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A methodology to enable exploratory thinking in strategic planning

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ABSTRACT

It is widely accepted that the traditional predict-then-act approach to long-term planning for delivery of public services, such as energy, water or transportation, cannot withstand uncertainties and complexities associated with issues such as population growth, changing demands and climate change. In this regard, various planning approaches have been put forward by the scholarship as alternatives to the conventional model. The planning practice, however, is often following the path-dependent legacy of conventional approaches. This study puts forward a planning intervention, which can be plugged into conventional planning processes, as a way of building capacity for alternative planning approaches to take off. The intervention aims at enabling exploratory thinking within the planning process. Exploratory thinking considers alternative perspectives to planning issues, different from the well-established frames of reference, to potentially reveal some of the blind-spots in the business-as-usual planning. Trial application of the proposed intervention within the process of planning for development of a flood management strategy in Melbourne, Australia, provides propitious indications of widening the scope of thinking among the participants. Based on the achieved insights, a methodology for carrying out the proposed intervention is presented. The methodology would be relevant, and potentially useful, for both planning scholars and practitioners.

1. Introduction

For decades, long-term planning was dominated by the rationality paradigm (Alexander, 1984; Voß et al., 2009). The rational model of planning demands systematic identification and evaluation of alternative solutions to a problem, and choosing the one with the best expected outcome (Alexander, 1984). Underpinned by this thinking, long-term planning for delivery of public services, such as energy or water, followed a linear optimization approach by using the most plausible forecasts of future conditions (Walker, 2000).

Simon was one of the first scholars to critique the positivistic notion of rationality in planning and decision making (Simon, 1955). He questioned the possibility of having complete information, and of simultaneous consideration of all the available alternatives in a real decision making process. Other scholars, such as Tversky and Kahneman, also contributed to highlighting the anomalies in the rationality paradigm by revealing the inherent imperfections of decision making processes in the face of uncertainties (Kahneman and Tversky, 1979; Tversky and Kahneman, 1974). Such debates, along with the increasing complexity and uncertainty of the planning context, led to the emergence of the next generation of long-term planning approaches within the scholarship.

The next generation of planning approaches for public services admits that long-term planning problems are, according to the famous term of Rittel and Webber, "wicked" in nature (Rittel and Webber, 1973). Unlike science and engineering problems, there are no enumerable sets of solutions for public planning problems, and any solution will generate waves of consequences over extended periods of time, which do not lend themselves to complete prediction and control (Rittel and Webber, 1973). Accordingly, the narrow focus on finding optimal solutions needs to be replaced by broader attempts for understanding the implications of complexities and increasing uncertainties (e.g. consequences of climate change) for designing long-term plans. Within the new perspective, planning is conceived as an ongoing process of experimentation and learning, that needs to be carried out in a participatory and interactive environment (Beierle and Cayford, 2002; Pahl-Wostl and Hare, 2004). It should entail a more explicit and reflexive treatment of future uncertainties, using exploratory scenario approaches, and should broaden the range of options to build robust and adaptive strategies that would perform across a wide range of possible future conditions (Lempert et al., 2003; Störmer et al., 2009). Eminent examples of such planning approaches are:

Assumption-based planning (Dewar et al., 1993): which tries to increase the robustness of an existing plan and protect it from failure by opening up and scrutinizing its underlying assumptions

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Robust decision making (Lempert et al., 2003): which uses computational exploratory modeling tools to identify a (static) robust plan that would perform well across a wide range of possible circumstances

Adaptive policymaking (Walker et al., 2001): which supports the design and implementation of long-term plans in the face of future uncertainties, through adaptation processes that are carried out over time

Adaptation tipping points (Kwadijk et al., 2010): which tries to identify the conditions (i.e. the tipping points) under which a given plan could no longer fulfill its objectives and new strategies would be needed

Adaptation pathways (Haasnoot et al., 2011): which produces alternative routes/pathways into the future once a tipping point is reached, in order to continue on meeting the intended objectives

Dynamic adaptive policy pathways (Haasnoot et al., 2013): which combines adaptive policymaking and adaptation pathways to explore a variety of uncertainties and their implications for future vulnerabilities and opportunities, in order to identify required actions, sequencing of actions and contingency actions to keep the plan on track

Despite the great potential of the new generation of planning approaches to deal with complexities and uncertainties of today's strategic planning for delivery of public services, there is limited evidence of their uptake in practice (Malekpour et al., 2015; Walker et al., 2013). In fact research indicates that conventional planning approaches are entrenched in today's planning frameworks, and the practice of planning in public sectors often tends to follow the path-dependent legacy of older planning paradigms (Lawrence et al., 2013; Truffer et al., 2010). In this regard, Walker and his colleagues state that the scholarship needs to do a lot more to fill the gap between planning theories and practice (Walker et al., 2013). Malekpour et al. specifically call for development of operational frameworks that can bridge between historically-entrained modes of practice and radically different planning approaches (Malekpour et al., 2015).

Against this backdrop, this study puts forward a planning intervention, which can be plugged into conventional planning processes, as a way of building capacity for alternative planning approaches to take off. We contend that there is need for simple and practical interventions, which do not necessarily transform the planning practice at once, but rather build capacities for a transformation to eventuate. This follows from the work of Cleland and King, who had stated that "an all at once introduction of a comprehensive planning process is almost inevitably doomed" (Cleland and King, 1974, p. 73). Instead, they suggested developing strategies for taking advantage of existing planning cultures in such a way as to enhance the likelihood of new planning approaches being accepted and used.

In this regard, our proposed intervention aims at enabling exploratory thinking at the outset of the planning process. Exploratory thinking, in this context, considers alternative perspectives to planning issues, different from the established frames of reference, to potentially reveal some of the blind-spots in conventional planning approaches. This is aligned with what Mintzberg advocated as strategic thinking (Mintzberg, 1994), which is about acquiring a broad perspective of planning issues through informal processes that stimulate creative thinking, rather than following a formalized process from the outset to end up with a strategy/solution in a programmatic way. Our proposed intervention creatively explores a portfolio of strategic directions and outcomes in the early stages of planning. The output of the exploratory exercise could then be subsequently analyzed using a range of available tools and methods, including quantitative techniques, to shape action plans.

The paper is organized in the following way: Section 2 establishes the conceptual underpinnings of the planning intervention. In Section 3, we develop the planning intervention and explain its different components in detail. In Section 4, we describe the empirical application of the proposed intervention within the process of planning for development of a flood management strategy in Melbourne, Australia, involving various stakeholders' representatives. In Section 5, we build on the achieved insights and the evaluation of the trialed process to put forward a methodology for carrying out our suggested planning intervention. The proposed methodology would be relevant, and potentially useful, for both planning scholars and practitioners.

2. A scope for the planning intervention

Conventionally, strategic planning processes for delivery of public services roughly comprise the following main phases: a) identifying the problem and the desired objectives, b) identifying potential solutions, c) auditing the internal context, i.e. strengths and weaknesses within the sector, and the external context, i.e. opportunities and threats in the environment, and d) evaluating the potential solutions and selecting the right action (Bryson, 1988; Olsen and Eadie, 1982).

Literature addressing long-term planning issues, however, expresses the following overarching problems with regard to practical implementation of the described procedure:

1- Definition of problems and planning objectives is often affected by the direction in which a treatment is considered (Rittel and Webber, 1973). Consequently, problem definition and objective setting would be intertwined with a preconceived idea about possible solutions (Dutton and Ashford, 1993; Rittel and Webber, 1973). More recently, widespread adoption of sustainability and liveability notions in public sector strategic planning, which have replaced the traditional concepts of reliability and the like, has further complicated the issue. In practice, many of planning objectives associated with sustainability or liveability concepts become subjective, ambiguous aspirations, owing to the inherent subjectivity and ambiguity of the concepts themselves (Voß et al., 2007). Lack of in-depth understanding of all aspects of multivariable and nonlinear planning problems may misguide planning and lead to implementation of simplistic solutions, or panaceas as Ostrom (2007) has called them.
2- There is often lock-in to conventional solutions in public sectors (Rogers et al., 2012). Moreover, many of the planning problems are approached from one or a small set of favored options, excluding other potentially valuable options at the very outset (Priemus, 2007). Such exclusions are sometimes deliberate, in reaction to policy bans or political disapproval on certain options (Malekpour, Brown, & de Haan, unpublished data). An example is the exclusion of potable reuse of treated wastewater as an option for water supply augmentation in most Australian states (Fuenfschilling and Truffer, 2014). Putting boundaries around options distorts and confines the search for alternative solutions prior to any rigorous analysis.
3- Uncertainties in context conditions are often dealt with through a narrow predictive approach (Bankes et al., 2001; Walker et al., 2013). The predictions are either based on extrapolation of past trends, or a handful of future scenarios, i.e. future representations of the system (Börjeson et al., 2006). However, context conditions influencing long-term plans are highly dynamic and complex, and therefore, how they will unfold in the future is deeply uncertain (Lempert et al., 2003). In this situation, relying on past trends or a small number of hypothesized future possibilities can mislead planning, and increase the vulnerability of produced plans to unexplored futures.

These key problems shape the scope of the planning intervention proposed in the next section.

3. The proposed planning intervention

Following from the three key problems explained above, the planning intervention we propose in this study consists of three main