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Psychology Based Policy Studies: what can we learn from psychology about how policymakers think, act, and use evidence?

Abstract. Policymakers, for understandable psychological, social, and neurological reasons, combine ‘rational’ and ‘irrational’ informational shortcuts to make decisions quickly. This basic insight can inform simple strategies for policy influence. For example, exploit the ‘fast thinking’ of policymakers rather than bombarding them with scientific evidence in the hope they engage in more effortful ‘slow thinking’. Yet, such broad recommendations are limited without a more sophisticated understanding of policymaker psychology. In this article, we provide a deeper account of the ways in which psychological principles combine with policy studies to produce ‘psychology based policy studies’. We use these insights from the field to propose five heuristics that help maximise the use of evidence in policymaking: respond positively to irrationality, produce bespoke framing strategies, understand ‘windows of opportunity’, adapt to dysfunctional organisations, and recognise your own cognitive biases.

Introduction

Policymakers cannot pay attention to all of the things for which they are responsible, or understand all of the information they use to make decisions. Our mental apparatus has limits on what it can process (Baddeley, 2003; Cowan, 2001, 2010; Miller, 1956; Rock, 2008). Instead, they use short cuts to gather enough information to make decisions quickly: the ‘rational’, by pursuing clear goals and prioritizing certain kinds of information, and the ‘irrational’, by drawing on emotions, gut feelings, values, deeply held beliefs, habits, schemata, scripts, and what is familiar to them, to make decisions quickly. We can use this basic insight to recommend a shift in strategy for scientists trying to influence policymakers. For example, focus on persuasion by identifying and engaging their ‘fast thinking’ (Kahneman, 2011) rather than bombarding them with scientific evidence in the hope that they will get round to ‘slow thinking’ which, because it requires more effort and may not be seen as necessary, people frequently avoid.

Yet, such recommendations can only take us so far without a more sophisticated understanding of policymaker psychology. We need to understand how people think and make decisions as individuals, and as part of collective processes in which it is more difficult to identify their individual role. To that end, we outline three main ways to show how to (a) combine many relevant psychological principles with policy studies to (b) provide a greater variety of recommendations for actors seeking to maximise the impact of their evidence in policymaking.

First, we summarise the insights from policy studies already drawing on psychology to help explain how policymakers think and make choices. Most studies consider the implications of ‘bounded rationality’, which partly describes the cognitive limits of policymakers and the short cuts they use to gather information to make decisions (Simon, 1976). Studies highlight the

relationship between individual choice and key factors within complex policy environments, such as the multiplicity of actors, institutions, networks, ideas, context and events. *We highlight the wide range of broad insights arising from such studies, and the resulting questions that could benefit from further psychological insights.*

Second, we review the relevant psychology literature to identify the most promising areas for future development. For example Houghton (2008) proposes a large number of psychological ‘errors’ that the Bush Administration committed in going to war but notes that his is not an exhaustive list, and neither are the mechanisms independent or easily separable from each other. *We identify psychological principles that could be applied further to the study of policymaking.*

Third, we use this combination of policy studies and psychology to produce practical advice for actors engaged in the policy process. There are good reasons for policy scholars to stop at explanation, and for scientists to limit their action to providing science advice, but policymakers and influencers do not have this luxury. They need to gather information quickly and effectively to make good choices. They have to take the risk of action. So, to influence this process we need to understand it, and to understand it *more* we need to study how scientists try to influence it. Therefore, psychology-based policy studies can provide important insights to help actors begin to measure and improve the effectiveness of their engagement in policy by: taking into account cognitive and emotional factors and the effect of identity on possible thought; and, considering how political actors are ‘embodied’ and situated in time, place, and social systems. In this policymaking context, many psychological insights are nascent, with a limited evidence base. *So, we provide preliminary advice by identifying the most relevant avenues of conceptual research and deriving some helpful ‘tools’ to those seeking to influence policy.*

Put simply, we advise: developing heuristics to respond positively to ‘irrational’ policymaking, tailoring framing strategies to policymaker bias, identifying the right time to influence individuals and processes, adapting to real-world (dysfunctional) organisations rather than waiting for an orderly process to appear, and recognising that the biases we ascribe to policymakers are present in ourselves and our own groups.

Psychology in policy studies: bounded rationality in complex policy environments

Most policy theories adopt a broad focus on bounded rationality, which could be little more than a truism: people do not have the time, resources or cognitive capacity to consider all information, all possibilities, all solutions, or anticipate all the consequences of their actions (Cairney and Heikkila, 2014). Further, like most people, politicians are ‘cognitive misers’ (Kam, 2005), using informational shortcuts and heuristics to gather enough information to make decisions efficiently. Some political psychology studies focus primarily on the goal-oriented strategies of actors, some place more emphasis on emotional heuristics (Brader, 2011; Haste, 2012), while others seek to move away from this ‘dualism’ to recognise that emotion and cognition are part of the same internal mental process (Storbeck and Clore, 2007).

One aim of policy studies is to identify the context in which such psychological processes take place: a large and messy policy ‘environment’ that can be summed up in five or six key concepts (John, 2003; Cairney, 2012a; Cairney and Heikkila, 2014)ⁱ, each producing demands for psychological insights.

First, theories identify a wide range of actors making choices. Actors can be individuals or collectives, and collectives can range from private companies to interest groups to governments bodies (Weible, 2014). The US and UK literature from the late 1970s identifies a shift from centralized and exclusive policymaking towards a more fragmented multi-level system with a large number of influential participants (Hecl, 1978: 94–7; Jordan, 1981: 96-100; Radin, 2000). *This insight prompts us to do more than ‘psychoanalyse’ a small number of key actors at the ‘centre’ of government.*

Second, they identify ‘institutions’, as the rules, norms, practices or relationships that influence individual and collective behaviour. Institutions at one level (e.g. constitutional) can shape activity at another (e.g. legislation or regulation), establishing the venues where decisions are made, and the rules that allow particular types of actors or ideas to enter the policy process (Ostrom et al 2014). Rules can be formal and widely understood, when enshrined in law or a constitution, or informal and only understood in particular organisations. *This insight prompts us to consider how and why actors identify, understand, follow, reproduce, or seek to shape or challenge, rules within their organisations or networks.* For example, we can identify individual calculations based on institutional incentives (Dowding and King, 1995), socialisation when people are taught the ‘rules of the game’ (March and Olsen, 1984; Lowndes, 2010), and the ways in which institutions privilege ‘certain groups over others’ (Kenny and Mackay, 2009: 274).

Third, they identify the role of policy networks, as the relationships - often in ‘subsystems’ - between actors responsible for policy decisions and the ‘pressure participants’ such as interest groups, or other types or levels of government, with which they consult and negotiate (Jordan et al, 2004). To some extent, the development of subsystems follows government attempts to deal with complexity. To address the sheer size of their responsibilities, governments divide them into broad sectors and more specialist subsectors. Senior policymakers delegate responsibility for policy making to bureaucrats, who seek information and advice from groups. Groups exchange information for access to, and potential influence within, government. Some bureaucracies may have operating procedures that favour particular sources of evidence and some participants over others, but these rules vary: scientists may receive privileged access in some departments (such as health) when the main ‘currency’ is scientific evidence, but need to try harder to establish routine contacts in other departments or venues (Cairney, 2012a: 178; Boswell 2009: 11–6). *This insight prompts us to identify the role of network formation and maintenance, and the extent to which it is built on heuristics to establish trust and the regular flow of information and advice.* Trust can come from the reliable supply of high quality evidence relevant to a policy problem, or a willingness to follow informal rules (such as not to complain publicly when decisions don’t go your way).

Fourth, they identify the role of ‘ideas’, a broad term to describe ways of thinking, and the extent to which they are shared within organisations and networks (Cairney and Weible, 2014). Shared ideas (knowledge, world views, language) appear to structure political activity when they are almost taken for granted – as core beliefs, paradigms, hegemony, and monopolies of understanding (Cairney and Heikkila, 2014). Actors try to reshape debates, to build support for new policy solutions, in that context. *This insight prompts us to consider the extent to which persuasion can be used to prompt actors to rethink their beliefs – such as when new evidence or a proposed new solution challenges the way that a problem is framed, how much attention it receives, and how it is solved.* We might like to think that new evidence can win the day, but also worry that major votes on Brexit and Trump demonstrate a level of confirmatory bias, and resistance to challenging evidence, much stronger than expected.

Fifth, they conceptualise the role of context and events. Context is a broad category to describe the extent to which a policymaker’s environment is in her control or how it influences her decisions. It can refer to the conditions that policymakers take into account, such as a political system’s geography, demographic profile, economy, mass attitudes and behaviour (Cairney and Heikkila, 2014). It also refers to a sense of policymaker ‘inheritance’ - of laws, rules, and programs – when they enter office (Rose, 1990). Events can be routine and anticipated, such as elections which produce limited change or introduce new actors with different ideas. Or, they can be unanticipated incidents, including social or natural crises or major scientific breakthroughs and technological change (Weible, 2014). *This insight prompts us to consider (a) the effect of events such as elections on the ways in which policymakers process evidence (e.g. does it encourage short-term and vote-driven calculations?), and (b) what prompts them to pay attention to some contextual factors and not others.*

In policy studies, the same starting point produces different insights

Early post-war discussions focused primarily on the goal-oriented strategies of key actors. For example, Simon (1976: xxviii) identified policymakers’ ‘rules of thumb’ to identify the issues most important to them and gather the most relevant information to produce ‘good enough’ decisions. Simon expressed some hope that evidence-gathering processes would improve with technological advances, and these hopes are often magnified by proponents of ‘evidence based policymaking’ (Cairney, 2016: 19-20). However, bounded rationality is an ever-present constraint on policymakers, ‘under continual pressure to reach decisions’ (Botterill and Hindmoor, 2012: 369). Although information technologies have improved, they do not preclude the need to make judgements quickly about ‘what is feasible’ in the face of limits to ‘brain power, time and financial inputs’ (2012: 369). So, to be influential, actors need to identify the goals expressed explicitly by policymakers, *and the ‘rules of thumb’ they use to deal with bounded rationality and make ‘good enough’ decisions quickly.* This is a very different process to the one we associate with long-term scientific strategies (Oliver et al, 2014: 6).

Lindblom (1959: 88) captured the inevitably-political side of this evidence-gathering process by describing a tendency for policymakers to pursue ‘incrementalism’: identifying realistic policy aims that do not divert radically from the status quo, limiting analysis to those options,

and combining analysis with strategies such as trial-and-error. Lindblom (1964: 157) praised pragmatic strategies, arguing that (a) organisations act effectively when pursuing realistic goals, and (b) incrementalism is consistent with pluralism and consensus building, since to depart radically from the status quo is to reject previous agreements (Lindblom, 1959: 81-5). Not everyone agreed with this **prescription** for ‘good policymaking’, but incrementalism served for decades as a **description** with implications for gathering evidence: *limit your analysis to incremental policy change*.

Modern policy theories, based on the study of cognitive processing and emotional policymaking, challenge this advice in three main ways. First, there is great potential for bounded rationality to prompt non-incremental policy change. Individuals pay attention to one policy problem and ‘image’ (a way to view the problem) at a time - ‘serial processing’, compared to governments who can ‘parallel process’ – and take certain ways of thinking for granted for long periods, often because they are not paying much attention (Baumgartner and Jones, 1993: 7; Cairney, 2012a: 230; Hall, 1993). Yet, policy problems are ambiguous, people can entertain multiple images (Zahariadis, 2014), and it takes a small change in policy conditions, or injection of new information, to produce a major shift of attention to another image (Baumgartner et al, 2014). Bounded rationality and ambiguity produces the potential for attention to lurch dramatically from one policy problem or image to another. During (albeit rare) ‘windows of opportunity’, actors can exploit such lurches of attention to promote their favoured solution (Kingdon, 1984; Zahariadis, 2014; Cairney and Jones, 2016). This discussion prompts different advice: *engage in persuasion to reframe problems, which generates new demands for evidence to solve them*.

Second, policymakers respond to bounded rationality in ways other than goal-setting, such as by relying on quick gut, instinct, emotional, and moral choices (including ‘hot cognition’ⁱⁱ), then backing up their actions with selective facts. Lewis (2013: 1) describes *social intuitionism*, which suggests that ‘in human decision making and moral judgment, the use of reason and rationality are subordinated to rapid, gut-level, emotion-laden cognition, and that people rely heavily on heuristics and narratives that often carry certain inherent biases’. Direct reference points from psychology include Haidt’s (2001: 818; 2007; 2012) distinction between ‘intuitive system’ and ‘reasoning system’ⁱⁱⁱ, and Kahneman’s (2012: 20) thinking ‘fast and slow’: ‘*System 1* operates automatically and quickly, with little or no effort and no sense of voluntary control. *System 2* allocates attention to the effortful mental activities that demand it, including complex computations ... often associated with the subjective experience of agency, choice and concentration’.

Lewis (2013: 4; 7) argues that ‘fast’ thinking is ‘typically where the action is’ because people tend to conserve ‘our limited amount of attention and cognitive processing capabilities for the few activities we currently view as most essential’ and rely on ‘autopilot’ whenever emotions are heightened. The main effect is a series of biases related to cognitive shortcuts which develop over time as people learn from experience, including: the ‘availability heuristic’, when people relate the size, frequency or probability of a problem to how easy it is to remember or imagine; the ‘representativeness heuristic’, when people overestimate the probability of vivid events; ‘prospect theory’, when ‘losses tend to pain us more than gains please us’; ‘framing effects’

based on emotional and moral judgements over well thought out preferences; ‘confirmation bias’, where material that corroborates what we already believe is given disproportionate credence; ‘optimism bias’, or unrealistic expectations about our aims working out well when we commit to them; ‘status quo bias’; a tendency to use exemplars of social groups to represent general experience; and a ‘need for coherence’ to establish patterns and causal relationships when they may not exist (2013: 7). People also draw quickly on ‘moral foundations’ related to caring for the vulnerable, punishing cheating, rewarding loyalty, respecting authority, and protecting families and other social groups (2013: 9-10).

The application of these insights help improve policy studies. Passion/ intuition helps explain why policymaker beliefs seem relatively impervious to change (2013: 13). Work by neuropsychologists such as Fiske (2011) produce categories – ‘pride, envy, pity, or disgust’ – to prompt the ‘social construction of target populations’, in which policymakers decide who should receive benefits or sanctions from government (2013: 16, describing Schneider et al, 2014). A tendency for intuition to precede reason helps explain the motivation of policymakers to either close off their decisions to debate, or to quickly select new solutions based on moral intuition when their attention lurches to problems (2013: 19-22). Or, actors may deal collectively with bounded rationality by telling simple stories to help ‘process information, communicate, and reason’ (McBeth et al, 2014) and an evidence-gathering process may reinforce collective identity or what people already believe (Lewis, 2013: 13-15; Stone, 1989).

Put more bluntly, ‘Reason is emotion’s slave and exists to rationalize experience’ (Bion, 1970) when unconscious processes, out of awareness, are present (Arnaud, 2012). If so, *persuasion strategies should appeal primarily to policymakers’ emotional and instinctual heuristics*, and evidence-advocacy will be ineffective if focusing on ‘establishing the facts’ or describing complexity in a complicated way rather than the ways in which policymakers already think.

Third, incremental change can be caused by something other than ‘mutual adjustment’ between many actors. The Advocacy Coalition Framework (ACF) suggests that, although *in some cases* we witness compromise during routine ‘policy learning’ by competing coalitions, we are just as likely to identify policy inertia built on the dominance of one coalition over another, and a tendency for ‘learning’ to take place through the lens of its members’ deeply held beliefs. Boundedly rational actors ‘simplify the world through their belief systems’ and the ACF focuses on actors engaging in politics to translate their beliefs into action (Jenkins Smith et al 2014; Sabatier and Jenkins-Smith, 1993). A large number, and wide range, of actors with similar beliefs become part of the same ‘advocacy coalition’ – a metaphor to describe a ‘non-trivial degree of coordinated activity’ (Sabatier, 1988: 139).

The ACF describes a tendency for actors to form coalitions with like-minded actors and to compete with other coalitions in what often seem to be irrational ways: built, for example, on

‘prospect theory’ when ‘people remember losses more readily than gains’ (Quattrone and Tversky 1988: 735), which helps to distort their perception of their competitors (Jenkins-Smith et al, 2014). Coalitions often compete fiercely to interpret evidence and gain the favour of key policymakers, particularly when they romanticise their own cause and ‘demonize’ their opponents, or misperceive their opponent’s beliefs and question their legitimacy. Sabatier et al (1987: 451) identify the ‘devil shift’: ‘at least in relatively high conflict situations, political elites tend to see their opponents as "devils," i.e., as being more powerful and more "evil" than they actually are’. This is reminiscent of ‘projective identification’, an unconscious Kleinian process where ‘badness’ can be projected onto an external object, be that a person or an idea, allowing it to be attacked far more vigorously (Buckingham, 2011).

In any resultant battle of ideas, coalitions ‘exaggerate the influence and maliciousness of opponents’ and interpret the same evidence in wildly different ways (Weible, 2007: 99). Consequently, a strategy to limit your analysis to policy options that represent non-radical departures from the status quo may be ineffective. Instead, *identify which coalitions hold influence, how their members understand the world, and the technical and ethical implications: can and should you fit your evidence into that way of thinking?*

Overall, this literature highlights the use of evidence by actors who anticipate or respond to lurches of attention, moral choices, and coalition formation built on bolstering one’s own position, demonising competitors, and discrediting (some) evidence. These aspects of individual and collective choice should not be caricatured; it is not useful simply to bemoan ‘post-truth’ politics and policymaking ‘irrationality’. Instead, they provide a useful corrective to the fantasy of a linear policy process in which evidence can be directed to a single moment of authoritative and ‘comprehensively rational’ choice based only on cognition, *and* take us beyond the assumption that bounded rationality produces incrementalism and a demand for evidence to support non-radical change. Political systems and human psychology combine to create a dynamic policy process characterised by many actors competing to influence continuous policy choice built on cognition and emotion.

New Insights for Psychology Based Policy Studies

Such processes are reflected in the wider literature on psychology and organisational and political action: Von Stekelenberg (2013) points to the need for collective social identification, a sense of collective self-efficacy and the presence of emotion (chiefly anger) as predictors of protest; Kam (2005) found that actors draw more from cues related to their allies (such as a shared political party) than specific political issues, indicating that we need to consider coalitions when communicating evidence; Houghton (2008) points to many ‘errors’ – from ‘decision making on impulse’ to ‘groupthink’ that the Bush administration made when going to war in Iraq (the Chilcot Inquiry, 2016, makes similar points about the UK Government under Blair). More generally, Bion (1961) contrasts the positive idea of a ‘work group’ (a group of individuals able to have a good contact with reality and deal with the anxiety engendered by complex or difficult tasks or relationships) with a maladaptive group that seems – particularly from the outside – to be in the thrall of unspoken ‘basic assumptions’ and closed to logical arguments.

From this wider literature, we identify four further processes that are particularly relevant to psychology based policy studies. First, *processing fluency* suggests that people's decisions are influenced by their familiarity with things; with the ease in which they process information (Alter and Oppenheimer, 2009). For example, they may pay more attention to an issue or statement if they already possess some knowledge of it and find it easy to understand or recall. Fluency can take several forms (conceptual, perceptual, linguistic) and it can be influenced in several ways ('semantic priming', 'visual clarity' and 'phonological simplicity') (see Alter and Oppenheimer, 2009: 220; and its conceptual roots in the 'availability heuristic' – Tversky and Kahneman, 1973; Schwartz et al, 1991; Schwartz, 2004). 'Cells that fire together wire together' is the popular aphorism to describe the reinforcement of pathways in the brain associated with Hebbian learning.

Fluency helps explain why policymakers would pay attention to particular crises or 'focusing' events at the expense of others: they are already familiar with them, or perceive them to be closer to home, and therefore do not struggle to work out how the problem is relevant to their objectives. Or, when we examine advocacy coalition behaviour, fluency may help explain how and why people join, form or stay in coalitions, and how people form networks based on familiarity.

Second, it is important to understand *how emotions coexist with cognition* in individuals (see, for example, the extensive literature on cognitive behaviour therapy – Beck, 1970; Butler, Chapman, Forman, & Beck, 2006; Hazell, Hayward, Cavanagh, & Strauss, 2016; Kuiper & MacDonald, 1983; Yoshimura et al., 2014).^{iv} There has been much debate regarding the primacy of one over the other and the mechanisms in which they interact (Storbeck & Clore, 2007), but we know, for example, that anxiety has an impact on political behaviour (Brader, 2011) and that motivated reasoning can have an impact on the regulation of emotion in politics.

This insight is rarely applied to politicians directly (Kwiatkowski, 2016), but the interaction can be profound. Menges and Kilduff's (2015) review of the literature on group emotions contributes to their model in Figure 1. It shows that, for example, a member of parliament (MP) may continue to feel the emotions of a salient group (their party, a region-specific group of MPs, or their committee) even though they are not physically present. These emotional ties may be powerful and significant, and the individual may feel antagonism towards a person giving (what they perceive to be) dubious evidence, or sympathy towards a bill conferring rights onto certain social groups, without realising that is because they are 'carrying' some of the group emotion with them (Menges & Kilduff, 2015). As in Schiens' (2015) ORJI cycle, one's lack of awareness of the emotion does not preclude action.

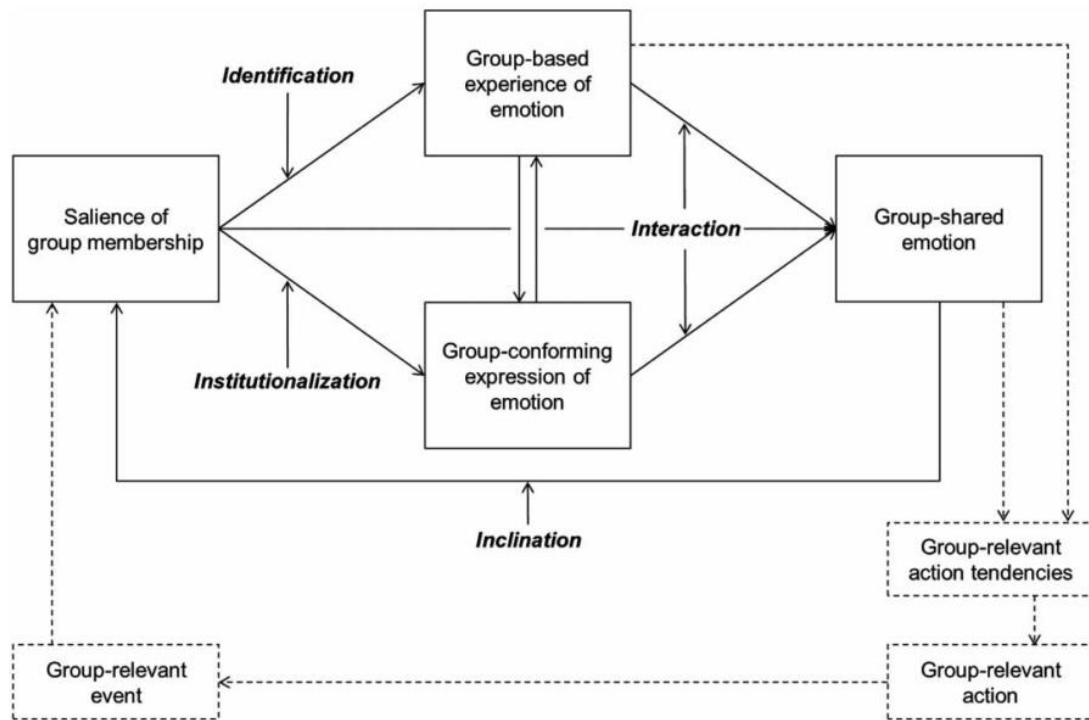


Figure 1 A Model of Group Emotion Emergence.

Third, policymakers must necessarily cooperate with many other actors, demonstrating leadership and encouraging followership in organisations and political systems (Lewis & Donaldson-Feilder, 2012). The literature here is vast, and Aviolo et al (2009) seem pessimistic about practical applications of leadership studies. For example, there is a nascent literature on leadership in complex systems but, as in complexity theory in policy studies (Geyer and Cairney, 2015; Cairney and Geyer, 2017), there is more focus on conceptual innovation than empirical payoffs.

Much of the psychology literature on leadership and organizational politics is pragmatic and involves correlational studies, some using questionnaires, with variables such as job satisfaction, rating and rumination, leading in some cases to ‘how to do it’ advice (Bedi & Schat, 2013; Ferris, 2005; Ferris et al., 2007; Kapoutsis, Papalexandris, Nikolopoulos, Hochwarter, & Ferris, 2011; Prati, Perrewe, & Ferris, 2009). Yet, politicians are not universally skilled at undertaking organizational politics (Kwiatkowski, 2011), and the ‘how to do it’ literature may not be a better guide to ‘how it is done’ than the equally misleading policy cycle model (Cairney, 2016); partly because the context of political work is different from that of most organizations.

Rather, those seeking to influence policymakers should consider where, in organizational political terms, those they are seeking to influence ‘sit’; how politically sophisticated, aware, and deliberate they might be. For example, those who use deliberate political tactics consciously may need to be equally consciously influenced, while we may seek a different

strategy for more idealistic actors who hope that an idea or argument (or even evidence) will hold sway even when the dominant coalition is clearly set against it.

They may also draw insights from the importance of ‘social context’ and ‘group processes’, in which our aim may be to ‘liberate’ the knowledge provided by each person and broaden the ‘information considered before making a decision’ (Larrick, 2016). Obstacles include a tendency in established groups to share, repeat, and trust ‘commonly held’ rather than new information (‘common knowledge bias’), and to minimise disagreement by limiting the diversity of information, which disadvantages outsiders or ‘people in low positions of power who withhold their private doubts because they fear a high social cost’ (2016: 448). One solution may be ‘task conflict’ (rather than ‘relationship conflict’), to encourage information sharing without major repercussions, but it requires the trust and ‘psychological safety’ that comes with some form of ‘team development’ (2016: 448). Of course, much depends on organisational culture, but the potential drawback when team development is easier, in organisations with a culture of collectivism, is that this culture may also encourage more conflict avoidance (Larrick, 2016: 450). Thus if a ‘battle of ideas’ can genuinely take place, new thinking can be possible, but the conditions have to be ‘just so’.

Fourth, we find studies in which it is difficult to disentangle the nascent evidence from likely interpretations based on one’s pre-existing beliefs about politicians and experts. On the one hand, genetic studies provide succour for those sympathetic to experts. Some studies examine the relationship between political position and genetics (as compared with the effect of environmental causes). Since these are studies of twin siblings they are carried out on the general population rather than politicians. Oskarsson et al (2015: 650) argue that, while existing studies ‘report that genetic factors account for 30–50% of the variation in issue orientations, ideology, and party identification’ they do not identify a convincing mechanism between genetics and attitudes. One potential mediating mechanism is cognitive ability. Put simply, and rather cautiously and speculatively, the link relates to the relationship between cognitive ability and emotionally-driven attitudes: people with lower cognitive ability are more likely to see ‘complexity, novelty, and ambiguity’ as threatening and to respond with fear, risk aversion, and conservatism (2015: 652). They use a sample of 2000 male twins to explore attitudes to issues such as redistribution, immigration, and foreign policy, ascribing differences in political positions broadly to ‘resistance to change’ (Oskarsson et al., 2015: 652), which further develops existing work on conservatism and cognitive ability (Stankov, 2009).

On the other hand, some interesting nascent work on why politicians and large sections of the public do not believe or trust experts (a factor that seemed to be exploited openly by advocates for ‘Brexit’ and Donald Trump’s Presidency) does not lay the blame solely on low cognitive ability. *Some* explanation may relate to politicians’ overconfidence (Cassidy & Buede, 2009), but some to the possibility that experts are known to be equally prone to such bias (Perez, 2015). Perez makes a number of practical suggestions for amelioration but also, since bias-free judgement is not possible and institutional solutions have limited impact, notes the irony that the solution may involve intuitive judgement.

Practical Insights from Psychology Based Policy Studies: develop heuristics to deal with bounded rationality

We use the term ‘irrational’ provocatively, to reflect an often-expressed sense that the cognitive traits associated with ‘fast thinking’ can hinder the use of evidence in policy: heroic scientists producing evidence are thwarted by villainous politicians drawing on their gut, emotion, moral choices, and ideologies. Yet, irrationality is difficult to define and separate from subjective (external and judgemental) evaluations of behaviour. It could refer to the insufficient use of reason when making decisions, engaging in activity ‘against their long term interests given their initial preferences’ (John, 2012: 100), or policy ‘driven by situational logics and opportunism rather than careful deliberation and assessment’ (Howlett and Lejano, 2013: 360).

Rather than simply decry these ‘errors’ in one’s political opponents, it may be more helpful to acknowledge their *universal* existence and give them greater attention in general political discourse (Houghton, 2008). Similarly, we should encourage good group decision-making processes rather than bemoan bad. A practical strategy may be to tailor one’s response to the observable errors in individual and collective policymaking. When an individual or group appears to move away from reality, someone wishing to influence them may need to run alongside them, in the same direction, at least for a while.

For us, heuristics represent simple strategies, *built on* psychological insights *to use* psychological insights in policy practice. They are broad prompts towards certain ways of thinking and acting, not specific blueprints for action in all circumstances. Their proposed use by Simon and Lindblom has direct parallels in Gigerenzer’s (2001: 38) ‘adaptive toolbox’. Gigerenzer cites Simon directly and shares Lindblom’s (1964: 157) rejection of a focus on ‘optimising’ individuals. Gigerenzer (2001: 37-8) argues that we should try to understand ‘how actual humans ...make decisions, as opposed to heavenly beings being equipped with practically unlimited time, knowledge, memory, and other unlimited resources’. For example, examine how people can (and should) use, for example, ‘fast, frugal, and computationally cheap decisions’ to adapt to different environment in different ways.

His work seems well suited to the study of public policy, since his scepticism about: (a) ‘optimisation’ is based on issues central to policymaking, including the maintenance of multiple contradictory goals in which there is limited information on how to achieve them and no hope of finding enough evidence on which to base a definitive choice; and (b) ‘consistency’ is based on the idea of the advantage of inconsistent and unpredictable behaviour in competitive environments, as opposed to the close cooperation central to familial relationships; while, (c) he acknowledges the potentially valuable role of emotion as a way to limit choice (compare with Frank, 1998). Too much choice is a problem.

Gigerenzer captures the realities of practices such as policymaking, and identifies potential ways for actors to adapt to policy environments with the tools they possess, rather than bemoaning the absence of an idea-type world and complete toolbox. Pursuit of the latter is demoralising because we’ll never have the ability to ‘optimise’: the world is always too complex, the possibilities too many and our abilities too limited. Instead, the value of these tools is determined through (a) trial and error in specific ‘domains’, to limit effectively a search for ‘cues’ from that environment (if I do this, what happens?), (b) limited searching for new choices (such as when emotions like love stop us looking constantly for a new partner or

considering the costs/ benefits of keeping one's children), and (c) making choices based on a small number of simple rules (rather than attempting to weigh all costs and benefits in an artificially common currency).

Heuristic 1: respond positively to 'irrationality' and fast thinking

Instead of automatically bemoaning the irrationality of policymakers, let's acknowledge the potential benefits – from the perspective of people making choices – of seemingly 'suboptimal', inconsistent, moral and emotional decision making, and to engage with that process rather than seeking an unrealistic alternative built on ideal-types like comprehensive rationality. Indeed, perhaps we elect politicians to use their values to make difficult moral choices.

Let's marvel at the heuristics they develop to make quick decisions despite uncertainty and think about how to respond in a 'fast and frugal' way, to pursue a form of evidence informed policymaking that is realistic in a complex and constantly changing policymaking environment: adapt effectively to policymaking environments, identify their key characteristics and possible responses, and use simple rules to gauge the success of each response using trial and error. It is possible to remain broadly critical of some policymaker heuristics (which can be, for example: will it make me popular, will it be easy to achieve, and will it produce good social outcomes? McConnell, 2010) *and* adapt to them.

Heuristic 2: match your 'framing' strategy to your audience's bias

Consider cognitive biases from the perspective of policymakers instead of bemoaning them from our own: while *we* think they take policymaking 'off course', *they* envisage a bias in a road which allows them to travel smoothly and safely around a bend. They make decisions quickly, based on their values and judgements reflecting their beliefs, and new data triggers certain schemata in the brain that may 'filter out' the need to pay complete attention, overriding what *we* consider to be an impetus to act on the (new) 'facts' or 'evidence'. It is not obvious how to adapt to, or try to influence, people motivated by social intuition, values or moral judgement, and we need more evidence on the success of adaptation. However, policy and psychological studies of 'framing' provide a starting point.

In policy studies, 'framing' or 'problem definition' refers to the ways in which we understand, portray, and categorise issues. Problems are multi-faceted, but bounded rationality limits the attention of policymakers, and actors compete to highlight one image at the expense of others. The outcome determines who is involved, responsible for policy, has relevant expertise, how much attention they pay, and what kind of solution they favour (Dearing and Rogers, 1996).

In that context, we should adapt framing strategies specifically to the cognitive biases we think are at play (Cairney et al, 2016: 3). If policymakers are combining cognitive and emotive processes, combine facts with emotional appeals (True et al, 2007: 161). If policymakers are making quick choices based on their values and simple moral judgements, tell simple stories with a hero and a clear moral (McBeth et al, 2014). If policymakers are reflecting a group emotion, based for example on their membership of a coalition with firmly-held beliefs, frame

new evidence to be consistent with the ‘lens’ through which actors in those groups or coalitions understand the world (Weible et al, 2012). In each case, we need to invest heavily in policymaking – forming alliances and learning the ‘rules of the game’ – to know how and when to use these strategies, enhancing our own observational skills, and really getting to know political actors.

The study of fluency also provides general advice. We already know to avoid overly complicated presentations of evidence with numerous subclauses, technical diagrams, caveats, nuances, and academically fashionable concepts. Studies of learning (Winne & Nesbit, 2010) suggests similar strategies, such as: minimising cognitive load and the amount of material to be stored in temporary short term memory; create conditions for transfer to long term memory; use multiple coding (such as words and pictures); present materials more than once; maintain coherence of the message; minimise the irrelevant; tell stories and give specific examples; ask for feedback; provide time for processing and reflection; and, attend to energy and fatigue levels.

We should also consider factors such as *primacy* and *recency*, in which material presented at the beginning or at the end of a statement is more likely to be recalled, and the *Von Rostroff effect*, in which something unusual in a list of familiar objects becomes more memorable. Studies also point to strategies such as the manipulation of fonts, colours and duration of texts and images; the repeated use of text or images, or the simplification of messages, or provision of priming messages (in other words providing a cue), to influence their recall and ease of information processing; and the provision of fewer choices to aid decision making (Alter and Oppenheimer, 2009: 227). Communication can also grab the attention using *focusing events* (Birkland, 1997): linking evidence to something immediate that affects them - or their voters or party – and generating a sense of *proximity* to an issue that can be perceived in concrete, not abstract, terms (Alter and Oppenheimer, 2008: 166).

Heuristic 3: *understand what it means to find the right time to exploit ‘windows of opportunity’*

It is common in politics to identify the role of timing, but it can refer to the psychology of *individual policymakers* and/ or the particular conditions in a *policy environment*. In psychology, timing can refer to the often-limited chance to influence individuals. An emotional reaction may take place before any conscious processing. This will happen without awareness; the person feeling the emotion may not necessarily be aware that their reaction or decision is not made purely on logical grounds. For example, clear thinking is difficult during *heightened emotion* (say, during an important event). Anyone seeking to influence policymakers at such times should note that it is unlikely that peripheral information will be attended to or remembered (Baddeley, 2012), since it may not even enter ‘working memory’. Under conditions of heightened arousal, memory may not function the way you expect. For instance, “flashbulb memory” may occur for particular events (where you were when Princess Diana died?), and people may remember peripheral or irrelevant material extremely vividly (as in the triggering cues for post-traumatic stress disorder).

It is possible to find the right time to influence emotional thinking while, for example, telling vivid stories to arouse the emotional interest of your audience. However the emotional content of the communication may have a perverse effect. For example, health psychology studies find that, under certain conditions, if the suggested outcome – such as terror at dying of cancer as a result of smoking - is portrayed too vividly people may ‘switch off’, exhibiting defensive reactions rather than attend to the message (Witte & Allen, 2000). There seems to be a U shaped curve of attention (Dillard et al, 2016). Of course, it may be more effective to provoke positive emotions by setting a *positive* ‘emotional tone’ using, for example Cialdini’s (1983) notion of social proof (see also Jones and Crow, 2017 in this series). However, someone’s emotional attachment or allegiance to a group or coalition may simply and rapidly override any positive feelings they have towards you or your position.

In other words, it is useful to bear in mind the broader system within which this human being is embedded. For example, Floukes and Anthony (1964) describe people being nodes in an emotional net; as part of the net is tugged the node or knot moves. In policy studies, we go further to describe the effect of an individual’s policy environment. For example, multiple streams analysis describes the conditions under which there is a ‘window of opportunity’ for policy change: attention to a policy problem rises; a feasible solution already exists; and, policymakers have the motive and opportunity to select it (Kingdon, 1984; Zahariadis, 2014; Cairney and Jones, 2016). So, framing problems is an important exercise, but lurches of attention to one way of understanding a problem won’t produce policy change unless its solution has become acceptable to the ‘policy community’, often after a very long period of ‘evolution’, and policymakers identify the right time to act. Kingdon (1984: 21; 104) describes as ‘policy entrepreneur’ the actors who use their knowledge of this process to further their own policy ends. They ‘lie in wait in and around government with their solutions at hand, waiting for problems to float by to which they can attach their solutions, waiting for a development in the political stream they can use to their advantage’ (Kingdon, 1984: 165–6; Cairney, 2012a: 271-2). Note the primacy of environmental conditions in his metaphor: entrepreneurs are ‘surfers waiting for the big wave’ (Kingdon, 1984: 173), not ‘Poseidon-like masters of the seas’ (Cairney and Jones, 2016: 41).

Overall, the same word ‘timing’ can refer to the right time to influence an individual, which is relatively difficult to identify but with the possibility of direct influence, or to act while several political conditions are aligned, which is often easier to identify but presents less chance for you to make a direct impact.

Heuristic 4: adapt to dysfunctional organisations rather than investing in myths of orderly policymaking

In management studies, one might use psychological insights on leadership and organisations to *encourage new rules and behaviours*. For example, Larrick (2016: 461) identifies ways to encourage greater diversity of perspectives in group decision-making by fostering trust, collectivism, and a sense that less powerful or more peripheral actors are not punished for presenting information that challenges existing ways of thinking. If successful, one can ‘speak

truth to power' (Wildavsky, 1980) or be confident that your presentation of evidence, which challenges the status quo, is received positively.

In contrast, our aim is to give advice to actors who need to *adapt to current organisational reality* (even if they hope they can help change it). Politicians may be confident of policy and with a grasp of facts and details, but only adequate in organisational politics, or unable to change the rules of their organisations. Or, while they appear confident they are actually vulnerable and defensive, and closed to challenging information. In the absence of Larrick's suggested reforms, actors need different strategies, such as: form relationships in networks, coalitions, or organisations first, then supply challenging information second. To challenge without establishing trust may be counterproductive. Cultures may differ, but the need to establish a presence may not.

Such general advice is common in policy studies (Cairney, 2016). In organisational psychology, we may add (albeit often equally vague) analysis of *how* to identify chances to form networks with, or otherwise influence, policymakers when we have the chance (such as being at the right place at the right time, and having influential mentors) and how to spot the difference between (a) people in organisations who have limited power, have been asked to fill in time for others, and/ or will not spend what little political capital they possess in championing your position, and (b) the more astute , who will have identified your issue as an upcoming problem, an area where they can demonstrate thought leadership, become the acknowledged expert, or even save the group from a terrible decision. At that point you are pushing at an open door but, if you can only really have one hero, they may want to be that hero. So, you may need to put aside your own ego and allow them to express your ideas. You may even want to write parts of some of their speeches for them, provide them with briefings, and allow them to have the kudos of having an expert on tap. Here you are deliberately putting yourself in the role of a 'follower', in the hope that leaders will remember and reward you. Of course it is risky to ally yourself with one side, but riskier to think of yourself (naïvely) as above politics. The more you are aware of internal political groupings the better. At the very least, by attending to the signals from specific groups you can make sure that you are positioning your message correctly.

Heuristic 5: Recognise your own biases when deciding how strongly to engage

There is an emerging theme - particularly in media and blog commentary in relation to recent events such as Brexit and Donald Trump's election victory - about the need to avoid one key pitfall: recognising the biases of others but not ourselves. Identifying only the biases in our competitors may help mask academic/ scientific examples of group-think, and it may be counterproductive to use euphemistic terms like 'low information' to describe actors whose views we do not respect. This is a particular problem for scholars if they assume that most people do not live up to their own imagined standards of high-information-led action while using similar shortcuts to reinforce their own theories (Gregg et al , 2017).

Yet, it is easier to identify an evidence base in psychology, suggesting that we all have particular biases, than how to respond. Psychology can only take us so far to suggest, for

example, that (a) people's beliefs are honestly held, policymakers believe that their role is to serve a cause greater than themselves, and by implementing these policies they will make a difference to the greater good; and, (b) a fundamental aspect of evolutionary psychology is that people need to get on with each other, so showing simple respect – or going further, to 'mirror' that person's non-verbal signals - can be useful even if it looks facile

It may be more useful to consider as an *ethical* question how far we should go to identify our biases, accept the need to work with people whose ways of thinking we do not share (particularly when we find their views on some issues to be abhorrent), and how far we should go to secure their trust (unless, of course, one considers lying about one's beliefs, which can be counterproductive well as morally problematic, and not the action, we trust of any reader of this piece).

Conclusion

Policymakers need to gather information quickly and effectively, so they develop heuristics to allow them to make what they believe to be good choices. Their solutions often seem to be driven more by their emotions than a 'rational' analysis of the evidence, but perhaps because we hold them to a standard that no human can reach. If so, and if they have high confidence in their heuristics, they may dismiss our criticism as biased and naïve. Under those circumstances, restating the need for 'evidence-based policymaking' is futile, and naively 'speaking truth to power' counterproductive.

If so, what do psychological and policy studies suggest we do instead? The former helps us understand people, or how they think and act, and the latter helps us understand the policy process in which they operate. When we put those things together, they point to two main, profoundly important, insights about the psychology of policymaking. First, policymakers combine cognitive and emotional short cuts to thought and action, and they often do so without fully understanding the reasons for that action. So, for example, bombarding them with evidence can be less effective than telling simple stories or using other framing techniques to exploit their cognitive biases. Second, this takes place in a policy environment with many policymakers, many authoritative organisations, venues, or networks with their own rules that take time to understand, and in which there is often a dominant way to understand policy problems. So, for example, our evidence may have little impact unless we work out where and with whom to engage, how to form effective alliances, and how to spot the right time to act.

Yet, these studies don't tell us what to do! There is a big difference between scientific explanation and political action. So, at the risk of sounding too clever by half, our final section performs two functions to make that point. First, we proposed some 'fast and frugal heuristics' to help generate greater demand by policymakers for scientific evidence and work effectively in the institutions, coalitions, and networks crucial to policy development, including: tailoring framing strategies to policymaker bias, identifying the right time to influence policy makers and processes, and adapting to real-world dysfunctional organisations.

Second, we invite you to reflect on the ways in which we produced those heuristics given (a) the limited evidence on psychology and politics at our disposal, and (b) its limited application

to new settings. At best, much psychological research is nascent, producing a limited evidence base that is difficult to ‘scientifically’ or ‘reliably’ replicate in messy, multivariate and complex real-world political contexts. Policy scholars have often used the results to inform theories very effectively, but in a (speculative or deductive) way not anticipated by the original architects of psychological research. In most cases, this evidence informs one aspect of a complicated problem without giving us much indication about what to do, and it does little to inform value-based discussions about how we should act. At worst, its implications are open to misinterpretation and abuse. This exercise represents evidence and policy in a nutshell: policymakers face uncertainty and have to draw on limited evidence, and make value judgements, to produce necessarily problematic but ‘good enough’ decisions. If we seek to influence that process we need to do the same, even if our more successful strategies are not as ‘evidence based’ as we would like. We suggest that once we acknowledge and embrace this notion the consequence is that ‘psychology based policy studies’ will become a necessary component of any policy initiative.

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ⁱ This focus on individuals *and* environments allows policy theories to deal with the role of psychology in different ways. Some ‘zoom in’ to focus on the point of view of key policymakers (to ‘get into their heads’), using qualitative methods to explore how and why they make particular choices. Others ‘zoom out’ to situate action within a complex policymaking system over which policymakers have limited control (Cairney 2012b: 124-5; Geyer and Rihani, 2010). They study how individuals adapt to their environments, such as by modelling systems to consider the rules of interaction between large numbers of individuals representing ‘nodes’ in a network. The latter may involve ascribing the same basic thought processes to actors, examining that process at a relatively abstract level. This is the necessary consequence of trying to account for the effects of a very large number of actors. More generally, a messy policy process prompts us to make trade-offs between depth and breadth of analytical coverage and explanation. Depth helps explain one or several cases relatively convincingly, but without generalisability, while breadth helps an explanation travel further, explaining a smaller but important part of multiple cases.

ⁱⁱ Lodge and Taber (2005: 456): People develop positive or negative feelings about things they have thought about in the past – ‘political leaders, groups, issues, symbols, and ideas’ - and this feeling ‘comes automatically and inescapably to mind upon presentation of the associated object’. ‘Feelings become information. Affect imbues the judgment process from start to finish - from the encoding of information, its retrieval and comprehension, to its expression as a preference or choice’. If so, people become ‘biased reasoners’, unable to assess information in an ‘evenhanded way’ or to ‘break free of their prior sentiments when evaluating arguments on political issues, even when they are motivated to be impartial’.

ⁱⁱⁱ Haidt (2001: 814) draws on the idea of intuitionism (people grasp moral truths as a form of perception, not reflection) to suggest that ‘moral reasoning is usually an ex post facto process used to influence the intuitions (and hence judgements) of other people’; one has an instant gut response to certain issues and ‘when faced with a social demand for a verbal justification, one becomes a lawyer trying to build a case rather than a judge searching for the truth’.

^{iv} ‘Grounded cognition’ goes further, to explore the relationship between cognition, ‘perception, action, and introspection’ – but is not central to mainstream psychology (Barsalou, 2008: 635).