based on ‘evidence-based decision-making’, preferably generated through the ‘gold standard’ random control trial. Incrementalism takes the ‘default setting’ as given and centres on decision-making at the margin. The introduction of ‘Nudge’ calls for a questioning of the ‘default option’, which is likely to attract considerable resistance, thereby reducing the scope to achieve an agreement in the first place. For example, explicit attempts at ‘wiping’ the existing stock of policies clean, such as the UK Red Tape Challenge initiative where all departments were to cut their stock of legislation and regulation unless a good reason could be found to retain them, eventually turn incremental as any comprehensive ‘root’ (or stock) review over-stretches the capacities of government units (Lodge and Wegrich 2015). In particular, the demand to separate values (political objectives) from means (policy tools) increases the analytical complexity of such an exercise. Moreover, in a multi-actor setting, decision-making is often easier to achieve when incremental steps are taken on the basis of an agreement on the means, but without requiring consensus on the underlying objectives or ends (Lindblom 1959). Nudge represents an approach that requires an agreement on both the ends and the means: it is about having a clear idea as to ‘what is good’ for individual and society, and it is about the (non-coercive and ‘evidence-based’) means of achieving them (also Waldron 2014).

Finally, nudging is also problematic as it leads to decomplexification. High group pressures means that bureaucracy is inherently about decomplexification in the sense of creating categories and classifications to allow for a processing and ‘normalisation’ of the daily noise that government departments are exposed to. However, here decomplexification goes further, namely in the sense that nudging reduces the capacity of problem-solving per se. As argued by Baldwin (2010), to address complexity one needs to encourage ‘clumsy’ and hybrid solutions and not search for ‘elegant’ ones. Similarly, the better regulation literature notes that regulatory problem-solving should encourage combinations involving ‘soft’ regulation, self-

⁷ ‘Sacré bleu! French restaurateurs asked to hand out doggy bags’ *Daily Telegraph*, 15 April 2015 (<http://www.telegraph.co.uk/news/worldnews/europe/france/11537970/Sacre-bleu-French-restaurateurs-asked-to-hand-out-doggy-bags.html>, last accessed 9 May 2015). ‘Restekochen mit Senat und Spitzenköchen’ *Der Tagesspiegel*, 24 September 2013 (<http://www.tagesspiegel.de/berlin/aufklaerung-ueber-lebensmittel-restekochen-mit-senat-und-spitzenkoechen/8841444.html>, last accessed 9 May 2015); ‘Aigner fordert kleinere Portionen auf Speisekarten’ *Focus*, 26 May 2012 (http://www.focus.de/politik/deutschland/initiative-gegen-verschwendung-von-nahrung-aigner-fordert-kleinere-portionen-auf-speisekarten_aid_758730.html, last accessed 9 May 2015), ‘Ministerin will Kinderteller für alle’ *Bild*, 26 May 2012 (<http://www.bild.de/politik/inland/ilse-aigner/fordert-halbe-portionen-im-restaurant-24344064.bild.html>, last accessed 9 May 2015).

regulation with incentives and, occasionally, command-and-control regulation. The enforcement literature, too, encourages a mixing of soft and 'hard' instruments, and emphasises that it is only the presence of 'hard' instruments that allows the functioning of 'soft' instruments. Hybridisation and clumsiness are problematic to design, but they highlight that Nudge is, in principle, an '(over-) elegant' solution that stifles creative combinations through its emphasis on particular forms of 'evidence' and on the calculation of costs and benefits. This provides policy bureaucrats with incentives to come up with regulatory designs that are simple and 'pure' in their approach, rather than complex combinations of different tools and approaches.

In short, the 'imperious immediacy of interest' in organisational decision-making provides a problematic setting for Nudge to succeed as a priority or to be informed by a higher degree of 'rationality' than other initiatives. Politics and decision-making at the top are characterised by confirmation bias, risk aversion, turf battles and disproportionate information processing. These are hardly the kind of conditions that make 'evidence-based' nudge units a solution to 'reasoning failures' in executive government. In short, the bounded rationality conditions that define organisational decision-making have not been transformed by the rise and rise of the Nudge agenda. Nudge's popularity is a product of bounded rationality in executive government, it is shaped by bounded rationality in decision-making processes, and it is itself developed by individuals who are boundedly rational. Such conditions have a strong impact on the way in which Nudge is being developed and utilised, and the way its intended and unintended consequences emerge. As noted, the bounded rationality affecting government decision-making is nothing that is specific to Nudge; what is specific about Nudge is that this is an approach that emphasises bounded rationality among individuals, but does little to acknowledge the implications of bounded rationality in its own approach.

Individuals, Tool Choice and Bounded Rationality

The above discussion is unlikely to raise opposition among enthusiasts of Nudge. They would suggest that their prescriptions were never meant to be universal (although Halpern (2015a: 318) suggests that '..we use behavioural insight approaches [...] as a tool or lens through which to view all policy interventions'), and that Nudge does offer some political benefits (namely a reliance on low-cost political initiatives that may free up space for engagement in more electorally appealing areas). Nudge-based interventions have had some effects, according to advocates' websites at least. At the same time, Nudge has had no noticeable effect in other areas, such as in food labelling (OECD 2010: chapter 6, Griffith et al 2014). This section does not seek to weigh the evidence supporting or disputing Nudge as a policy tool. Nor does it consider what kind of value judgements should underpin Nudge-type decisions. For example, asking individuals to 'opt in' so that they can access pornography in their bedrooms is a political choice as to whether and where Nudge should be employed. Similarly, the decision to rely on Nudge to deter certain behaviours or consumption patterns rather than to fall back on punitive tax levels is a political choice.

This section considers whether bounded rationality can be ‘rationally’ manipulated or whether the type of limitations noted by Merton over 75 years ago are applicable to Nudge as well. Such a question may sound puzzling as Nudge is exactly about exploiting those limitations. However, this requires a degree of superior knowledge about people’s choices that may not always be present (see also criticism by Mitchell 2002, Selinger and Whyte 2011) or may have an impoverished assumption about human motivation (Mols et al 2015). As in the previous section, we note four ways in which bounded rationality may trump the best policy intentions and they, again, reflect dynamics within social organisations in terms of group and structural (rule-based) processes: these are classification error, aggravation, placation and over-commitment. These are summarised in Table 2 (see also Sieber 1981, who adds functional disruption, goal displacement and exploitation to the list of reverse effects).

Table 2: Overview of Unintended Consequences

	<u>Group constraints low</u>	<u>Group constraints high</u>
<u>Structural constraints high</u>	<p>Placation</p> <p>Nudges lead to intended behaviour change, but fail to address and hide build-up of major problem</p>	<p>Classification Error</p> <p>Wrong choices about which issues to nudge or regulate</p>
<u>Structural constraints low</u>	<p>Over-commitment</p> <p>Disappointment effect after over-enthusiastic uptake and over-use of Nudge</p>	<p>Aggravation</p> <p>Responses encourage opposite behaviour</p>

Turning to classification error first, any choice to engage in nudging and to require changes to the choice architecture demands a value judgement: it implies a view as to which particular behaviours are seen as ill-informed mistakes or as informed expressions of preferences. Such choices are shaped by existing structural and group constraints - and any choice is likely to reinforce such biases. This matters, for example, when it comes to the ‘selling’ of financial products to individuals who are given little insight into the actual risks involved. Furthermore, choosing which products and consumers deserve a ‘nudge’ in order to ensure that they are not pursuing ill-intended mistakes is a choice as to what one considers to be a ‘problem’ warranting intervention. A choice between a reliance on nudging or on more prohibitive approaches requires a judgement as to whether the identified problem can be contained to the individual decision-maker or whether any failing will impact on the overall trust in markets. Making a choice that certain products do not deserve a ‘nudge’ to

guide individual decision-making assumes, first, informed decision-making and, second, that losses are not going to have wider (psychological) effects on other individuals.

Aggravation suggests that despite nudging the actual problem is getting worse as individuals are provoked into opposing the intended effect (i.e. it offends group views). Individuals may regard any form of manipulation as an illegitimate interference in their choices.⁸ Mitchell, for example, has pointed to the potential conflict between living a 'prolonged, but boring' and a 'shorter, but exciting life' and it is questionable whether a government's intention to nudge individuals towards the 'boring' option will not lead to resistance (Mitchell 2005: 1254). In a more extreme case, targets of a Nudge may opt out of public provision and thereby increase the actual problem. For example, 'nudging' pupils to eat healthier meals may lead parents to respond by giving their children more of their own food, thereby enhancing obesity. Similarly, forcing companies to remove sweets from the till area may only lead to more colourful and manipulative advertising. A behavioural response that aggravates the problem rather than mitigates it may in particular occur in those situations where the intended outcome is not seen as desirable by at least a minority, especially when this minority is ill-intentioned (i.e. hostile to the policy intent) rather than ill-informed. More generally, where governments are distrusted and politicians generally seen as 'liars', it is questionable whether subjects are going to be willing to be nudged as any suspicion of 'libertarian paternalism' is likely to lead to opposition (see Waldron 2014).

Over-commitment emerges when Nudge-type initiatives are announced and adopted with much enthusiasm, but then lead to disappointment. One example of over-commitment is where the intended response overwhelms existing administrative capacities. As a consequence, support may decline and therefore increased use of the 'opt out' option will occur. For example, an 'opt out' organ donation system may be widely supported, but will lose support if body parts are found to be distributed through a system of medical favouritism (see also Truog 2008). Another example is where the individual gets over-whelmed by the multiplicity of nudging devices. Similarly worded statements to incentivise on-time tax payment, multiple labels to inform about food choices and online billing information may lead to a nudging overload that causes a reluctance to be guided by such information (especially with online billing when this requires the retrieval of passwords). A third example of over-commitment is the long-term effect of Nudge. It remains to be seen whether the long-term effectiveness of nudging will wear-off, therefore requiring even fancier devices to attract individuals' attention.

Placation suggests that nudging may lead to some change in behaviour that is then seen as addressing the problem. In fact, however, the long-term problem is not addressed, leading to a much worse problem later. Individuals after being nudged to wear cycling helmets may

⁸ Indeed, 'nudging' letters by the UK's Revenue and Customs regarding lower than expected tax payments were accused of representing 'bullying' by tabloid newspapers (<http://www.dailymail.co.uk/money/news/article-2644274/Taxmans-bully-boy-letters-innocent-families.html>, last accessed 24 June 2014).

bike in a more risky fashion as they feel 'safe'; similarly, individuals may eat particular foodstuffs because they are advertised (nudged) as 'healthy' ('green') if eaten in 'reasonable quantities'. As, however, there is no knowledge of what 'reasonable quantity' means, such traffic-light labelling can lead individuals to over-consume certain foods that appear 'healthy', but are not, while they only eat 'good' food in small doses because of some optical signal on the packaging that suggests that over-consumption may not be particularly healthy.⁹ Furthermore, being 'publicly' nudged in terms of pension provision may also give a signal that future retirement earnings are safe and at an appropriate level, when they may not be. Individuals therefore may show little interest in considering private savings options. In short, nudging relies on a signal that is 'easy' to understand; it may have the unintended effect of individuals caring even less about long-term consequences of their short-term actions.

Finally, combinations may also occur. An example of over-commitment and classification error is when consumers appear to be actively rejecting the set default option. For instance, UK consumers were actively opting-out of government imposed internet filters ('parental controls') in order to be able to watch pornography and other adult websites regardless of the government requiring internet service providers to implement a default setting that blocked legal pornography and other 'adult subjects'. Some blamed this on the engineers who set up private household internet connections rather than actively choosing customers. Regardless, a pattern of 4-8 per cent (for one operator it was approx. 36 per cent) of customers accepting the default setting did suggest that consumers were actively 'opting in'.¹⁰

These four mechanisms are not meant to suggest that all Nudge-type interventions are going to fail. It might be argued that all of the issues considered in this section can be ironed out through careful design, i.e. through the application of high degrees of rationality. However, it is unlikely that Nudge can be removed from the context of bounded rationality. Not all nudging will be ineffective, similarly, alternative strategies may be more (or less) useful than Nudge. However, whether Nudge and other behavioural 'insights' are useful remains difficult to assess (but see, Haynes et al 2013, Hallsworth et al 2014). For example, the UK House of Lords' Science and Technology Committee noted how difficult it was, based on published information, to establish which activities of the Behavioural Insights Team had proven effective or ineffective, or why certain initiatives had been pursued and others had not (see

⁹ This argument was made by the food industry to prevent the introduction of a standardised 'traffic light' system.

¹⁰ <http://www.bbc.com/news/technology-28440067> (last accessed 21 November 2015).

House of Lords 2014).¹¹ The charge that the proof of Nudge was ‘in the pudding’ (i.e. evidence) rather in its basic assumptions is difficult to assess as the evidence, such as there is, has been produced by those with a stake in Nudge’s success. What this section suggests is that a policy tool which claims to be rationalising ‘bounded rationality’ is faced by limitations introduced by the presence of bounded rationality itself.

Implications

Nudge represents the latest incarnation of ‘rational’ policy tools to overcome perceived inferior outcomes due to bounded rationality. As noted, Nudge is a somewhat different policy tool as it focuses on the target of the policy intervention, not on the way in which decisions within government are made. However, as previous studies of such ‘rationalising’ instruments have argued (Wildavsky 1966), Nudge is unlikely to overcome those inherent limitations that affect all government decision-making. Nudge has very high rationality assumptions: it assumes the possibility of expert judgement, the possibility to predict the effect of ‘architecture’ choices, and the possibility of well-intentioned individuals’ willingness to choose on the basis of being better informed. Nudge is, however, not just like any other tool as it claims to be addressing bounded rationality.

One objection to this argument is that all these claims are largely speculation and that the actual track record is likely to show that Nudge offers effective solutions. Some results may exist that point to such an outcome. Others may argue that the results are hardly insightful as they are based on limited samples, do not rely on a true natural experiment which focuses on different intervention theories, and that creatively construct data. Some may even suggest that the success stories do not even represent Nudges (see Mols et al 2015: 85-6). Most of the evidence is produced by actors that have a stake in the advocacy of Nudge. In other words, it is difficult to argue that straightforward evidence in favour or against Nudge can be produced.

The absence of any consideration of these potential limitations suggests that Nudge suffers from an over-optimism in its rationality assumptions (for an earlier critique, see Rostain 2000). This absence is particularly surprising in that Nudge addresses bounded rationality directly. Thus, Nudge is not sufficiently reflective of its own limitations. This limitation may admittedly not be unexpected as ideas about benevolent governments and ‘imperfect’ private decision-making are not unusual for public policy writing: Nudge and ‘behavioural public policy’ seem to be affected by the academic biases of their advocates.

¹¹ The Behavioural Insights Team responded by suggesting that much of its work was in the peer review process for academic journals, but pointed to its ‘East’ Publication (Behavioural Insights Team 2014) for evidence of examples that presented ‘what we have learnt about what works in this field - and (importantly) what does not’ (<http://www.behaviouralinsights.co.uk/blogpost/house-lords-science-and-technology-select-committee-behaviour-change>, last accessed 21 November 2015). That ‘East’ report did contain examples of experiments where interventions had shown effects and others had not, without being able to offer an explanation for different effects apart from stressing specificity and personalisation. The report also included ‘pitfalls’. Examples of these pitfalls either either drew on earlier literature or on cases that, however, did not suggest that the Behavioural Insight Team’s work had been found to have ‘pitfallen’.

The direct implication therefore is that Nudge-enthusiasts in government (and beyond) should be nudged into considering further the limits of their knowledge, and the type of experimental evidence-base they are relying on and the inherent trade-offs and side-effects that occur in organisational and individual decision-making. Wildavsky (1983) argued that one of the key limitations of the policy sciences was their lack of consideration of the importance of organisational logics within government. It is indeed highly ironic that bounded rationality is used to bring rationality to policy, without acknowledging the conditions of bounded rationality. This does not mean that all government intervention should be discarded, or that governments are incapable of advancing options that support individuals in ways that these targeted individuals could not pursue themselves. Instead, what is required is somewhat more modesty when it comes to the pursuit of 'rational' policy-making in executive government.

In conclusion, questions of individuals' and organisations' motivations and capacities are clearly critical for the practice and study of politics and public policy. This paper has focused on the rationality 'paradox' at the heart of Nudge by suggesting that greater attention needs to be paid to the mechanisms that are inherent in all (executive government) decision-making and that therefore impact on the way in which Nudge arrives on the governmental agenda, and how it is being deployed. While the limits of Nudge resemble those of other policy fashions and movements, it is particularly noteworthy and ironic that an approach claiming to be dealing with reasoning failure and bounded rationality shows so little self-awareness of its own limitations.

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References

6, P (2014) 'Explaining Decision-Making in Government' Public Administration, 92(1): 87-103.

Abadie, A., & Gay, S. (2006) 'The impact of presumed consent legislation on cadaveric organ donation: A cross-country study' Journal of Health Economics 25(4): 599–620

Amir, O., & Lobel, O. (2008) 'Stumble, Predict, Nudge: How Behavioral Economics Informs Law and Policy' Columbia Law Review 108(8): 2098–2137

- Ariely, D (2008) Predictably irrational: the hidden forces that shape our decisions (New York: Harper Perennial)
- Baldwin, R (2014) 'From Regulation to Behaviour Change' Modern Law Review 77(6): 831-57.
- Baldwin, R (2010) 'Better Regulation: The Search and the Struggle' in R. Baldwin, M. Cave and M. Lodge (eds) Oxford Handbook of Regulation, Oxford, Oxford University Press.
- Baumgartner, F and Jones, BD (1993) Agendas and instability in American Politics, Chicago, University of Chicago Press.
- Behavioural Insights Team (2014) East - Four Simple Ways of to Apply Behavioural Insights, London, Behavioural Insights Team (11 April 2014) (http://www.behaviouralinsights.co.uk/sites/default/files/BIT%20Publication%20EAST_FA_WEB.pdf).
- Blumenthal-Barby, J. S., & Burroughs, H. (2012) 'Seeking better health care outcomes: the ethics of using the „nudge“' The American journal of bioethics 12(2): 1–10
- deBrujin, H, Groenleer, M and T. van Ruijven (2015) 'The Dynamics of Doping' Regulation & Governance, DOI: 10.1111/rego.12085 (early view)
- Bovens, L (2008) 'The Ethics of *Nudge*' (<http://www.bovens.org/TheEthicsFV.pdf>), last accessed 2 May 2015.
- Choi, JJ, Laibson, D, Madrian, BC, & Metrick, A (2001) 'Defined Contribution Pensions: Plan Rules, Participant Decisions, and the Path of Least Resistance' (NBER Working Paper No. 8655). National Bureau of Economic Research, <http://ideas.repec.org/p/nbr/nberwo/8655.html> (last accessed 21 November 2015).
- Cohen, S. (2013) 'Nudging and Informed Consent' American Journal of Bioethics, 13(6): 3-11.
- Cohen, M, March, J and Olsen, JP (1972) 'A Garbage Can Model of Organizational Choice' Administrative Science Quarterly, 17: 1-25.
- Department of Health and Human Services (US) (2013) 2012 National Survey of Organ Donation Attitudes and Behaviors, Washington, US Department of Health and Human Services, (<http://organdonor.gov/dtcp/nationalsurveyorgandonation.pdf>, last accessed 21 November 2015).
- Gigerenzer, G (2014) Risk Savvy, London, Allen Lane.
- Griffith, R, von Hinke Kessler Scholder, S and Smith, S (2014) 'Getting a Healthy Start? Nudge versus Economic Incentives' CRSO Working Paper, No 14/328.
- Hallsworth, M, List, J, Metcalfe, R and Vlaev, I (2014) 'The Behavioralist as Tax Collector' National Bureau of Economic Research, <http://www.nber.org/papers/w20007> (last accessed 21 November 2015).
- Halpern, D (2015a) Inside the Nudge Unit, London, WH Allen.

- Halpern, D (2015b) 'Radical Incrementalism' Evaluation, 21(2): 143-9.
- Harford, T (2014) 'Big Data: Are We Making a Big Mistake?' Financial Times, 28 March 2014 (<http://www.ft.com/cms/s/2/21a6e7d8-b479-11e3-a09a-00144feabdc0.html#axzz3Ab4bTQHF>, last accessed 21 November 2015).
- Haslam, SA (2014) 'Making Good Theory Practical' British Journal of Social Psychology 18(1): 123-36.
- Hausman, D and Welch, B (2010) 'Debate: To Nudge or Not to Nudge' Journal of Political Philosophy 18(1): 123-36.
- Haynes, L, Green, D, Gallagher, R, John, P and Torgerson, D (2013) 'Collection of Delinquent Fines' Journal of Policy Analysis and Management, 32(4): 718-30.
- Hood, C. (1976) The Limits of Administration, London, New York: Wiley.
- Hood, C and Lodge, M (2005) 'Pavlovian Innovation, Pet Solutions and Economizing on Rationality' in J. Black, M. Lodge and M. Thatcher (eds) Regulatory Intervention, Cheltenham, Edward Elgar.
- House of Lords (2014) Science and Technology Select Committee Letter to Rt Hon Oliver Letwin MP, Minister for Government Policy and Chancellor of the Duchy of Lancaster, Cabinet Office, 22 July 2014, (<http://www.parliament.uk/documents/lords-committees/science-technology/behaviourchange/behaviourchange/LetwinBehaviourChangeLtr20140722.pdf>, last access 21 November 2015)
- Hove, T (2012) 'Between Complacency and Paternalism' Annals of the American Academy of Political and Social Science 644(1): 272-9.
- James, O and Moseley, A (2014) 'Does Performance Information about Public Services affect Citizens' Perceptions, Satisfaction and Voice Behaviour?' Public Administration 92(2): 493-511.
- John, P. (2013) 'Policy Entrepreneurship in UK Central Government', http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2256987 (last 2 May 2015).
- John, P. (2011) Making Policy Work, Routledge.
- John, P., Cotterill, S., Moseley, A., Richardson, L., Smith, G., Stoker, G., & Wales, C. (2011) Nudge, Nudge, Think, Think: Experimenting with Ways to Change Civic Behaviour, New York: Bloomsbury Academic.
- Johnson, E. J., & Goldstein, D. (2003) 'Do Defaults Save Lives?' Science 302(5649): 1338–1339.
- Jolls, C, Sunstein, CR and Thaler, R (1998) 'A Behavioral Approach to Law and Economics' Stanford Law Review, 50: 1471-1550.

- Jones, BD (2003) 'Bounded Rationality and Political Science: Lessons from Public Administration and Public Policy' Journal of Public Administration Research and Theory 13(4): 395-412.
- Kahneman, D. (2011) Thinking, fast and slow, New York: Farrar, Straus and Giroux.
- Kahneman, D., & Tversky, A. (1979) Prospect Theory: An Analysis of Decision under Risk Econometrica 47(2): 263–291.
- King, A and Crewe, I (2013) The Blunders of Our Governments, London, Oneworld.
- Klick, J and Mitchell, G (2006) 'Government Regulation of Irrationality' Minnesota Law Review 90: 1620-63
- Layard, R and Clark, D (2014) Thrive, London, Penguin.
- Leggett, W (2014) 'The Politics of Behaviour Change' Policy and Politics 42: 3-19.
- Lindblom, C. (1959) 'The Science of "muddling through"' Public Administration Review 19(2): 79-88.
- Lindenberg, S (2001) 'Intrinsic Motivation in a New Light' Kyklos, 54 (2/3): 317-58.
- Lindenberg, S (1988) 'Contractual Relations and Weak Solidarity' Journal of Institutional and Theoretical Economics, 144: 39-58.
- Lindenberg, S and Steg, L (2007) 'Normative, Gain and Hedonic Goad Frames Guiding Environmental Behavior' Journal of Social Issues, 63(1): 117-37.
- Lodge, M and Matus, K (2014) 'Science, Badgers, Politics' Policy Studies Journal 42(3): 367-90.
- Lodge, M and Wegrich, K (2015) 'Crowdsourcing and Regulatory Reviews' Regulation & Governance, 9(1): 30-46.
- Lodge, M and Wegrich, K (2012) Managing Regulation, Basingstoke, Palgrave.
- Madrian, B. C., & Shea, D. F. (2000) 'The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior' National Bureau of Economic Research. (Working Paper No. 7682) <http://www.nber.org/papers/w7682>
- March, JG and Olsen, JP (1983) 'The New Institutionalism: Organizational Factors in Political Life' American Political Science Review, 78(3): 734-49.
- March, JG, Sproul, L and Tamuz, M (1991) 'Learning from Samples of One or Fewer' Organization Science, 2(1): 1-13.
- Merton, R (1936) 'The Unanticipated Consequences of Purposes Social Action' American Sociological Review 1(6): 894-904.
- Miller, G (2000) 'Rational Choice and Dysfunctional Institutions' Governance 13(4): 535-47.
- Mitchell, G (2005) 'Libertarian Paternalism is an Oxymoron' Northwestern University Law Review, 99(3): 1245-1277.

- Mitchell, G (2002) 'Why Law and Economics' Perfect Rationality Should Not be Traded For Behavioural Law and Economics' Equal Incompetence' http://papers.ssrn.com/sol3/papers.cfm?abstract_id=306562 (last accessed 4 May 2015).
- Mols, F, Alexander, S, Jetten, J, and Steffens, NK (2015) 'Why a Nudge is Not Enough' European Journal of Political Research, 54(1): 81-98.
- Moseley, A and Stoker, G (2015) 'Putting Public Policy Defaults to the Test' International Public Management Journal, doi: 10.1080/10967494.2015.1012574.
- OECD (2010) Obesity and the Economics of Prevention, Paris, OECD.
- Oliver, A (2015) 'Nudging, Shoving, and Budging' Public Administration, 93(3): 700-14.
- Oliver, A (2013a) 'From Nudging to Budging: Using Behavioural Economics to Inform Public Sector Policy' Journal of Social Policy, 42(4): 685-700.
- Oliver, A (2013b) Behavioural Public Policy, Cambridge, Cambridge University Press.
- Ogus, A (2010) 'The Paradoxes of Legal Paternalism and How to Resolve Them' Legal Studies 30(1): 61-73.
- Pierson, P (2000) 'The Limits of Design: Explaining Institutional Origins and Change' Governance: 13(4): 475-99.
- Rittel, H and Webber, M (1973) 'Dilemmas in a General Theory of Planning' Policy Sciences 4: 155-69.
- Rizzo, M. J., & Whitman, D. G. (2008) 'The Knowledge Problem of New Paternalism' NYU Law School, Public Law Research Paper No. 08-12; http://0-works.bepress.com.skyline.ucdenver.edu/mario_rizzo/24
- Rizzo, M., & Whitman, D. (2009) 'Little Brother is Watching You: New Paternalism on the Slippery Slopes' (SSRN Scholarly Paper No. ID 1119325). Rochester, NY: Social Science Research Network. <http://papers.ssrn.com/abstract=1119325>.
- Rose, R (1990) 'Inheritance Before Choice in Public Policy' Journal of Theoretical Politics, 2(3): 263-91.
- Rostain, T (2000) 'Educating Homo Economicus' Law & Society Review 34(4): 973-1006.
- Selinger, E and Whyte, K (2011) 'Is there a Right Way to Nudge?' Sociology Compass 5(10): 923-35.
- Sieber, S. (1981) Fatal Remedies, New York: Plenum Press.
- Simon, H.A. (1947) Administrative Behavior (4th ed. in 1997), New York, The Free Press.
- Stark, A (2014) 'Bureaucratic Values and Resilience' Public Administration, 92(3): 692-706.
- Sunstein, C (2014) Why Nudge?, New Haven, Yale University Press.
- Thaler, R (2015) Misbehaving, London, Allen Lane.
- Thaler, RH and Sunstein, CR (2008) Nudge, New Haven, CT: Yale University Press.

- Truog, RD (2008) 'Consent for Organ Donation — Balancing Conflicting Ethical Obligations' New England Journal of Medicine 358(12): 1209–1211
- Turner, JC (2005) 'Explaining the Nature of Power' European Journal of Social Psychology, 35(1): 1-22.
- Waldron, J. (2014) 'It's All for Your Own Good' New York Review of Books, 9 October 2014.
- Wildavsky, A (1983) 'Information as an Organizational Problem' Journal of Management Studies, 20(1): 29-40
- Wildavsky, A. (1966) 'The Political Economy of Efficiency: Cost-Benefit Analysis, Systems Analysis, and Program Budgeting' Public Administration Review 26(4): 292-310.
- Wilkinson, T.M. (2013) 'Nudging and manipulation' Political Studies 61: 341-355.
- Viscusi, WP and Gayer, T (2015) 'Behavioral Public Choice: The Behavioral Paradox of Government Policy' Harvard Journal of Law and Public Policy, <http://www.brookings.edu/~media/research/files/papers/2015/07/behavioral-politics-gayer/the-behavioral-paradox-of-government-policy.pdf> (last accessed 22 November 2015).
- Yeung, K (2015) 'The Forms and Limits of Choice Architecture as a Tool of Government' Law & Policy, forthcoming.
- Yeung, K (2012) 'Nudge as Fudge' Modern Law Review 75(1): 122-48.