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Policy Design as Craft:
Teasing out policy design expertise using a semi-experimental
approach

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Abstract:

Public policy research typically neglects the role of the individual policy actor with most accounts of the policy process instead privileging the role of governmental systems; institutions; processes; organizations; organized interests or networks of multiple actors. The policy design literature suffers from similar limitations, with very few authors paying attention to the crucial work of the individual policy designer or considering how the latter's skills, expertise and creativity are employed in the design task. This represents a significant weakness in our understanding of how policy is formulated.

This paper outlines and previews what we believe is a potentially fruitful semi-experimental methodological tool for exploring how individual policy actors draw on knowledge, expertise, intuition, and creativity in framing and responding to complex policy issues. Real-time scenario-based problem solving exercises are used to explore how policy problems and solutions are framed and articulated by novice (first term

politicians and early career bureaucrats) and experienced (former cabinet ministers and senior civil servants) policy actors and to examine the strategies and approaches they employ in response to specific problem cues. Initial findings are discussed and we conclude by advancing potential refinements of the instrument and directions for future research.

Key words: policy design; expertise; decision-making; scenario-based exercises.

INTRODUCTION

Writing in 1988 Anne Schneider and Helen Ingram remarked that despite major advances in the study of public policy, policy design remained uncharted and relatively underdeveloped (1988: 61). Somewhat surprisingly, two decades later their observation remains valid. Despite promising beginnings in the early 1980s with the work of authors such as Alexander (1979; 1982); Simon (1981); Dryzek (1983); Linder and Peters (1984); and Schneider and Ingham (1988) the art of policy design remains an important yet seriously under-researched field within policy analysis. Persuasive models of the policy process now abound and account for factors as disparate as the role of historical inheritance, ideas in good standing, the impact of coalitions of actors, and the nature of governance systems. Few systematic analyses though have focused on policy design as a creative act or have considered what might be gained by thinking about policy as a design process. Even fewer have closely analysed the crucial work of the policy designer or considered how the latter's skills, expertise and creativity are employed in the design task.

Indeed, for the most part, public policy research has neglected the role of the individual policy actor. Instead attention typically focuses on seeking to explain and account for the work of governmental systems; institutions; processes; like-minded interests; and of the intersecting work of multiple rather than individual players (Allison, 1971; Bozeman and Scott 1992; Considine, 2005). This approach, we argue, not only underplays the agency and influence of individual policy actors, but also the importance of these actor's *skills, political style, creativity and expertise* in shaping policy processes and outcomes. This is a significant weakness in our understanding

of how policy is developed which also potentially limits our capacity to train and support the development of new policy experts and leaders.

As authors such as Chabal (2003) convincingly argue, individual actors such as ministers and senior civil servants are able to influence policy processes and content by dint of their professional style and capacity. This influence has long been recognised by scholars in the fields of international relations, particularly within foreign policy analysis where actor centric explanations of key events have been common (See for example Hudson 2005; Schafer and Walker 2006; Shannon and Keller 2007). The policy sciences, in contrast have been slow to recognise this point with very few studies systematically exploring the importance of individual capacities and actions in shaping policy processes or outcomes.

This paper forms part of a larger emerging research program which seeks to do just this. It begins by reviewing the trajectory of policy design research since the early 1980s, arguing that despite initial promise, research in the field has become increasingly bogged down with questions of instrumentation. This, the paper argues, has come at the expense of developing a deeper, more nuanced understanding of the ‘art’ of the individual policy designer. The paper then reviews the existing literature exploring the skills, attributes and expertise exhibited by policy makers, before mapping out and testing an experimental scenario-based problem solving method designed to shed light on how these skills and expertise are brought to bear in response to complex policy challenges.

Policy Design: ‘Process’ versus ‘Instrumentation’

In a recent and comprehensive account Howlett and Lejano (2012) trace the declining interest in ‘policy design’ from the mid-1990s onwards. This shift, they argue can be attributed to the ‘decentering of policy studies away from the centrality of authority and state centredness’ as those working in the field looked increasingly towards globalization and the shift from ‘government to governance’ to explain policy formulation and instrument choice (Howlett and Lejano 2012: 9). As they argue:

Many existing debates about policy choices are embedded in discussions of these two processes, and as a result, much of the existing discussions of policy tools and policy designs is characterized by misinformation, ideological predilection, and unnecessarily polarized positions. (2012: 13)

While we agree that this “present-day neglect of the existing corpus of studies on policy design’ (2012: 14) is problematic, it both reflects and overlooks an equally troublesome and for our purposes, more significant shift in the focus of ‘policy design scholarship”. This shift we characterise as a move away from *policy design as verb* with an emphasis on *design processes* towards *policy design as noun* with an emphasis on design *content or instrumentation* (May, 1981; Schneider and Ingram, 1988; Howlett and Lejano, 2012). Importantly, this shift away from exploring the artistry of the design process itself towards a greater focus on design outputs leaves us without a clear picture of how *policy designs* come to be. This is a significant void in our understanding of the policy process.

As Dryzek argued in the early 1980s, public policy’s capacity to respond effectively to complex contemporary social problems could be significantly enriched by a shift in policy analysis “...away from methods emphasising the assessment of pre-ordained and well-defined alternatives, and towards policy design.” (Dryzek, 1983: 345). This, Dryzek defined as “...the process of *inventing, developing and fine-tuning* [our

emphasis] a course of action with the amelioration of some problem or the achievement of some target in mind”. (Dryzek, 1983: 346). Interestingly, the creative element of this ‘*inventing, developing and fine-tuning*’, what we might call the *design component* of the design process, has been consistently underplayed in the literature. Design involves a practice of disciplined creativity, imaginative prototyping and an achieved form of competence that can be translated from one project to another (Alexander, 1982; Considine, 2012). Yet these important facets of the design task are largely ignored in the policy analysis literature.

Part of this underplaying no doubt stems from the traditional dominance of ‘rationalism’ within the policy sciences. As Alexander noted in the early 1980s, when pushing for greater recognition of the role of creativity: “those who would like to believe that the decision process can be expressed in an algorithm, however complex...[n]aturally prefer to disregard a stage involving creativity, with its associations of unpredictability and its basically irrational nature. (Alexander, 1982:281). Further explanation lies in the previously alluded to tendency for the policy sciences and the social sciences in general to focus on levels of analysis beyond the individual, while the sheer difficulty of unpacking the policy design ‘black box’ is also a likely contributor. The design process often occurs beyond public scrutiny and is incredibly complex (Howlett and Lejano, 2012), both features which militate against empirical observation. Moreover, as Schneider and Ingram note, “...when design includes ideas about strategies to solve problems, it has been viewed as so creative that it is an art rather than a science, and therefore cannot be captured.” (1988: 61-62). While similar debates in the fields of expertise studies and within the discipline of design have led to the development of innovative and valuable new

empirical methods such as protocol analysis (see for example Dorst, 1995; Valkenburg and Dorst, 1998; Jiang and Yen, 2009) and important new theoretical debates and frameworks (see for example Schon's [1983] theory of reflective practice) we are yet to see comparable breakthroughs in the policy sciences.

In this paper we echo Howlett and Lejano's (2012) call to rediscover policy design. But we do so with an interest in policy design that is focused upon exploring and understanding the application of the skills, expertise, craft and creativity of individual policy actors, rather than policy design as content or instrumentation (See Weimer 1993 and 1998 for an excellent discussion of policy analysis as craft). We link these ideas by considering one key dimension of a design approach – the notion that policy making has important biographical dynamics that inform the skill set of the designer. These mature into high level abilities to make judgements and develop sophisticated short-cuts in order to tackle very complex policy challenges, including the challenge to make decisions under time and information constraints.

Politicians, Bureaucrats and Policy Skills and Expertise.

The attributes, skills and expertise that politicians and bureaucrats bring to their role as policy actors are likely to hold important implications for the performance of government (Headey, 1974; Beckman; 2006; Alexander et al, 2013). Unfortunately, despite this significance, research in this area remains limited. There is a significant body of literature focusing on the skills and attributes of policy entrepreneurs, policy brokers and policy innovators. Kingdon's (1995) classic work on agenda setting, for example, notes the superior networking and negotiating skills of policy entrepreneurs; their 'claim to a hearing' based on expertise or formal role; and their persistence.

Mintrom (2000) has similarly pointed to the creativity and insight; social perceptiveness; social and political dexterity; persuasiveness; and strategic sense of policy entrepreneurs. Kuhnert (2001) identifies personality, charisma and management skills as important attributes, while Mintrom and Norman (2009) and Considine, Lewis and Alexander (2009) identify social acuity and networking skills as key attributes. In terms of methods, insights can be gained from diaries, biographies, autobiographies and memoirs (Greenstein, 1969) and from the more detailed anthropological accounts of the working lives of elite level policy actors provided by interpretive studies (See for example Rhodes 2005; 2011; Rhodes, t'Hart and Noordegraaf 2007; Rhodes and Weller, 2001).

There is also a small body of studies focusing on the general role requirements and performance of elite political actors rather than on more narrow policy-specific skills or attributes. In this vein, Greenstein's research into Presidential performance identifies proficiency as a public communicator; organizational capacity; political skill; policy vision; cognitive style; and emotional intelligence as key markers of elite level performance (cited in Theakston, 2006: 3). Similarly, Bakema and Secker (1988), focus on ministerial performance, noting the importance of technical knowledge; political knowledge and skills; and administrative and managerial skills. Headey's (1974) ambitious attempt to identify the role requirements of cabinet ministers and to explain cross-national variations in government performance by differences in ministerial competencies provides another useful example focusing on core skills with those identified including specialized knowledge of their policy field; analytical skills; managerial skills; the ability to 'organize'; public relations skills; political weight; political judgement; and brokerage skills.

The seminal Australian study: *Can Ministers Cope?* (Weller and Grattan, 1981) and the more recent follow up *Learning to Be A Minister* (Tiernan and Weller 2010) also explore the nature of ministerial roles in federal politics, and more obliquely, the skill sets and individual attributes required. The second work in particular touches on ministerial skills and qualities and how these develop by exploring the early experiences of ministers in the Rudd Labor government. Elsewhere, where ministerial expertise has been examined, it has often simply been assumed based on professional background rather than examined in empirical terms (See Bakema and Secker 1988 and Beckman 2006 for a critique of this approach). Thus, a lawyer appointed to the position of Attorney-General may be regarded as an ‘expert’ but a lawyer appointed as Treasurer a generalist.

Beyond this, studies focusing specifically on the skills and expertise of policy makers and how they develop and ply their trade are rare, generalised, and lacking an empirical grounding – or as Theakston puts it ‘strong on sweeping generalization or anecdote and weak in terms of systematic comparison and evaluation’ (2006:3). In the next section, we provide an overview of one approach to examining the art of policy design – scenario-based problem solving.

SCENARIO-BASED PROBLEM -SOLVING

Scenario-based problem exercises provide one potential avenue of empirically exploring these questions in a systematic fashion. The use of such exercises, simulation, or gaming to understand decision-making processes or to improve decision-making strategies through training is well established across a wide range of

fields. In sport, for example, gaming and simulations of varying degrees of complexity have been widely used to examine and improve the decision-making strategies of squash players (Allain and Sarrazin 1990); sailors (Walls et al 1998); soccer goal-keepers (Williams and Burwitz 1993); tennis players (Ward, Williams and Bennett); volleyball players (Borgeaud and Abernathy (1987); and rugby union referees (Mascarenhas et al 2005). In medicine, similar methods have been used to examine differences in perceptual-motor skills between trainee and expert surgeons (see for example Torkington et al 2001 as cited in Ward et al 2006); and to train nurses and surgical teams (Kneebone 2003; Law et al 2004; Norman et al 2006). An even more extensive body of research uses simulation and gaming to explore decision making in a military context (for an overview see Smith 2010). Closer to our current subject matter, proponents of game theory have used simulations of varying degrees of complexity to model the decision-making processes of voters, public officials and political leaders alike (See for example Guetzkow et al 1963; James 1996; Jervis 1988; Schaph, 1991; 1994; Stevens 1989; Tsebelis 1990).

As Ward, Williams and Hancock (2006) suggest, such approaches offer a potentially valuable compromise between ‘real world’ examinations of decision-making expertise, which are often difficult to capture and generalise from, and more simplistic laboratory-based experimentation which, though easily replicated in controlled environments, often offers little in terms of useful explanation for real world situations. Despite their utility and prevalence in other fields, the use of such methods in public policy and management research has been relatively restricted. Throughout the 1950s, 1960s and 1970s, influential think-tanks such as the Rand Corporation were amongst the first institutions to extend the use of such approaches

to the public policy field (Mayer 2009). Moving beyond the highly formalised and primarily computer-based Operations Research and Systems Research approaches, which had been used to model military and strategic decision making, Rand began experimenting with human-based free-form models of simulation in areas such as urban planning and drug policy (Kahan et al, 1995) in an attempt to shed light on decision making in government and to make the policy process more rational (Mayer 2009).

More recently similar methods such as multi-actor scenario-based policy exercises (See Toth, 1988a; 1988b for detailed descriptions) have been used to explore alternative approaches to complex policy issues. These exercises are interactive and flexibly structured processes designed to act as an interface between academics, experts and policy-makers (Toth 1988a). Typically, individuals or teams are provided with detailed starting scenarios depicting specific policy problems and environmental conditions. In an iterative process involving multiple stages and feedback loops alternative policy responses are tested, adjusted for predicted consequences, recast and re-evaluated as a means of synthesizing knowledge from a range of perspectives and bringing greater insight to the nature of the problem and potential solutions. Such exercises have been used to explore a diverse range of complex policy issues such as likely stakeholder reactions to dramatic climate change events (Toth and Hizsnyik 2004); problems around the implementation of climate change mitigation measures (Parson 1996); safeguards around the use of genetically modified crops (Marris et al 2003; Oreszczyn and Carr 2008); and decisions around the provision of healthcare for the aged in the Netherlands (Joldersma et al 1995). Obviously the most potent challenge to using simulations or scenario-based methods such as these is the

fact that they are artificial rather than real life situations, and knowing this, the decision makers may react differently. While true, this is also the case in every educational, training, internship and apprenticeship environment through which we currently develop high level expertise.

DATA AND RESEARCH METHOD

Against this background we trialled the use of a relatively simple scenario-based approach to test its utility in shedding light on how individual policy actors frame and respond to a range of complex policy problems. We were particularly interested in whether such instruments could be usefully employed to tease out how policy actors ‘read’ issues and navigate their way through complex administrative and political territory. Given the semi-experimental nature of the method, we were keen to test whether sufficient realism and ‘buy-in’ could be elicited from respondents so that responses might reflect actual problem-solving behaviour with some form of external validity.

Forty-six semi-structured interviews were conducted with former Australian state and federal government ministers, sitting first term backbenchers, early career state and federal policy officers and ex-senior government bureaucrats.¹ A description of this

¹ This constitutes an initial sample which will be extended to approximately 70-80 respondents by the end of the project. The sample frame includes all ex-state and federal ministers who had served at least two parliamentary terms; senior bureaucrats included all ex department secretaries who had served at least 10 years in a senior leadership position at the state and/or federal level; first term back-benchers included all federal and Victorian parliamentary members serving their first term in office; early career policy officers included state and federal public officials in the first five years of a policy role. Recruitment for ex-ministers, ex-senior bureaucrats and backbenchers was by direct invitation with all those responding favourably interviewed. Early career policy officers were recruited by invitation through a professional association, the Institute for Public Administration Australia (IPAA) Victorian branch. This sample is currently heavily skewed as it includes no female ministers and only a small number of senior bureaucrats. The final sample will reflect a quota sampling methodology with approximately equal numbers across all four sub-populations and a proportional representation across genders.

Table 1 Current Sample Characteristics

Role	Jurisdiction		Total
	Federal	State	
Ex Ministers	5	4	9
Backbenchers	4	8	12
Senior Bureaucrats	0	3	3
Early Career Policy officers	2	20	22
	11	35	46

current sample is provided in Table 1. The nine ministers interviewed have on average of almost 18 years parliamentary service and eight years ministerial experience, while the senior bureaucrats have each served lengthy periods at the highest level of their respective state civil services. In contrast, the backbenchers interviewed are all in their first parliamentary terms with the early career bureaucrats averaging three years' service in a policy role. Interviews ranging in duration from 45-90 minutes were conducted face-to-face between March-2011 and December 2012 and were recorded and fully transcribed.²

In these interviews, respondents were provided with a brief one and a half page scenario to read through. This scenario outlined a high-profile policy problem – alcohol-fuelled street violence in an urban environment – and allocated respondents a specific role to play: either a Cabinet Minister with carriage over the policy area (ex-ministers and backbenchers); Department Secretary (ex-senior bureaucrats); or Executive Director with departmental responsibility for the policy issue (novice bureaucrats). Having read through the problem, respondents were prompted to “talk us through what you see – tell us what jumps off the page”. Similar to practices employed in methods such as protocol analysis, interaction with the participant was kept to an absolute minimum while they outlined key elements of the problem as they

² The research design incorporates questionnaire-based scale items (administered face-to-face); ‘emblematic’ case study analysis; and a series of scenario-based problem solving exercises.

saw it. Effectively, the interviewers adopted the role of ‘non-judgmental listener’, and only brief verbal and non-verbal signals and prompts were used to encourage the participant to fully express their thoughts (Williamson, Ranyard and Cuthbert 2000; Ranyard and Williamson 2005).

Having outlined the nature of the problem as they see it, interviewees were then asked to take on their allocated role in the scenario and to describe the steps they would take in dealing with such a problem, again, with minimal interaction with the interviewer. The entire conversation was digitally recorded and fully transcribed. These transcripts were then subjected to detailed narrative analysis to assess how actors evaluate and frame the nature and key characteristics of the problem, and then to evaluate the level of detail and expertise reflected in their response.

The remainder of this paper discusses some of the initial analytical approaches we are experimenting with and outlines some of our early findings. We emphasise that these analytical approaches are in their infancy and that further more rigorous testing, analysis and refinement is required before the data collection method and analytical approaches used are properly validated. The purpose of outlining them here and flagging the preliminary results of our analysis is to generate discussion about the potential utility of the approach and to encourage others to test variations of it.

INITIAL RESULTS

‘First Response’ Classification

At this point in the method’s development we have restricted our attention to capturing and analysing the ‘first responses’ of our policy actors to two relatively

simple tasks – *problem framing* and *mapping initial responses*. We have done this to make the analytical task more manageable as we test the efficacy of the method but also in recognition of the critical nature these initial steps in framing and responding to problems play in shaping both policy design processes and outcomes. The manner in which we define problems sets boundaries to our attention and imposes a level of coherence on the situation confronted (Olshfski and Cunningham, 2008). Initial descriptions and responses are likely to reflect these ‘sense-making’ processes and the ‘working assumptions’ used by actors addressing complex problems (Hajer, 1995; Hood and Margetts, 2007). As the *anchoring* literature suggests (see for example Tversky and Kahneman, 1974; Furnham and Boo, 2011) they are also important markers of likely subsequent decisions and responses.

With this in mind we examined the content of the *first substantive thought* provided by interviewees when asked ‘what jumps off the page?’ By substantive thought we mean the first meaningful thought expressed relating directly to the problem (See Table 2 for examples). Thematic analyses of these initial reactions to the scenario revealed six general types of responses put forward by the interviewees: *Diagnosis*; *Complexity*; *Practical*; *Sceptical*; *Detail-focused*; and *Value-based*. These are described in Table 2 with illustrative examples of responses from each category also provided.

As the data in Table 3 indicates, more than one in four respondents launched immediately into a diagnosis of the underlying nature of the problem based on their initial reading of the scenario. Seven of 42 respondents initially noted the complexity

Table2. Classification of Response Strategy Types
(prompt = ‘having read through that what stands out/what leaps off the page’)

Initial Strategy	Example
Diagnosis: Response proceeds directly to a diagnosis of the problem	“One point absolutely utterly jumps out of the page. This is all about perceptions.” Michael, ex-Minister
	“Well, I personally think it's a problem of perception and this may be a bit of my history working in this issue, because I've worked in the area and I think it is perception of the issue being actually a little bit blown out of proportion myself.” Clair, Novice Bureaucrat.
Complexity: First response is to acknowledge complexity/multi-faceted nature of the problem.	“Well, that it’s complex and that if there was a quick fix solution it would have... There is no easy answer.” Zoe, Novice Bureaucrat.
	“So that the standout issues are there’s a genuine policy problem, there’s a real need for some change in government policies and that this problem is occurring for a whole range of complex reasons including increased wealth, mobility, lower price of alcohol, population growth, economic growth, popularity of Melbourne. “ John, Ex Minister
Practical: First response focuses on practical requirements of dealing with the problem.	“Well, that there’s a, there’s a recognition of a problem in a number of different locations and it’s regarded as something that, something needs to be done about. It shouldn’t, it’s not acceptable to allow it to continue. So something’s got to be done.” Peter, Senior Bureaucrat
	“That you’ve got to give a report at cabinet next week coming up with a solution and that there’s no single explaining factor for the violence which is something that resonates with me.” Natalie, First-term backbencher
Sceptical: First response was to question evidence provided in the scenario as basis for action	“There’s no evidence is what leaps out at me...that it’s very – the solutions that have been derived are very knee jerk, intuitive and there’s no evidence. Pat, Senior Bureaucrat.
	“Well, it’s an issue that needs dealing with [but] at face value I wouldn’t believe any of the sources, the media or the police.” Mark, Ex Minister.
Detail focused: First response was to recount detail provided in the scenario	“That it’s predominantly involving young people and that young people have also most likely been the victims of it.” Adam, first term backbencher.
	“Alcohol, the violence, the culture of that violence is okay.” Dan, novice bureaucrat.
Value-based: First response reflected value-based judgement of nature of the problem.	“The balance between individual responsibility and government’s intervention in that area for, if you like, a market failure.” Michael, first term backbencher.
	“For me I’d wonder what the role of government is in fixing this problem, how much government should intervene to correct individual’s poor behaviour, there are lots of little ways that government can tweak things, but I think it’s the individuals themselves, which is probably why I won’t get promoted to this role. “ Melissa, novice bureaucrat.

**Table 3. Classification of initial response to street violence scenario:
(prompt = having read through that what stands out/what leaps off the page)**

	Total
Diagnosis	11
Complexity	7
Practical	4
Sceptical	6
Detail focused	7
Value-based	4
Other	3
Total	42

of the problem, with another 7 asking for more detail. Six displayed a sense of scepticism about how the problem was being framed in the scenario.

These results suggest the method is capable of discerning different problem framing strategies adopted by individual actors. More fine-grained analysis also pointed towards differences across sub-groups of policy actors (for example, experienced players were much more likely to proceed straight to diagnosis than novice actors, with the latter more likely to focus on the actual problem details) although the numbers in the current sample are too small to draw any definitive conclusions.

We expect similar differences in problem framing and problem-solving approaches to emerge across subgroups of policy actors (such as novice versus experienced players; and politicians versus bureaucrats) when we analyse the interviewees actual response strategies. What might these difference look like? In terms of the novice versus experienced actor category we advance the following working propositions as examples of the kinds of markers which analysis of the scenario responses may enable us to identify.

Proposition 1: Firstly, all things being equal, we would expect both the level of analysis and the responses from experienced players to be more extensive (in length) and comprehensive in terms of substance than novice actors. They should also contain a noticeably greater level of overall detail; more sophisticated analysis and explanation; and a greater number of substantive elements.

Proposition 2: We also posit that novice actors are more likely to focus on data/information in trying to define/recognise the problem. Experienced actors, on the other hand might be expected to more immediately recognise the nature of the problem based on prior experience and to advance to the problem solution without requiring further information. This being the case we would expect novice players to focus more upon the nature and validity of the data provided, and to more overtly prioritise the need to supplement the latter prior to acting.

Proposition 3: In line with the literature (see for example Simon, 1978; 1981; Kahneman, Slovic, and Tversky, 1982; Polsby, 1984; Schneider and Ingram, 1988; Ross et al, 2006) we would also expect the experienced players to demonstrate a greater capacity to ‘pattern match’ problems and solutions against previously encountered issues as well as projecting forward through mental simulation in dealing with the problem. This being the case we would expect to see overt referrals back to prior experiences as well as evidence of forward projection through simulation in their responses such as: if A then B type responses.

Proposition 4: Finally, we expect those with experience to demonstrate a superior level of situational awareness. This in turn should allow them to focus beyond the

immediate parameters of the problem to incorporate other important elements such as political management and the likely reactions of other actors, rather than focusing on the specific details of the problem itself. This being the case, we would expect experienced actors to display a more developed and nuanced understanding of their environment and what we might call ‘second-order’ issues such as political, stakeholder and media management and how such groups are likely to react or behave in response to policy intervention.

While this part of the research program is very much a work in progress, a first cut analysis of responses from four participants to the ‘Alcohol-fuelled Street Violence scenario demonstrates the kinds of analytical approaches which may be usefully employed in characterising the scenario-based responses of individual actors. It also suggests that such an approach may be useful in identifying different ways in which actors approach the policy design task. Table 4 provides a summary analysis of responses from two of the experienced former ministers interviewed (Jackson and Greg), and from two first term backbenchers (Terrence and Martin).

Firstly, in line with Proposition 1 on comprehensiveness, both former ministers were much more expansive in their replies, in terms of both duration and word count. Jackson, at 7 minutes 39 seconds, spoke for between six and seven times longer than both novice respondents, with Greg’s response taking three and four times that of Terrence and Martin respectively. Both former ministers also rated much higher in terms of the level of detail and sophistication provided in their responses and tended

Table 4. Summary Statistics for Street Violence Scenario Responses

Interviewer: What are your steps then for dealing with something like this? As a minister, if something like that landed on your desk, what do you do, how do you approach it?					
		Jackson	Greg	Terrence	Martin
Summary	Policy Field Expertise	Yes (social policy)	No	No	No
	Reading Time	2: 58	1:24	2:33	2:10
	Overall detail/sophistication	High	Medium	Low	Low
	Extensiveness of response (words/time)	942 words (7:39)	534 words (4:28)	161 words (1:30)	103 words (1:05)
	Flow (words per sec)	2.1	2.0	1.8	1.6
	Substantive elements identified (n)	>10	>10	<5	>10
	Analysis detail	High	Medium	Low	Low
Response Strategy	Search	Yes	Yes	Yes	No
	Consult/Collaborate	Yes	Yes	Yes	No
	Classifies/Matches	Yes	Yes	No	No
	Projects forward	Yes	No	No	No
Response Content	Response content detail	High	Medium	Low	Medium
	Identifies key actors	Yes	Yes	No	No
	Process detail	High	Low	Low	Low
	Political management	High	Low	Low	Low

to raise a greater number of substantive elements both in framing the problem and in detailing how they would approach it.³

There also seems to be some confirmation of our prediction about the likely immediate focus of novice versus experienced actors on data/detail as outlined in *Proposition 2*. Box 1 provides the initial response (first two sentences) given by each participant when asked what steps they would take in response to the problem. As the responses show and as predicted, both novice players immediately focused in on the need to gather more information in order to more accurately gauge the problem. In marked contrast, both ex Ministers ignored such detail and immediately went about classifying the nature of the problem and working through potential solutions.

³ For the purposes of this article coding and assessment of responses was carried out by one of the authors. Once the full sample is collected responses will be blind-coded and categorized by a panel of two researchers independent of the research team.

In doing so, their responses also provided evidence of pattern matching and simulation thereby supporting *Proposition 3*. Greg, for example, talks about the problem being a “*classic combination* of a sharp end here and now problem, combined with an underlying root cause problem” [emphasis added]. In doing so, he relies upon a typology of familiar problems based on prior experience. Later in his response he draws a parallel between the street violence problem and combating the road toll, suggesting advertising campaigns based on those aimed at changing attitudes towards drink-driving and speeding may be one approach worth exploring. Jackson also overtly matches or compares the nature of the problem and his likely approach in his opening response (See Box 1) to the scenario noting he would be “using the sort of approach used in *these other things*.”⁴

There is also some evidence of ‘forward projection’ and mental simulation as he talks about the need to develop holding strategies capable of relieving the immediate political pressure while developing and implementing medium and long term solutions capable of dealing with what he identifies as the core problem of changing social behaviour and

Box 1. Initial response (first two sentences) to Street Violence Scenario

Interviewer: What are your steps then? You’re the minister, you’ve got to do something about it, what are the steps you would take?	
Terrence: “You’ve got to establish the depth of what the issue is, whether it’s some – I mean, we’re in a world now that everything is reported and over reported, and we compare back to ten, 20, 30 years ago, is the situation any worse now than what it was back then? Before, you just jump and start boxing at shadows, say, we’ve got to crack down on this sort of stuff – because at the end of the day, it’s relative to what’s happened over time.”	Greg: “Well, it’s a classic combination of a sharp end ‘here and now problem’, combined with an underlying ‘root cause problem’ and dealing either with the sharp end or the root cause to the exclusion of the other, is not going to solve the total problem. But probably my instinct would be to focus on the sharp end and hope that over time the message would seep through into the wider community that irresponsible behaviour is going to be punished accordingly.”
Martin: “Firstly identify the problem and test the problem because that will indicate the extent of the problem. Based on this being accurate and the information in there, there is a problem.”	Jackson: “Well, in relation to the broader policy, which is the real problem, I would be using the sort of approach used in these other things. I would be seeking expert advice and input as to what has worked elsewhere, and what might work.”

⁴ Prior to addressing the scenario, Jackson had outlined his involvement and approach in two other policy issues.

attitudes around alcohol consumption. In contrast, neither of the novice actors provided any evidence of problem matching, classifying or projecting in their responses.

Similar distinctions between novice and experienced actors were also evident in respect to *Proposition 4*. As expected, both ex ministers displayed far superior levels of situational awareness; were more able to identify key actors/stakeholders and how they might react to various strategies; and were able to identify and focus attention on a range of potentially important second order issues, beyond the immediate context of the problem. This was particularly the case for Jackson, who having served in a state-level social policy orientated portfolio had at least some working knowledge of the problem identified in the scenario, and was therefore much better placed than his federal ministerial colleague to provide a detailed, domain-specific response.⁵

CONCLUSION

In this paper we have considered some of the early research on policy design noting the shift away from explorations of creative *design processes (policy design as verb)* towards a focus on design *content or instrumentation (policy design as noun)*. This shift we argue not only leaves us with a fundamentally incomplete picture of how policy designs come to be but also further dilutes the already limited attention paid to the creativity, skills and expertise of individual policy designers. This paper represents a small initial step in our attempt to construct an approach to understanding

⁵ This suggests an important contextual variable which needs to be considered in any analysis of variations in expertise levels displayed by novice and experienced policy-makers – the impact of domain specific experience either in terms of jurisdiction, portfolio responsibilities, or prior experience. For example, it is possible that a first term back-bencher with a background in policing or the criminal justice system may display superior levels of domain-specific expertise in responding to this scenario than an ex federal minister with years of experience in a completely unrelated portfolio area. To control for this and to identify cases where prior experience may aid the development of domain specific expertise, we are collecting detailed biographical information on all participants. We are also using two diverse scenario-based exercises in each interview as a way of ensuring at least one response will be drawn from an unfamiliar domain.

public policy making which takes these individual level factors into account. This focus on individuals is not to deny the importance of structure. Policy actors do not of course operate in a vacuum, but face all manner of structural, institutional and organisational constraints, challenges, and opportunities in framing, designing, implementing and evaluating policy. The manner in which they respond to these influences though, including, ultimately, their success or failure, is heavily conditioned by the skills, expertise, experience and creativity that they as individuals bring to their role as policy actors. These factors warrant exploring.

In the second half of this paper we have sketched out and reported our initial findings from a semi-experimental method designed to shed light on how individual policy actors frame and respond to a range of complex policy problems. While the approach is still relatively rudimentary, our initial analysis suggests there may be significant potential in using such scenario-based problem solving exercises to tease out how respondents read, make sense of and respond to problem cues, and in identifying different modes or styles of thinking and acting. Such methods, as Bozeman and Scott (1992) note, have been widely used elsewhere in the social sciences for decades, forming a key part of the research toolkit for disciplines such as psychology, sociology, business, information science, and education. Closer to home, they have also been employed in the field of foreign policy analysis and international relations. Surprisingly though, such approaches have barely been explored within the fields of public policy and public administration. Technological development and burgeoning interest in computer gaming is likely to change this in the near future with rapid growth in the application of 'serious computer gaming and simulation' as a research,

teaching and learning aid in complex decision-making environments.⁶ These developments make the use of realistic, real-time, multi-iterative decision-making exercises possible and have the potential to add greatly to our understanding of how and why policy actors make the decisions they do.

Even operating at this relatively simple initial level, our approach has been able to successfully tease out apparent differences in the ways in which actors read cues and prioritize different problem components, and in the way in which novice and experienced actors respond to policy problems. Beyond more in-depth analysis of the material we have collected from these interviews through these scenarios, our next challenge is to introduce more biographical characteristics such as role; policy field; and jurisdiction; and to incorporate iterative or multi-stage scenarios which provide respondents with opportunities for information gathering and feedback loops. This will enable us to explore in more detail how individual problem solving styles vary across a wider range of biographical factors, as well as improving the realism of the scenarios employed.

⁶ See the work of the Delft Centre for Serious Gaming for a leading example of developments in this area. www.seriousgaming.tudelft.nl

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