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Meaning and power in the design and development of policy experiments

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ABSTRACT

Poorly designed or implemented policies impede a society's ability to adapt to changes in the policy environment. In order to avoid such situations, pilot projects and other forms of policy experiments can and are often used to test new approaches before their full-scale roll-out. Policy experimentation can provide meaning to policymaking by helping in framing or projecting the future, deriving alternate response strategies and monitoring any changes in the policy environment. At least in theory, the small scale and experimental nature of pilots can encourage policy innovations and reduce policy risks. The discussion in this paper examines three key challenges to policy experimentation all of which centre on questions of meaning in terms of understanding the future, and power in terms of the ability of governments to design and implement such actions. These are (1) the influence of politics and key stakeholders therein on the design and evaluation of experiments, (2) problems in the technical evaluation of policy experiments and (3) problems encountered in the diffusion of experiments and retaining the lessons drawn from them.

1. Uncertainty and the need for policy experiments

A critical challenge that often faces decision-makers and planners in designing policies is doing so under conditions of uncertainty, that is, with limited and sometimes no information about the likely future policy environment. In this sense, as Swanson et al. (2010) argued, much policymaking in the 21st century is akin to gardening in so far as it is "muddy, attentive and experiential, because we really do not know what growing conditions will prevail".

Outputs, outcomes and target group behaviour are only a few of the many aspects of policy-making which are uncertain. Day and Klein (1989) note while most government policies are crafted in response to events that are 'reasonably predictable', policy events can also be, (1) unpredictable, 'unforeseen' and 'unprojectable', (2) catastrophic and (3) events where interpretation of uncertainty signals is convoluted because of associated moral and social issues.

Coping with the challenges posed by uncertainty involves assessing degree or level in any given policy-making situation. Some of these uncertainties stem from a lack of knowledge of cause and effect relationships between policy interventions and outcomes. Failing to correctly identify the bounds and range of these uncertainties is a major cause of policy over and under-reaction (Maor, 2012, 2014) and over and under-design, and uncertainties must be correctly understood and diagnosed by policy-makers in specific circumstances if policy failures are to be avoided, both in the short and long-term.

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Faced with this kind of uncertainty governments often resort to experiments or pilot projects which can generate policy-relevant knowledge with respect to the future policy environment, identify appropriate policy responses and allow policies to effectively 'adapt' with the rate and level of projected future change in their environments (Nair & Vreugdenhil, in press; Swanson & Bhadwal, 2009).

But not all environments change as rapidly as others and not all uncertainties demand the same response, so policy experiments themselves must be carefully designed and calibrated (Nair & Howlett, in press). Policy experimentation can provide meaning to policymaking by helping in framing or projecting the future, deriving alternate response strategies and monitoring changes in the policy environment. At least in theory, the small scale and experimental nature of pilots can encourage policy innovations and reduce policy risks. The discussion in this article examines three key challenges to policy experimentation all of which centre on questions of meaning in terms of understanding the future, and power in terms of the ability of governments to design and implement such actions. These are (1) the influence of politics and key stakeholders therein on the design and evaluation of experiments, (2) problems in the technical evaluation of policy experiments and (3) problems encountered in the diffusion of experiments and retaining the lessons drawn from them.

2. Types of uncertainty and the benefits of policy experiments

The recent uncertainty classifications by Kwakkel, Walker, and Marchau (2010), Walker et al. (2003) and Walker, Marchau, and Swanson (2010) can be used to develop a set of propositions for policy-making dealing with a range of future scenarios and knowledge gaps related to them. Walker et al. (2010) usefully identify five levels of uncertainty which experiments can address. These include Level 1 shallow or parameter uncertainty where multiple alternative states representing the system with specific probabilities are present and Level 2 medium or fuzzy uncertainty where multiple alternatives exist within a scenario but these can be ranked based on the 'perceived likelihood' of their occurrence. Level III situations are where different scenarios exist but can still be ranked in terms of their likelihood. Level IV uncertainty represents a more complex situation in which multiple plausible alternative scenarios can be enumerated without being able to rank the alternatives in terms of their perceived likelihood. Finally, in the most complex Level V situations there is an inability to present or agree upon a full range of possible alternative scenarios and the "strong possibility of being surprised" must be acknowledged Walker et al. (2013).

Testing policy responses through active experimentation is a key tool for policy-makers attempting to deal with these different kinds of uncertainty through approaches ranging from improved knowledge of target group behaviour under different policy interventions, to improved projections of the likelihood of future states of events. Transposing the idea of "controlled experimentation" – a concept that is well-acknowledged in the social and natural sciences - into policy research has received much attention by policy scholars and practitioners alike attempting to deal with uncertainties in the policy environment (Anderson, 1975).

Policy experiments including pilots can play an important role in policy-relevant knowledge production which could include early evaluation of the impacts of new initiatives such as subsidies and incentive programmes for education or training of economically disadvantaged communities and utilisation of data generated via these pilots (Stromsdorfer, 1985). The development sector, for example, has often conducted experiments to evaluate alternative strategies and accordingly allocate resources to those that emerge as most feasible in promoting development goals (Rondinelli, 1993). Experiments have also served as a source of evidence for policy-making in many sectors including education, healthcare, environment, social welfare among others (Bennion, 2011).[1] The role of social learning fostered through experimentation has also been found to be crucial in overcoming 'lock-in' of unsustainable trajectories and enabling restructuring of current social–technical systems to transition towards sustainable pathways (Rotmans et al 2001).

"Promoting variation" (Swanson & Bhadwal, 2009) by crafting multiple policy alternatives can make the emergence of a successful solution more likely (Cummings, 2013). But enhanced experimentation and learning can be instrumental in "keeping pace with the dynamic drivers and expressions of risk" in a changing policy environment (ÓBrien & Sygna, 2013), only if the experiments themselves are designed to address the level of uncertainty involved in a specific case.[2]

[1] More recently, policy pilots have also gained much attention in the transition management literature (Rotmans, Kemp, & van Asselt, 2001; Van den Bosch & Rotmans, 2008) specifically those intended to generate long-term societal change. Many experiments that aim towards enabling sustainable transitions are largely technological. Social learning requires open and flexible networks while learning derived from technological experimentation largely happens in 'closed networks' (Bos & Brown, 2012). There is little empirical analysis on the effects of policy experiments however, in particular how their design influences their potential as "learning incubators" (McFadgen, 2013). It is usually just assumed that experimentation is an important instrument to support sustainability transitions by providing a 'space' for social learning to occur (Bettini, 2014).

[2] Acknowledgement of the limitations to "rational calculation, planning and forecasting" under conditions of high uncertainty have drawn attention to the role of experiential learning and experimentation over time for adapting to change (March & Olsen, 1975). The idea of adaptive policies has been discussed widely in the context of decisions for the long-term such as infrastructure planning and climate change (Buurman, Zhang, & Babovic, 2009; Gersonius, Ashley, Pathirana, & Zevenbergen, 2013; Giordano, 2012; Ranger & Garbett-Shiels, 2011; Swanson & Bhadwal, 2009; Walker et al., 2001). The process of adaptive policymaking can be (1) passive and operate on the available scientific information till new knowledge comes up or (2) active and consciously experiment with policy alternatives to identify better strategies as the new conditions emerge (Walter, 1992). Apart from technical or 'hard' knowledge, pilots may also produce 'soft' types of knowledge such as knowledge on management processes, actor preferences, policies and implementation designs. Learning is established through formal means (monitoring and evaluation), but (social) learning between stakeholders during the process is often at least as important for the future of the innovation or project (Nair & Vreugdenhil, in press).