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Using opportunity costs to counter 'one-shot' bias in policy innovation

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Abstract

Allocating scarce resources to meet policy objectives incurs opportunity costs. Public servants face an increasingly significant opportunity-cost dilemma between resourcing the incremental adaption of existing systems of service delivery and investing in their replacement through radical but risky innovation. Should government's limited time, money and brainpower be spent on low-risk, low-change adaptation, or on high-risk, high-change innovation? Attitudes among policy-makers towards this question are influenced by cognitive biases. Hindsight bias among voters fosters risk aversion in politicians, leading to incremental adaptation, protecting against policy gambles but forestalling radical change. Conversely, "one-shot bias" among ministers temporarily in positions of influence leads to risk-seeking behaviour, greater innovation but increased chance of high-cost failure as leaders strive to use time-limited powers to the full. Either bias can be functional or dysfunctional, depending on circumstances. The downsides of "one-shot" bias are starkly illustrated by three major changes in British public policy since 2010, relating to social security, healthcare and European Union membership. Future public servants can respond to

one-shot bias and the adapt-innovate dilemma by proving impartial advice on ministers' choice of policy objectives, not simply the means to achieve those objectives. This requires civil service independence, increased trust between the political and administrative classes, and, more radically, enhanced public audit arrangements so that ministers and senior officials are accountable for "benefits forgone" as well as "value-for-money."

Keywords

Brexit; cognitive bias; hindsight bias; innovation; optimism bias; policy change

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"A central concern of studies of adaptive processes is the relation between the exploration of new possibilities and the exploitation of old certainties. … Both exploration and exploitation are essential for organizations, but they compete for scarce resources."

– James March, 1991, *Exploration and Exploitation in Organizational Learning*

Introduction

Politicians and public managers make daily, perhaps even hourly, decisions about the allocation of valuable resources. Politics is, to borrow Lasswell's (1936) memorable phrase, about "who gets what, when, how." And management, whether in the public or private sector, involves "the transformation of resources into value" (Malik, 2010, p.39). Thus: Should support be provided to Group X? Should investment go to Project Y? Should time be spent improving Policy Z? Questions such as these are the bread and butter of public service, and their determination has significant consequences for citizens.

The fact that the resources required to pursue policy objectives are in short supply – or "scarce," as economists say – complicates matters considerably. In an imaginary world of unlimited resource, policy-makers should encounter few trade-offs between objectives. Scarcity, however, means that the decision to allocate resources to one purpose reduces the opportunity to pursue others. Decisions are thus far more constrained than implied by the vignette above. Typically, the question is: Should resources go to Group X *or* Project Y *or* Policy Z? In other words, using scarce resources incurs "opportunity costs" – the foregoing of benefits simply by the act of choosing one activity over another. These implicit losses rarely feature in political discourse, and are unsuited to inclusion in financial accounts or project evaluations. But recognizing opportunity costs upfront may alter the course of decision-making considerably (Besanko et al., 2003).

The public servant of the future faces an increasingly significant opportunity-cost dilemma: given new or changing policy threats, should scarce resources go towards incrementally adapting existing systems of service delivery, or should priority be given to their replacement through radical but risky policy innovation? Innovation is a medicine commonly prescribed for public bureaucracies (Potts & Kastelle, 2010). It has, as Osborne and Brown (2012, p.1) explain, "an appeal that seems hard to argue with," combining "a determination to reform and improve … with a whiff of 'state of the art' business practice." But the mantra "change or die," commonly ascribed to industry, is deeply misleading. According to Pfeffer and Sutton

(2006, p.159), "Change and innovation are nasty doubled-edged swords. When companies try something new, it usually fails. And avoiding the wrong move isn't easy." In short, novelty breeds risk. In government, failed innovations are damaging not simply because important problems remain unsolved or exacerbated, but because the time, money and brainpower consumed by the policy "flop" could have been deployed on more certain, if more incremental, solutions. Consequently, as March concludes, a major challenge facing society is "the difficulty of specifying the optimal allocation for resources between exploiting and developing what is already known, and exploring what might come to be known" (foreword to Garud et al., 1997, p.x).

How can opportunity-costs considerations be incorporated into the design of public service reforms? Under what circumstances are policy-makers more prone to risk-taking or risk-avoidance? And how can decision-making processes be strengthened to facilitate innovation while recognizing its opportunity costs and avoiding reckless policy gambles? This chapter considers these questions by drawing on insights from behavioural science. "Hindsight bias" among vocal policy constituencies is known to foster risk aversion among decision-makers, leading to a preference for incremental adaptation rather than radical innovation. Conversely, what is below termed "one-shot bias" describes the opposite tendency for risk-taking, owing to elites' temporarily elevation to positions of influence and desire to use these time-limited powers to the full. Hindsight bias is especially influential when the outcomes of decisions are clear and the feedback relatively immediate, whereas one-shot bias arises when outcomes are remote and ambiguous. Both kinds of bias can be functional and dysfunctional, depending on circumstances. Ambitious policy change that protects against reckless policy gambles requires governments to achieve the institutional-cultural "sweet-spot" of strict civil service independence combined with high trust between politicians and permanent officials. Impartial advice on policy objectives, not simply the means to achieve those objectives, and an expanded remit for independent audit institutions to consider "benefits forgone" alongside "value-for-money," can also better incorporate opportunity costs into decision-making and protect against reckless policy gambles.

The chapter begins by discussing opportunity costs and their relevance to public sector reform. Next, key differences between incremental adaptation and innovative change are identified, drawing on March's (1991) distinction between "exploration" and "exploration." Hindsight bias and one-shot bias are then introduced, and the latter illustrated with three

major changes in British policy since 2010 relating to social security, healthcare and Brexit. Finally, the institutional and cultural requirements for taking effective decisions about the adaptation-innovation dilemma are examined.

Opportunity costs and public sector reform

Economic resources

Economics is foremost among the social sciences in the study of resources and resource allocation. Robbins' (1932, p.15) influential definition of economics describes it as "the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses." These "means" – or economic resources – include any input required to produce goods or services, typically relating to land, labour, capital (equipment), or entrepreneurial ability (McConnell & Brue, 2008). (Strictly, money purchases resources but is not a resource itself.) Allocating scarce resources to one purpose rather than another incurs an opportunity cost. This represents "the value of all that must be sacrificed" by consuming those resources in pursuit of the chosen purpose (Frank & Cartwright, 2013, p.7). Since resources are multipurpose, numerous alternatives are sacrificed. Opportunity costs are thus conceptualized as the *most highly valued* of all those foregone alternatives. The word "conceptualized" is apposite for two reasons. First, opportunity costs remain *implicit*. Unlike the direct costs of an activity, such as the investment required to buy machinery or hire staff, opportunity costs rarely come with an obvious price tag. Second, and relatedly, the true opportunity cost of a decision is in a sense unknowable, since it depends on the value derived from an unobserved counterfactual (Mackey & Barney, 2013). Hence, opportunity costs are not easily incorporated into decision-making, despite it being rational to do so.

Economists also suggests that, while resources are multipurpose, they are not perfectly adaptable. Certain areas of land are best used for agriculture, say, while others are more suited to mining. If demand for food rises and prime agriculture land is exhausted, mining land could be turned over to food production, albeit for a lower per-acre yield. Using resources for poorly-suited purposes foregoes the best value that could be generated by using the resource for its most-suited purpose. This leads to "the law of increasing opportunity costs," which states that "as the production of a particular good increase, the opportunity cost of producing an additional unit rises" (McConnell & Brue, 2008, p.12). Essentially, if resources are rank-ordered by suitability for a particular purpose, and most-suited resources

are consumed first, implicit losses accrue at a growing rate as each additional and increasingly ill-suited resource is consumed.

Organizational resources

How does this foundational economic thought relate to organizations? Coase (1937, p.388) highlighted two fundamentally different ways of allocating resources:

> "Outside the firm, price movements direct production, which is co-ordinated through a series of exchange transactions on the market. Within a firm, … in place of the complicated market structure with exchange transactions is substituted the entrepreneur-coordinator, who directs production."

In other words, while markets allocate resources through the "invisible hand" of many actors pursuing their own interests, organizations are "a collection of productive resources the disposal of which between different uses and over time is *determined by administrative decisions*" (Penrose, 2009, p.24, emphasis added). Administratively-allocated resources consist of the all "assets that an organization might draw on to help it achieve its goals" (Bryson et al., 2007, p.704), including personnel, technology, information and finance, as well as intangible assets such as reputation and political acumen (Lee & Whitford, 2012). The economic conditions of scarcity and multipurposeness remain, so that administrative decisions incur opportunity costs. As Penrose (2009, p.132) explains, "the final products being produced by a firm at any given time merely represent one of several ways in which the firm could be using its resources, an incident in the development of its basic potentialities."

Opportunity costs in public services

Sometimes, what individuals or organizations "value" is clearly defined, meaning that alternative possible resource allocations can be rank-order by what is most "valuable." In the private sector, profit must be generated in order for firms to survive, and the opportunity cost of choosing one strategy over another is the difference between the realised and potential financial returns of chosen and foregone strategies:

> "Accounting profit is the simple difference between revenues and expenses. Economic profit, by contrast, represents the different between the accounting profits from a given activity, and the accounting profits that could have been earned by investing the same resources *in the most lucrative alternative activity*. " (Besanko, et al., 2003, p.111, emphasis added)

The key question for business executives is, therefore: could resources be deployed more profitably? Contrast this with the situation in government. As Allison (1992, p.392)

explains, "Governmental managers rarely have a clear bottom line, while that of a private business manager is profit, market performance, and survival." Government effectiveness cannot be judged from market evaluations or dividend payments, and equity and accountability matter more. Estimating opportunity costs is thus more complex in public sector organizations. When comparing courses of action for the "value" being foregone, does the loss relate to productive efficiency (the same ends could be achieved with fewer inputs), effectiveness (goals could be attained to a greater extent), accountability (processes could be more transparent, responsibility clearer), or legitimacy (greater consent could be secured)? In other words, policy-makers must ask what *kind* of "opportunity" is being foregone by the chosen allocation of resources, not simply what the (estimated) magnitude of the loss is.

Incremental and innovative change

Opportunity costs arise in all manner of decisions relating to the allocation of scarce and multipurpose public resources. But this chapter focuses on two scenarios in particular: incremental adaption and radical innovation in the face of evolving policy challenges (Moore, 2005). These modes of reform differ, primarily, in the extent to which the policy departs from the status quo. As Damanpour (1996, pp.153-154) explains, "radical innovation often produces fundamental changes in an organization's habitual practices, whereas incremental [changes] typically result in a lesser degree of departure from existing practices." This distinction has two main implications for the analysis of opportunity costs and for understanding decision-maker attitudes towards risk.

First, while incremental change keeps the organization on relatively familiar territory, radical innovation brings novelty, uncertainty and – therefore – risk. This is clear from March's (1991) distinction between "exploitation of *old certainties*" and "exploration of *new possibilities*," cited in the chapter epigraph. It is also supported empirically; for example, research suggests that the success rate for business innovations may be as low as 20 per cent (Garud, et al., 1997, p.4). Therefore, analysis of the opportunity costs arising from radical innovations must not only weigh up the *value* associated with alternative courses of action, but also the *risk* that estimates of that value will prove incorrect.

Second, when change involves less departure from the status quo, the results of decisions generally appear more quickly and are more easily attributed to the decision-maker than occurs with radical innovation. As March (1991, p.73) explains:

> "The certainty, speed, proximity, and clarity of feedback ties exploitation to its consequences more quickly and more precisely than is the case with exploration. … The search for new ideas … has less certain outcomes, longer time horizons, and more diffuse effects…."

The remoteness and ambiguity of feedback on radical innovations, or "explorations," affects the incentive structure and attitude towards risk for decision-makers concerned with public sector reform, as the following section argues.

Bias and opportunity costs

How should public servants advise politicians on the opportunity costs of policy options? Is it solely with reference to some conception of the public interest? Or should ministerial career prospects or political-party advantage also be included? Furthermore, how should estimates be derived? One way is according to their expected utility, calculating for each option the different possible outcomes and the likelihood and pay-off of each. But even in the simple world of gambles, with outcomes, risks and pay-offs that are relatively known, countless studies have found that expected-utility theory does not accord with the choices people make. Prospect theory is a far better predictor of decision-making in the face of risky options involving gains and losses (Kahneman & Tversky, 1980). This recognises three biases: (i) evaluation of options depends on the reference point – typically the status quo; (ii) there is diminishing sensitivity, such that the subjective difference between $100 and $200 is greater than between $900 and $1,000; and (iii) decision-makers display loss aversion, where the subjective value of losing $500 is approximately equivalent to a gain of $1,000 (Khaneman, 2011, p.203).

Hindsight bias

Hindsight bias refers to the phenomena whereby, after an event occurs, individuals overestimate the degree to which it was predictable. Also termed the "knew-it-all-along" effect, psychologists attribute hindsight bias to a combination of cognitive and motivational factors, including selective recollection and the need to make sense of the world by finding order and patterns amid chaos (Roese & Vohs, 2012).

According to Kahneman (2011, p.203), "Hindsight is especially unkind to decision-makers who act as agents for others – physicians, financial advisers, third-base coaches, CEOs, social workers, diplomats, politicians." This is because, once outcomes of delegated decisions are known, actions that turn out well receive less-than-deserved credit from the delegator – the voter, patient, etc. – since the "correct" choice is (incorrectly) recollected as being obvious. Conversely, decisions resulting in bad outcomes attract excessive blame, because "the writing was on the wall" and the decision-maker was, apparently, remis not to heed it.

Hindsight bias thus helps to explain risk-aversion among politicians when making policy choices. Whereas expected utility theory predicts the costs and benefits of decisions to be calculated regardless of hindsight bias, seasoned public servants operating in an environment of high accountability know the folly of ignoring this kind of voter behaviour. Thus, Schuett and Wagner (2011, pp.1621, 1629) contend that hindsight bias "act[s] as a discipline device that reduces policy gambles and can therefore be welfare-enhancing." In other words, anticipating that poor decisions will be punished and good decisions go unrewarded, politicians proceed cautiously. (Of course, the downside is that "the bias can also discourage efficient risk taking, which is detrimental to voter welfare" (Ibid.))

For example, in 2009, when the possibility of global pandemic of swine flu was making headlines, the World Health Organization had to assess two different types of uncertainty: the probable spread of the virus, and its severity. Subsequently it became clear that spread was correctly assessed, but the organization "did not recognize and communicate early enough that it was no more lethal than a normal flu virus" (Meyer, 2016, p.739). This explains why so many countries' responses now appear to be overreactions. As a review of the UK's response observed, "there is a tendency, in an emergency situation and in the absence of information, to assume the worst-case scenario and resource the response accordingly" (Hine, 2010, p.4). This is sensible. But the UK had "neither sufficient flexibility over response options nor scalability to tailor the response more closely to the emerging pandemic." For instance, break clauses in contracts to supply vaccines. Consequently, the high opportunity costs of hindsight bias when reacting to exogenous threats manifest not so much from the initial risk-averse decision, but from failing to adapt to good news.

The limits of hindsight bias

If hindsight bias creates risk-aversion and cautious policymaking, why do policy gambles ever occur? The answer developed below is that (i) the effect of hindsight bias is not universal; (ii) other biases produce a counterweight in terms of over-optimistic planning and poor appreciation of risks; and (iii) this is compounded by a proclivity for risk-taking among politicians keen to use their time-limited powers to the full – termed "one-shot bias."

Firstly, decision-making scenarios vary widely and hindsight bias is unlikely to affect all equally. If decisions produce rapid results that are unambiguous and easily attributed to the decision and decision-maker, as with March's "exploitation" styles of change above, Schuett and Wagner's (2011) account seems reasonable. The link between decisions and outcomes in the swine flu case, for instance, is easy to make because of the short time between cause and effect and clarity of the causal link. Loss of reputation and position is readily imagined when outcomes are clear and judgement is swift; so the public interest aligns with party and career interest. But if the outcomes of decisions are delayed, ambiguous, or difficult to attribute to a specific cause, as with "exploration," accountability is weaker. Innovation results might only appear years after decisions were taken; and the specific contribution of a decision-maker long-since out of office may be uncertain. As March (1991, p.73) argues, "compared to returns from exploitation, returns from exploration are systematically less certain, more remote in time, and organizationally more distant from the locus of action and adaptation." In this scenario, biased awarding of credit and blame by voters is less prominent in political decision-making. The disciplining effect is reduced.

Secondly, with the receding of hindsight bias, a variety of other cognitive biases known to cause over-optimistic planning and underappreciation of risks come to the fore. "Optimism bias," for instance, occurs when individuals have "inflated views of both their absolute and comparative ability, with a resulting bias in the perception of their probability of success" (Tor, 2002, p.505). This is especially pronounced in competitive situations where "people judge themselves in relation to others." In addition, "desirability bias" means decision-makers correlate the likelihood of an event with its desirability. This is "pervasive where people have pre-existing, vested interests in the outcomes of a predicted event" (Ibid., p.505). Alternatively, the "planning fallacy" occurs when actors "underestimate the time and costs required for completing projects, especially when these projects are complex and protracted"

(Ibid., pp.510-511). Finally, the "illusion of control" describes situations in which outcomes result from a mixture of chance and skill, but actors misperceive this ratio and overestimate their control over situations.

These biases, which downplay risks associated with innovation, may be especially pronounced in the context of public sector reform. Ministers operate in a highly competitive context, being members of the political party that has won office, outcompeting the party rank-and-file to hold high office, and working in concert with a permanent, more expert bureaucracy. As Weber ([1921] (2009), p.232) memorably remarked, "the 'political master' finds himself in the position of the 'dilettante' who stands opposite the 'expert'." This multi-dimensional competition means that optimistic bias may figure prominently in ministerial decision-making. Similarly, if desirability bias is exacerbated by holding pre-existing beliefs, ministers may again be especially susceptible. They generally assume office with strong ideological convictions and a determination to implement pre-agreed manifesto commitments or party positions.

But as well as exaggerating biases that are known to occur in a wide variety of decision-making situations, the government context has one further, more profound implication for decision-making: the potential for "one-shot" bias.

One-shot bias

The final reason why policy gambles occur relates to the situation, peculiar to democratic government, of decision-makers being granted unparalleled but inescapably temporary powers to effect change. As Linz (1998) emphasises, the "temporal delimitation" of democratic rule is one of its defining features. Such policy-making is always "government *pro tempore*" – literally, government for the time being. Commonly discussed implications of this basic condition relate to regime legitimacy in the face of policy disagreement, short-termism in decision-making, and the difficulty of making "credible" commitments about the future (Linz, 1998; Majone, 1996). To quote Moe (1990, p.227), "Whatever today's authorities create … stands to be subverted or perhaps completely destroyed … by tomorrow's authorities." But another important consideration is the effect of temporal delineation on decision-maker attitudes towards risk.

"One-shot bias" describes the tendency for enhanced risk-taking among ministers given their transient ability to exercise public authority. Eventual loss of power is assured, whether for the entire government through election, or by cabinet reshuffle. The only uncertainty is when demotion will occur. A temporary period of extreme influence, followed by an extended time of ex-post reflection, incentivizes full and ambitious use of the powers of high office in pursuit of what Hirschman (1973, p.636) calls "obituary-improving activities." For most ministers, assuming power means achieving a lifetime's greatest but hugely-unlikely ambition. "They got to where they are by seeking challenges and taking risks. They are talented and they have been lucky, almost certain luckier than they acknowledge,' writes Khaneman (2011, p.203). In office, ministers are acutely aware of this hard-won, unparalleled but *pro tempore* ability to effect change. Under such circumstances, increased risk-talking is likely to be accepted if it means seeing policy ambitions fulfilled.

Prospect theory supports this analysis. The greatest "loss" a minister would seek to avoid would be not to have seized that opportunity to announce radical policy change. As van der Wal (2013, pp.754-755) found when analysing political motivation, politicians have a "sense of urgency to govern and change society," and "opportunities to exert influence and power … drive political elites, who feel able to make a difference during their term and change society according to their worldviews." The *prospect* of "playing it safe" would thus be a lifetime of regret at the opportunity lost. What is more, as argued above, there is little downside risk for "exploratory" decision-making given that it may take years for outcomes to be known.

This new concept of "one-shot bias" resonates with a number of existing observations by eminent scholars of politics and economics. Hirschman (1965) complained of development consultants' excessive optimism for solving all problem despite only encountering them briefly: "*la rage de vouloir conclure*" – literally, the rage of wanting to conclude. Citing Hirschman, Linz (1998, p.22) observed that government *pro tempore* creates "pressures" for ministers "to carry out their policies within the limited time span granted to them." The effect, he notes, is "haste and ambitiousness of policy formulations under the pressure of limited time." Majone (1996, pp.1-2) argues that the transience of "political property rights" leads to poor use of public resources given the lack of incentive for preserving value of the asset – power to wield public authority – from one "owner" to the next:

> "An owner of a resource with a well-defined property right has a powerful incentive to use that resource efficiently, because a decline in the value of the resource represents a personal loss. Conversely, serious misallocations ensue where property rights are poorly defined. … Political property rights are used by politicians to make choices about policy and the structure of government. However, in a democracy, such rights are ill defined."

And Parsons (1963, pp.251, 254) analogized the granting of time-limited power to politicians to the awarding of credit to an entrepreneur. By implication, the politician-entrepreneur must "embark on ventures" – or gambles – to deliver a return on voters' investment.

Three unsuccessful gambles in contemporary British policy

Three major policies implemented by the British government since 2010 illustrate the concept of "one-shot bias" and the opportunity costs that it can give rise to. Table 1 summarizes each. Below, published interview material, research by thinktanks and quality political journalism with exceptional access to key players help to explain why each gamble seemed 'rational' for its protagonist at the time the gamble was taken. Government documents, independent audit reports and academic analysis provide evidence of some of the opportunity costs these decisions incurred.

Table 1: Three policy gambles

Policies	**Problem**	**Best-case scenario**	**Actual outcome**
Social security	Byzantine system of different means-tested benefits	Reduce poverty, fraud and error; push claimants to do as much work as is reasonable for them	People already on low incomes in rent arrears, debt, and sometimes homelessness; job losses
Healthcare	Failure of two previous attempts to implement effective provider competition	Entrench provider competition in primary legislation to deliver observable improvements in quality within 3 years	Provider competition abandoned; new system obstructs the integration of health and social care agencies

Brexit	Government handicapped by divisions over Europe within the Conservative Party	Resolve divisions, enable party to move forward and be effective government	Exacerbates divisions; damages economy, delays other government business, commits ministers to implement a radical policy they reject

Social Security Reform: "Universal Credit"

At nearly £180bn per year, social security accounts for the largest proportion of public expenditure in Britain, exceeding the next-largest health service budget by some £30bn. The ministry responsible, the Department for Work and Pensions, employs nearly 75,000 civil servants, the most of any government department, within one of 700-plus benefits offices nationwide (Institute for Government, 2019a, 2019b).

In 2010, when David Cameron's Conservative-led government took office, social security was widely regarded as a byzantine system that was incomprehensible to claimants and administrators. Prone to errors, with significant over- and under-payments each year, it also appeared (to some) to encourage worklessness and fraud. The new government's remedy was to unify six means-tested benefits into a single payment – a policy described by Cameron as "…one of the boldest and most radical reforms of the welfare state since [the 1940s]." The aim was to: 'substantially reduce poverty … make the system more secure from fraud and error and … push people to do as much work as is reasonable for them' (Department for Work and Pensions, 2010, p.5). The system would be digital, pay benefits monthly (rather than weekly), and incentivize full-time employment.

Branded "Universal Credit," the idea originated with the Centre for Social Justice – a thinktank founded by politician Iain Duncan Smith in 2004 after he resigned the leadership of the Conservative Party in 2003. Appointed the minister responsible for social security in 2010, Duncan Smith was on a mission to implement Universal Credit: "[He] was Universal Credit's creator and champion. He was by all accounts passionate about the policy, was at the heart of its development in opposition, and was determined to see it succeed in some form." (Institute for Government, 2016, p.8). But, mid-implementation, only 10 per cent of the target caseload was being handled, at four times the target cost-per-claim (National Audit Office, 2018). A fifth of claimants received delayed payments, and 40 per cent reported

financial difficulties. Rent arrears grew, as did reluctance by landlords to let property to tenants receiving Universal Credit. And reliance on "foodbanks" – voluntary donations of food to help the poor – grew by nearly a fifth.

According to the National Audit Office (2018, p.46), "The Department's view of the success of Universal Credit contrasts sharply with those of the external organizations we spoke to" (Ibid, p.46). Indeed, Timmins (2018) claim's the response to this independent inquiry was to "reject outright some of its key findings and seeks to assert that all is well." Moreover, asked to explain the problems to a United Nations field visit, "ministers were almost entirely dismissive, blaming political opponents for wanting to sabotage their work, or suggesting that the media didn't really understand the system and that Universal Credit was unfairly blamed for problems rooted in the old legacy system of benefits" (United Nations, 2019, p.12). Several commentators attribute this culture of "not wanting to hear the bad news" to the minister's zeal for his long-planned radical innovation (Timmins, 2018). As the non-partisan Institute for Government's (2016, p.8) noted, Duncan Smith's "deep commitment to the reforms arguably made it difficult for officials to be honest about its problems."

Healthcare Reform: Provider Competition in the National Health Service

Established in the 1940s and today one of the largest employers in the world, the National Health Service (NHS) interacts with over one million patients during every 36-hour period (NHS Confederation, 2017). It is a cherished institution, "the nearest thing the English have to a religion," and thus difficult to reform without provoking public and political backlash. Yet the Health and Social Care Act 2012 delivered "the most wide-ranging reforms of the NHS since it was founded" by entrenching competition between health service providers (The Kings Fund, 2019). This would address what the Conservative party saw as lack of incentives for efficiency and effectiveness within the service. Using legislation would, moreover, put a parliamentary lock on any future attempt to undo this controversial marketization.

Like Universal Credit, this reform was driven by a minister pursuing a pre-planned idea developed during thirteen years in opposition. Indeed, the unprecedented length of Andrew Lansley's spell as shadow health minister was a crucial antecedent to his reforms: "because he'd thought so long about all this stuff he had a perfectly formed system that was too

abstract and rational in a way, because it had been so long in his head" (Timmins, 2012, p.132). Unlike Universal Credit, however, there was no consensus that radical reform was needed to the NHS in England. (Health policy is devolved to Scotland, Wales and Northern Ireland.) A parliamentary committee, for example, identified four other key problems at this time: the failure of the previous provider-commissioning reforms; the challenge of reduced funding growth after ten years of sustained increases; the more complex medical needs of an ageing population; and the urgent requirement to integrate better with social care agencies (Health Select Committee, 2011). Lansley's legislation was thus controversial; and, midway through its passage through parliament, there was an unprecedented "pause" while proposals were reviewed. Ultimately, the bill became law with over 2,000 amendments. But it was widely condemned, including in a joint editorial by the *British Medical Journal*, *Health Service Journal* and *Nursing Times* which castigated the organizational upheaval as "unnecessary, poorly conceived, badly communicated, and a dangerous distraction at a time when the NHS is required to make unprecedented savings" (McLellan et al., 2012).

Constitutional Reform: The Referendum on Membership of the European Union

Universal Credit and "Dr Lansley's monster," as the healthcare reform was known, both appeared soon after the government took office. They are examples of the tendency among ministers towards "deductive" policy thinking, first noted in Aberbach et al.'s (1981, p.132) cross-national study of political-administrative relations:

> "Politicians … can be great simplifiers. Since the mechanics of policy engage their attention more rarely, they are driven more readily toward abstract, even utopian, thinking, and hence toward framing the policy agenda in more elaborate, deductive terms."

By contrast, the commitment to hold a referendum on membership of the European Union came several years later, in 2012, without clear political conviction and amid disagreement among Cameron's most senior and pro-European colleagues about its advisability (Shipman, 2016). Reflecting on his own time as Conservative Party leader from 1997 to 2001, Foreign Secretary William Hague argued strongly for a public vote, reportedly saying: "You need to do this. I got killed by Europe. A Tory leader needs to nail this once and for all" (Ibid.). But Treasury minister George Osborne thought this a disastrous idea: high risk, likely to split the party, and with no way back if the referendum were lost. And Cameron himself reportedly said a vote on Europe "could unleash demons of which ye know not" (Ibid.).

Legislation was passed in 2015, and polling day was set for June 2016. Cameron, Hague and Osborne all campaigned for "remain." There grounds for optimism, given the Prime Minister's earlier successful referenda on electoral reform and Scottish independence, and after he achieved in 2015 the first parliamentary majority by a Conservative leader in 23 years. Indeed, so confident was the government that officials were forbidden from preparing for a "leave" outcome. But Brexit won the day, securing 51.9 per cent of the vote. Cameron resigned and was succeeded by Theresa May. Three years later, she also resigned, unable to secure a withdrawal agreement with the EU that was acceptable to parliament.

The opportunity costs of one-shot bias

Given their enormous ambition and complexity, how can opportunity costs be estimated for these three policy gambles? One obvious but incomplete approach is to identify the direct costs of implementation and consider what those resources could otherwise have bought. For example, an estimated 30,000 civil servants have been recruited since the Brexit referendum, reversing by more than a third the headcount reduction effected by the Cameron government since 2010 (Institute for Government, 2019a). Expenditure on Brexit-related consultancy amounts to £100m, and a number of one-off costs, such as a £33m settlement for a rushed public procurement to secure cross-Channel transport capacity, can be identified (National Audit Office, 2019a, 2019b). Such "accounts" could no doubt be estimated for the social security and healthcare examples too, and a subjective "wish list" of alternative uses for these resources be compiled – especially given the fiscal squeeze in Britain since 2010 which has led to underinvestment in many public services. But what about the indirect costs of the policy gambles?

A more comprehensive if conjectural approach to estimating implicit losses is to examine whether performance departs from recent trends as a consequence of key decisions, controlling where possible for other factors. Staying with the Brexit example, analysis by academic economists found that anticipation of leaving the EU has reduced investment in the UK by about 11% and firm productivity by between 2% and 5% (Bloom et al., 2019). Then there is the distraction effect within government. As Cavendish (2019) explains, the UK government's problem-solving capacity has significantly weakened in non-Brexit areas:

> "non-Brexit activity has ground virtually to a halt. … Announcements on anything else are repeatedly shelved. Reports languish unpublished, and policies sit in limbo, while officials grapple with Brexit planning and ministers are distracted by political manoeuvring."

Immediately following the surprise referendum result, two new departments of state were created, and several others were abolished or reconfigured. Such "machinery-of-government change" produces significant disruption (White & Dunleavy, 2010). A total of 310 cross-government work streams were established to analyse the impact of leaving the EU on British policy, and to coordinate preparations for multiple potential exiting scenarios. And, at the peak of the preparations for a "no-deal" outcome, 16,000 civil servants were reportedly reassigned from regular duties to contingency planning (National Audit Office, 2017; O'Carroll & Jolly, 2019). This "borrowing" of staff from one government department to help address a Brexit-related crisis in another illustrates the aforementioned "law of increasing opportunity costs" perfectly. Officials are most productive when working on problems about which they have experience and expertise; redeployment to work in unfamiliar policy areas is clearly a suboptimal, albeit necessary, use of valuable resources.

What is more, efforts by ministers to protect radical innovations from being dismantled by their successors can also exacerbate opportunity costs. The *NHS Long Term Plan* (NHS England, 2019) calls for better integration of health with social care – something, it will be recalled, parliament highlighted at the outset of Lansley's reforms eight years earlier. Not only did progress on this important matter stall, but the future-proofing of provider competition in legislation actually curtailed any meaningful integration with the social care sector. The Act was designed for "individual institutions working autonomously," its "rules and processes … skewed more towards fostering competition than to enabling rapid integration of care planning and delivery" (NHS England, 2019, p.112). This makes it "unnecessarily difficult for local areas to pool funds and work together, causing additional cost and wasted resources" (Committee of Public Accounts, 2018, p.5).

Summary: "Act Now, or Forever Hold Your Peace"

In his article *Democracy's Time Dimension*, Linz (1998, p.35) contends that, "Without including in our analysis … the opportunity and confining character of time, many problems of democratic government would be difficult to understand." This chapter has developed that important insight in regard to political attitudes towards risk, especially the risk of significant opportunity costs arising from reckless policy gambles. Hindsight bias is a well-known linkage between time and risk. Retrospectively, policy-makers receive less credit and more blame for decisions that turn out well or badly. The result is risk aversion, with implicit

losses accruing from maladaptive planning for worst-case outcomes. But not all decision scenarios are alike. The "disciplining effect" of hindsight bias (Schuett & Wagner, 2011) is unlikely when decision outcomes are ambiguous, delayed or difficult to attribute, as with "exploratory" change (March, 1991). This creates an opening for "one-shot bias." Also linked to the "ticking clock" of democracy, but with the opposite effect of encouraging risk-taking behaviour, one-shot bias arises from the unparalleled but time-limited influence that accompanies high office. Democratic government is government "for the time being" (Linz, 1998). And in the absence of effective controls, reckless policymaking with high opportunity costs is an alarmingly-real possibility, as Universal Credit, NHS provider competition, and Brexit illustrate. Each was motivated by the pressure to "act now" or miss the once-in-a-lifetime opportunity to effect change. The fact that each failed to attain its goals is obvious; the large implicit losses, or "benefits foregone," by these actions are harder to pin down but no less real – from reduced economic growth and diminished government capacity to solve non-Brexit problems, to the ongoing failure to integrate health and social care.

Implications for public servants

Given various kinds of optimism bias associated with large technology projects, Goldfinch (2007, p.918) urges officials to be "recalcitrant, suspicious and skeptical" in order to forestall ill-advised government investments. But the problem of one-shot bias is more pernicious, leading not simply to underappreciation of project risks, but to risk acceptance given the limited time period for effecting change. So, how can public servants respond to the tendency towards one-shot bias among politicians?

First, it is essential to include estimates of opportunity costs in the advice provided to ministers. What might seem like a banal or even obstructive message – that pursuit of Project Y foregoes the benefits of Policy Z – is in fact vital, especially given the frequent lack of managerial experience among politicians. Implicit losses are difficult to quantify given the unknowable counterfactual and different dimensions along which public "value" might be measured. But it is possible to produce best-, worst- and most-likely-case estimates of the resourcing requirements for different scenarios, and illustrations of the value that could be realized from alternative allocations – including those that advance ministers' deeply-held policy preferences. "War gaming" of major strategic choices can also help "discover" potential non-obvious opportunity costs. And highlighting benefits foregone by policy

"mistakes" initiated by previous well-intentioned but one-shot-biased ministers can help make arguments persuasive.

Second, incentive structures need to be conducive to officials providing this kind of uncompromisingly advice. "Public service bargains" describe the terms of engagement between politicians and bureaucrats, and affect the official's ability to "speak truth to power" (Elston, 2017; Hood & Lodge, 2006). Over several decades, civil service reforms in many countries have sought to increase political control over bureaucrats by imposing an "agency-type" bargain – ending public servant tenure, increasing political influence in appointment and promotion processes, and requiring officials to defend and even enthuse about the policy choices of their political masters (Grube & Howard, 2016). But when career advancement, or even continuing employment, depend implicitly or explicitly on political patronage, full, free and frank advice is unlikely. The "trustee" bargain, conversely, removes this significant disincentive for providing opportunity-cost "bad news" to ministers. As trustees of the public at large rather than agents of the political class, and shielded from possible retribution by unimpressed ministers, such "public servants are expected to act as independent judges of the public good … and not merely to take their orders from some political masters" (Hood & Lodge, 2006, p.25). Paradoxically, then, public servants of the future will be better placed to tackle emerging policy challenges and the adapt-innovate dilemma if governments undo recent reforms and reinvigorate traditional civil service systems built on independence.

Third, because civil service independence is only part of the solution, one-shot bias requires that, more radically, society rethink the role of external scrutiny in holding officials and ministers to account. All three policy flops described occurred in spite of the relative protections afforded by Britain's (largely still intact) independent civil service. Possibly, independence affords weakest protection against policy gambles at the point of transition from one government to another. The social security and health reforms began immediately after the end of the Labour Party's thirteen years in office, at the point of greatest suspicion among the new government about the civil service's enduring loyalty to "the other side." This incentivizes officials to overcompensate, withholding strong criticism to prove their willingness to deliver new ideas. (As one social security minister remarked of Universal Credit, "Amazingly [the senior civil servants] were really enthusiastic!"). And even under more propitious circumstances, when independent advice is not in doubt, ministerial

reluctance to heed frank opportunity-cost advice can be readily imagined. Enhanced public audit arrangements may help.

Supreme audit institutions, such as the National Audit Office, typically examine the "value for money" of policy implementation, rather than the advisability of policy objectives. Policy gambles are audited not in terms of their foregone opportunities, but only for their direct financial costs. But if ministers and officials – past and present, given the lengthy time horizons involved in "exploration" – were to be held accountable in parliament for "benefits forgone" by strategic policy choices as determined through an independent audit process, the incentives for officials to provide, and ministers to heed, advice about opportunity costs would strengthen considerably. Moreover, to complement this ex-post assessment, an independent "quango" could be designated to provide independent, real-time assessments to parliament on the opportunity costs associated with major policy decisions, just as the British Office for Budget Responsibility recently took over the government's economic forecasting function.[1] Again, this would encourage greater consideration of the optimal allocation of government's scarce and multipurpose resources, especially when radical and risky innovation is involved that will preclude incremental but more certain adaptation.

[1] Suggestion from Julian Le Grand by personal communication.

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