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From the 'old' to the 'new' policy design: design thinking beyond markets and collaborative governance

Michael Howlett

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Abstract Policy design as a field of inquiry in policy studies has had a chequered history. After a promising beginning in the 1970s and 1980s, the field languished in the 1990s and 2000s as work in the policy sciences focused on the impact on policy outcomes of meta-changes in society and the international environment. Both globalization and governance studies of the period ignored traditional design concerns in arguing that changes at this level predetermined policy specifications and promoted the use of market and collaborative governance (network) instruments. However, more recent work re-asserting the role of governments both at the international and domestic levels has revitalized design studies. This special issue focuses on recent efforts in the policy sciences to reinvent, or more properly, 're-discover' the policy design orientation in light of these developments. Articles in the issue address leading edge issues such as the nature of design thinking and expertise in a policy context, the temporal aspects of policy designs, the role of experimental designs, the question of policy mixes, the issue of design flexibility and resilience and the criteria for assessing superior designs. Evidence and case studies deal with design contexts and processes in Canada, China, Singapore, the UK, EU, Australia and elsewhere. Such detailed case studies are necessary for policy design studies to advance beyond some of the strictures placed in their way by the reification of, and over-emphasis upon, only a few of the many possible kinds of policy designs identified by the 1990s and early 2000s literature.

Keywords Public policy · Policy design · Policy formulation · Policy advice · Policy instruments · Policy tools

M. Howlett (✉)
Department of Political Science, Simon Fraser University, Burnaby, BC, Canada
e-mail: Howlett@sfu.ca

M. Howlett
Lee Kuan Yew School of Public Policy, National University of Singapore, Singapore, Singapore

Introduction: the idea of policy design

Public policies are the result of efforts made by governments to alter aspects of their own or social behavior in order to carry out some end or purpose and are comprised of (typically complex) arrangements of policy goals and means. These efforts can be more or less systematically designed, and the ends and purposes attempted to be attained through such designs are multifarious and wide-ranging.

Some policies emerge from processes such as log-rolling, patronage or bargaining and cannot be thought of as having been 'designed' in any meaningful sense of the term. However, the exact processes through which policies emerge and are articulated vary greatly by jurisdiction and sector and reflect the differences, and nuances, that exist between and within different forms of government—from military regimes to liberal—as well as the particular configuration of issues, actors and problems faced by various governments, of whatever type (Ingraham 1987; Howlett et al. 2009b). In some circumstances, policy decisions will be more highly contingent and 'irrational' than others: driven by purely situational logics and opportunism rather than careful deliberation and assessment (Cohen 1979; Dryzek 1983; Kingdon 1984; Eijlander 2005; Franchino and Hoyland 2009). However, in others, the latter will be the case and determining exactly what constitutes a design, what makes one successful, and what makes one design better than another are important questions which have animated studies with a design orientation in the policy sciences over the past half century.

Although the frequency of appearance of poorly fashioned policies in some contexts has led some critics and observers of policy-making efforts to suggest that policies cannot be 'designed' in the sense that a house or a piece of furniture can be (Dryzek and Ripley 1988; deLeon 1988), many other scholars disagree with this assessment. They argue that while not all policies are 'designed' in this sense, many are, and the nature and operation of design processes in this field, as in others such as urban planning and product creation, can be systematically studied and improved (Schön 1988, 1992).

In their many works on the subject in the late 1980s and early 1990s, for example, Linder and Peters (1988) argued that the actual process of public policy decision-making followed in practice could, in an analytical sense, be divorced from the abstract concept of policy design, in the same way that an abstract architectural concept can be divorced from its final engineering manifestation in theory if not in practice. In this view, policy design involves the effort to more or less systematically develop efficient and effective policies through the application of knowledge about policy means gained from experience, and reason, to the development and adoption of possible courses of action that are likely to succeed in attaining their desired goals or aims (Bobrow and Dryzek 1987; Bobrow 2006; Montpetit 2003). Such a distinction, they argued, allowed policy designs to be separated conceptually from the process of policy designing, creating space for the development within policy studies of a design orientation.

The design orientation in policy studies engendered a large literature in the 1980s and 1990s under the guidance of prominent figures in the US, Canadian, European and Australian policy studies community such as Lester Salamon, Patricia Ingraham, Malcolm Goggin, John Dryzek, Hans Bressers, Helen Ingram and Anne Schneider, G.B. Doern, Stephen Linder and B. Guy Peters, Renate Mayntz, Christopher Hood, Eugene Bardach, Evert Vedung, Peter May, Frans van Nispen and Michael Trebilock, among others.

However, after the early 1990s, the number of works within this orientation declined (Howlett and Lejano 2013). Although some writings continued to flourish in specific fields such as economics, energy and environmental studies (see for example, Boonekamp 2006;

Del Río 2010a, b), in the fields of public administration and public policy the 'design' orientation was largely replaced by a new emphasis on the study of decentralized governance arrangements, featuring an increased reliance and emphasis on only a limited number of designs, specifically those centered on market and network-based tools and instruments. These studies embodied their own notions about what sorts of institutional arrangements and processes constituted desirable and attainable designs and usually treated the emergence of such designs as inevitable, quasi-automatic processes, therefore requiring only *ex-post* analysis of the conditions which led to their emergence (Rhodes 1996; Kooiman 1993, 2000).

In this literature, new arrangements of market and network-based policy tools and instruments found in many sectors and countries during this period were typically seen as the outcome of decentralized, democratized processes involving the actions and interests of multiple public and private stakeholders active in complex and internationalized modern societies and economies and thought to be less 'designed' than 'emergent.'[1] As a result of these processes, for example, many commentators suggested that implementation practices had become more participatory and consultative over the last several decades (Alshuwaikhat and Nkwenti 2002; Arellano-Gault and Vera-Cortes 2005), replacing previous top-down formulation and implementation processes dominated by government analysts with more 'bottom-up' ones; that is, ones less amenable to design by state elites.[2]

These arguments and orientations had a serious impact on policy design research. If accurate, such changes in governance modes entailed both alterations in the abilities of various state and non-state actors to prevail in policy formulation disputes and decisions, as well as shifts in the choices and types of policy instruments used to implement public policy; activities which are at the respective cores of policy designs and designing (March and Olsen 1996; Offe 2006; Weaver and Rockman 1993; Scharpf 1991). Although 'networkization' could just have been seen as a new contextual design challenge (Agranoff and McGuire 1999), for many authors the alleged weakening of the centrality of the state as an author of policy was accompanied by a waning interest in the traditional authorship (or design) of policy by state elites in government.

More recently, however, the government-to-governance thinking behind these models has been challenged by studies which revealed the continuing high profile and important role played by governments both in contexts of social 'steering' and in more traditional areas of policy activities (Tollefson et al. 2012; Howlett et al. 2009a, b). Despite

[1] A movement towards the development of more networked societies, it was argued, reduced government capacity for independent action and limited design choices and alternatives (Dobuzinskis 1987; Lehmbruch 1991). As networkization increased, it was argued, many countries placed an increasing emphasis on public information and other similar types of tools, replacing or supplementing other forms of government activity such as regulation or public enterprises (Hawkins and Thomas 1989; Woodside 1986; Howlett and Ramesh 1993; Hood 1991; Doern and Wilks 1998; Weiss and Tschirhart 1994).

[2] It has been argued in many circles that in response to the increased complexity of society and the international environment, governments in many countries (particularly in Western Europe) turned away from the use of a relatively limited number of traditional, often command-and-control oriented, policy tools such as public enterprises, regulatory agencies, subsidies and exhortation, and began to increasingly use their organizational resources to support a different set of substantive and procedural tools (Majone 1997; Peters 1998; Klijn and Teisman 1991). And some policy designs invoking new tools such as government reorganizations, reviews and inquiries, government–NGO partnerships and stakeholder consultations which act to guide or steer policy processes in the direction government wishes through the manipulation of policy actors and their interrelationships are indeed more frequent and common (Bingham et al. 2005). However other trends exist in other sectors featuring other kinds of governance activities and preferences and continue to challenge public administrators, managers and scholars (Peters and Pierre 1998; Peters 1996; Knill 1999).

globalization and de-regulation and privatization efforts over the past several decades, governments (or more generally, public institutions) still have the prime responsibility for governing most aspects of social life, from education to healthcare, in most countries (Capano 2011).

Governments can and do choose to steer from a distance (Kickert et al. 1997); however, in many policy areas—from defence to infrastructure investment in roads and highways—government has the task of defining what governance is to be (Capano 2011). In most sectors not bound by international agreements or internal arrangements to the contrary, a government may *choose* to allow a higher degree of freedom to other policy actors with regard to the goals to be pursued and the means to be employed. Governments thus continue to design systemic modes of governance and establish the nature of the policy instruments adopted for the pursuit of these goals (Meuleman 2009a, b).

The design orientation hence remains a key one in policy studies, and research in this vein is necessary to advance our understanding of both designs themselves and the processes which lead to their adoption, implementation, evaluation and reform. The articles in this special issue argue that reinventing, or more properly, 're-discovering' or 're-orienting' policy design, helps policy studies to advance beyond some of the strictures placed in its way by the overemphasis of the last two decades by the governance and globalization literatures on only one or two types of many possible designs. Articles in the issue provide information from case studies dealing with design contexts and processes in Canada, China, Singapore, the UK, EU, Australia and elsewhere. They show that the design orientation is still very much alive and well as both a subject of policy practice and an object of scholarship.

This introductory essay sets out the elements of, and differences between, the old and the 'new' fields of policy design. It reviews what is known and what remains to be understood in this field. Subsequent articles in the issue then deal with leading edge questions such as the nature of design thinking and creativity in crafting policy alternatives, the temporal aspects of policy designs and their emergence and dynamics, the role of experiments as a method of testing designs, the question of policy mixes and complex multi-instrument, multi-goal designs, the issue of design flexibility and resilience, and the criteria for assessing superior and inferior designs.

The recent intellectual history of policy design studies: from the old to the new policy design orientation

The roots of contemporary policy design studies lie in the very origins of the policy sciences. Conceived of as both a process and outcome, policy design is very much situated in the 'contextual' orientation, which is characteristic of modern policy science (Torgerson 1985, 1990; May 2003). That is, it is seen as an activity or set of activities, which takes place within a specific historical and institutional context that largely determines its content (Clemens and Cook 1999). Which alternatives can be imagined, and prove feasible or acceptable at any given point in time change as conditions evolve and different sets of actors and ideas alter their calculations of both the consequences and appropriateness of particular policy options or alternative designs (March and Olsen 2004; Goldmann 2005).

In his early pathbreaking works on public policy-making, for example, Harold Lasswell began integrating aspects of both policy formulation and implementation, pointing to the importance of understanding the range of policy instruments available to policy-makers in understanding why they took the actions they did (Lasswell 1954). This orientation primed

other policy scholars to begin studying the multiple means by which governments could effect policy and the contexts in which they could be used (Torgerson 1985, 1990).

By the 1970s, there arose a more explicit focus on the evaluation of the impact of specific kinds of implementation-related tools, primarily economic ones like subsidies and taxes, in order to aid policy-makers in considerations of their use and effectiveness (Sterner 2003; Woodside 1986; Mayntz 1983). This work, which separated formulation from implementation and concept from context, marked the origin of modern design studies. Bardach (1980) and Salamon (1981), for example, both argued in the early 1980s that policy studies had 'gone wrong' right at the start by defining policy in terms of 'problems,' 'issues,' 'areas' or 'fields' rather than in terms of 'instruments,' which would allow design considerations in policy formulation to emerge at the forefront of policy studies and policy-making. As Salamon put it in 1981:

> The major shortcoming of current implementation research is that it focuses on the wrong unit of analysis, and the most important theoretical breakthrough would be to identify a more fruitful unit on which to focus analysis and research. In particular, rather than focusing on individual programs, as is now done, or even collections of programs grouped according to major "purpose," as is frequently proposed, the suggestion here is that we should concentrate instead on the generic tools of government action, on the "techniques" of social intervention. (p. 256)

Following this new design orientation, scholars in many countries interested in the links between implementation failures and policy success (Mayntz 1979; O'Toole 2000; Goggin et al. 1990) turned their gaze toward the subjects of how implementation alternatives were crafted and formulated. Studies in economics and law which focused on the 'ex-post' evaluation of the impact of policy outputs (Stokey and Zeckhauser 1978; Bobrow and Dryzek 1987) joined this effort and formed a growing interdisciplinary literature focused on policy outputs and governmental processes. Legal studies similarly spoke to how laws and regulations mediated the delivery of goods and services, and how formal processes of legislation and rulemaking led to policy (Keyes 1996). On another front, management and administrative studies also provided insights into the links between administrative systems and implementation modes, among others (Lowi 1966, 1972, 1985; Peters and Pierre 1998).

This led to the birth of a specific self-referential literature on policy design in the mid-1980s. Scholarly attention at this time moved away from practice and turned to theory building, focusing on topics such as the need to more precisely categorize types of policy instruments in order to better analyze the reasons for, and patterns of, their use (Salamon 1981; Tupper and Doern 1981; Hood 1986; Bressers and Honigh 1986; Bressers and Klok 1988; Trebilcock and Hartle 1982). More careful examination of implementation instruments and instrument choices, it was argued, would improve understandings of current and possible designs, improve design theory and lead to both better policy designs and policy outcomes (Woodside 1986; Linder and Peters 1984; Mayntz 1983). In their 1990 study of policy targets and their behavior, for example, Schneider and Ingram employed both constructionist and behavioral lenses in understanding the factors leading to both the articulation and adoption of specific kinds of policy designs (Schneider and Ingram 1990a, b). Subsequent work by these authors and others on the nature of target group behavior advanced discussion and understanding of the subject well beyond its early formulation in Lasswell and Lowi's pioneering works (Ingram and Schneider 1990; Schneider and Ingram 1990a, b, 1994, 1997).

During this period, researchers in Europe and North America also shed a great deal of light on the nature of the policy tools involved in the construction and establishment of administrative agencies and enterprises as well as upon the structure and use of traditional financial inducements and tax expenditures, and upon the 'command-and-control' regulatory measures adopted by administrative agencies (Landry et al. 1998; Tupper and Doern 1981; Hood 1986; Vedung et al. 1997; Howlett 1991). This new emphasis upon the systematic study of policy instruments lent itself easily to emerging areas of policy activity such as pollution prevention and professional regulation (Hippes 1988; Trebilcock and Prichard 1983), and design theory explicitly informed formulation practices and policy adoptions in these fields. Researchers also began studying shifts in patterns of instrument choice over time, such as the dynamics associated with the waves of privatization and deregulation which characterized the period (Howlett and Ramesh 1993).

Soon, the field of instrument studies had advanced enough that Salamon (1989) could argue that the design had indeed become a major approach to policy studies in its own right, bringing a unique perspective to the policy sciences with its focus on policy tools. He framed two important research questions which all subsequent analyses of the tools of government action in a design context addressed: 'What consequences does the choice of tool of government action have for the effectiveness and operation of a government program?' and 'What factors influence the choice of program tools?' (p. 265).

These questions were taken up by the policy design literature (Salamon 1981; Timmermans et al. 1998; Hood 2007), and by the late 1990s, work on instrument selection had progressed to the point of beginning to systematically assess the potential for developing optimal policy mixes, moving away from the single instrument studies and designs characteristic of earlier works (Grabosky 1994; Gunningham et al. 1998; Howlett 2004). Studies such as Gunningham et al. (1998) work on 'smart regulation,' for example, influenced the development of efforts to identify complementarities and conflicts within instrument mixes or 'portfolios' in more complex and sophisticated multi-instrument policy designs (Buckman and Diesendorf 2010; Roch et al. 2010; Barnett and Shore 2009; Blonz et al. 2008; Del Río et al. 2010).

This leading edge work, however, lost its way in the late 1990s and early 2000s as studies grappled with questions related to the impact of globalization and the enhanced 'networkization' of society on governance arrangements (Howlett and Lejano 2013). As this focus has shifted in recent years, however, a (re)emergence of 'new' design thinking has occurred; that is, a re-discovery of the 'old' design orientation and its application to current issues in government. In what follows below, the key questions currently under investigation in design studies, and represented by the articles in this special issue, are set out, along with their analogues or counterparts in the 'old' design orientation.

Key questions in the research agenda of the new policy design studies

What is designed? From single tools analysis to that of policy mixes

What policy designers create are policy alternatives. That is, alternative options for how government action can be brought to bear on an identified problem. These alternatives are composed of different sets or combinations of policy elements including policy goals, objectives and aims, as well as policy means, tools and their calibrations or 'settings' (Howlett and Cashore 2009). But, as Linder and Peters (1988) noted, while all of these policy elements are present in a well-thought out design, policy instruments are especially

significant in this process as they are the actual techniques through which policy goal attainment occurs.

These tools thus have a special place in the consideration and study of policy design because, taken together, they comprise the contents of the toolbox from which governments must choose in building or creating public policies.[3] Policy design elevates the analysis and practice of policy instrument choice—specifically tools for policy implementation—to a central focus of study, making their understanding and analysis a key design concern (Salamon 1981; and Peters 1990a, b, c, d). Instrument choice, from this perspective, in a sense, is public policy-making, and understanding and analyzing potential instrument choices involved in implementation activity and their effects is the central concern of policy design studies.

As Linder and Peters (1984) noted, it is critical for policy scientists and policy designers alike to understand this basic vocabulary of design:

> Whether the problem is an architectural, mechanical or administrative one, the logic of design is fundamentally similar. The idea is to fashion an instrument that will work in a desired manner. In the context of policy problems, design involves both a systematic process for generating basic strategies and a framework for comparing them. Examining problems from a design perspective offers a more productive way of organizing our thinking and analytical efforts. (253)

In a design orientation, policy designs can be thought of as 'ideal types,' that is, as ideal configurations of sets of policy elements which can reasonably be expected, if adapted to meet the parameters of a specific contextual setting, to deliver a specific outcome. Whether or not all of the aspects of such contextual configurations are actually present in practice is thus more or less incidental to a design. As Linder and Peters (1988) argued:

> While somewhat at odds with conventional (mis)usage, our treatment focuses attention on the conceptual underpinnings of policy rather than its content, on the antecedent intellectual scheme rather than the manifest arrangement of elements. As a result, the study of design is properly 'meta-oriented' and, therefore, one step removed from the study of policy and policy-making (Linder and Peters 1988: 744)

'Constructing an inventory of potential public capabilities and resources that might be pertinent in any problem-solving situation' (Anderson 1975: 122) is thus a key activity in policy design studies and one which has received a great deal of attention from design scholars over the past several decades.

[3] It is important to note, however, that policy instruments exist at all stages of the policy process—with specific tools such as stakeholder consultations and government reviews intricately linked to agenda-setting activities, ones like legislative rules and norms linked to decision-making behaviour and outcomes, and others linked to policy evaluation, such as the use of ex-post, or after-the-fact, cost–benefit analyses Although policy instruments appear in all stages of the policy process, those affecting the agenda-setting, decision-making and evaluation stages of the policy process, while very significant and important in public management (Wu et al. 2010), are less so with respect to policy design activities. This is because policy design largely takes place at the formulation stage of the policy cycle and deals with plans for the implementation stage. Thus the key sets of policy instruments of concern to policy designers are those linked to policy implementation, in the first instance, and to policy formulation, in the second. In the first category we would find examples of many well-known governing tools such as public enterprises, financial subsidies and regulatory agencies which are expected to alter or affect the delivery of goods and services to the public and government (Salamon 2002a, b), while in the second we would find instruments such as regulatory impact or environmental impact appraisals which are designed to alter and affect some aspect of the nature of policy deliberations and the consideration and assessment of alternatives (Turnpenny et al. 2009).

In pursuing this aim, the old design studies tended to focus on single instruments. More recent studies, following Gunningham et al's (1998) lead, are more concerned with the issue of 'policy' portfolios (Doremus 2003) or the bundles of tools arranged in a policy 'mix,' which characterize policy arrangements in practice (Howlett 2011; Yi and Feiock 2012; Peters 2005; Jordan et al. 2011, 2012). Questions about how best to design policy mixes raise many significant issues for the new policy design studies. These are related to topics such as differences in the complexity of mixes, the manner in which multiple tool choices are made and how tool bundles evolve over time.

There are a series of questions animating current research, for example, involving how exactly tools fit together or should be fit together in a policy bundle (Weimer 1992, 1993). Most observers are aware that some combinations of tools may be inherently contradictory or evoke contradictory responses from policy targets (Grabosky 1995; Gunningham et al. 1998), while other combinations are more virtuous in providing a reinforcing or supplementing arrangement (Hou and Brewer 2010; Del Río 2010). And some arrangements may also be unnecessarily duplicative, while in others some redundancy may be advantageous (Braathen 2005; Braathen 2007). Determining which combinations fall into which category is a key area of research as is determining whether multiple policy tools which have evolved piecemeal over a long period of time can achieve complex and ambitious policy goals in as efficient and effective a way as more consciously designed packages or whether such 'unintentional' portfolios laden with policy legacies from past eras are more likely to suffer from disabling internal contradictions (Howlett and Rayner 2007). The issue about how to design complex new packages which maximize synergies and minimize conflicts in their formulation or packaging (Considine 2012; Kiss et al. 2012) or how to 'patch' existing packages to improve their performance (Howlett and Rayner 2013) are key subjects of much interest in the new design orientation and are questions addressed by articles in this issue by del Rio, Wu and Ramesh and others.

Who are the designers? From policy planners to policy advisory systems

'Policy design' is both a verb and a noun, and design studies have always been interested in both the process of designing as well as the design itself. As Charles Anderson (1971) noted,

> 'policy design (verb) is virtually synonymous with 'statecraft' or the practice of government as 'the art of the possible'. It is always a matter of making choices from the possibilities offered by a given historical situation and cultural context. From this vantage point, the institutions and procedures of the state to shape the course of economy and society become the equipment provided by a society to its leaders for the solution of public problems' (121).

Policy designers use these tools of the trade of statecraft to put together packages or portfolios of instruments and, as Anderson (1971) also noted, 'the skillful policy maker, then, is [one] who can find appropriate possibilities in the institutional equipment of… society' to best obtain their goals. In order for 'design' to meaningfully occur at all, policy designers need a great deal of knowledge and insight into the workings of their polity and specific policy sectors, raising to the forefront questions about the capacity of the policy-makers involved in the policy formulation process (Walker et al. 2001). But who exactly are these designers?

Not everyone's ideas about policy options and instrument choices are as influential as others when it comes to policy appraisal and design (Lindvall 2009). Different kinds of

actors involved in policy-making hold different kinds of ideas and have different levels of influence or impact on policy formulation. Traditional design studies focused on the role played by officials and policy analysts in government in formulating and crafting alternatives (Meltsner 1976). But while politicians and senior administrators situated in authoritative decision-making positions ultimately 'make' public policy, they do so most often by following the advice provided to them by those they trust or rely upon to provide expert opinion on the merits and demerits of proposed courses of action (MacRae and Whittington 1997; Heinrichs 2005). This typically involves both official and unofficial sources of advice and as Anderson (1996) noted, in many countries, for example, 'a healthy policy-research community outside government can play a vital role in enriching public understanding and debate of policy issues, and it serves as a natural complement to policy capacity within government' (486).

The new design orientation takes into account recent studies of advice systems in countries such as New Zealand, Israel, Canada and Australia that have developed this idea; that government decision- makers sit at the center of a complex web of policy advisors or a 'policy advisory system' (Halligan 1995), which includes both 'traditional' advisors in government as well as non-governmental actors in NGOs, think tanks and other similar organizations, and less formal or professional forms of advice from colleagues, friends and relatives and members of the public and political parties, among others (Maley 2000; Peled 2002; Dobuzinskis et al. 2007; Eichbaum and Shaw 2007). The manner in which the policy advice system is structured in a particular sector, for example, says a great deal about the nature of influential actors involved in design decisions.

The new policy design studies seek to understand the nature of policy formulation and design activities in different analytical contexts, and this involves discerning how the policy advice system is structured and operated in specific sectors of policy activity under examination (Brint 1990; Lindvall 2009; Page 2010). The difficulties involved in promoting 'integrated' policy designs congruent with existing design spaces, for example, multiplies the problems designers face in making choices and selection of instruments (Meijers and Stead 2004; Stead et al. 2004; Briassoulis 2005a, b)[4] and is a subject of much interest in the new policy design orientation. Developing and adopting such designs assumes a great deal of administrative and analytical capacity on the part of state actors that may or may not exist in different sectors and countries (Howlett 2009a, b; Howlett and Newman 2010).

In such contexts, the new design literature focuses on issues such as policy experiments or pilots that can play a key role in testing out policy ideas and designs, (Hoffmann et al. 2011) or designs with built in temporal elements promoting either flexibility or resilience in the face of changing circumstances (Walker et al. 2010; Haasnoot et al. 2013). Articles by van der Heijden and Mei and Liu in this issue examine aspects of these issues in the context of Australian and Chinese experiences.

[4] In such studies attention has also been focused on the design criteria for policy success and studies have argued for the importance of designers aiming to achieve criteria such as 'coherence, consistency and congruence' or 'integration' in any new design (Howlett and Rayner 2007; Kern and Howlett 2009; Meijers et al. 2004; Briassoulis 2005a, b; Meijers and Stead 2004; Stead et al. 2004). That is, designers should ensure that any new design elements are coherent in the sense that they are logically related to overall policy aims and objectives; that they be consistent in that they work together to support a policy goal; and that both policy goals and means should be congruent, rather than working at cross-purposes.

Why do they design what they do? From technical knowledge to political ideas

The old design studies noted that a key aspect of policy design, as both a subject and a process, lies in the kinds of ideas held by key actors in policy advice systems about the feasibility and optimality of alternative possible arrangements of policy tools (Huitt 1968; Majone 1975). Ideas held by central policy actors were seen to play a key role in guiding their efforts to construct policy options and assess design alternatives (Ingraham 1987; George 1969; Mayntz 1983; Jacobsen 1995; Chadwick 2000; Gormley 2007).

The idea of policy design, for example, was inextricably linked with the idea of improving government actions through the conscious consideration at the stage of policy formulation of the likely outcomes of policy implementation activities. For the old design studies this was seen as a concern mainly for governmental actors who might be tasked with carrying out impossible duties and meeting unrealistic expectations. Regardless of regime and issue type, and regardless of the specific weight given by governments to different substantive and procedural aims, all governments were seen to wish to have their goals effectively achieved and usually to wish to do so in an efficient way, that is, with a minimum of effort and cost (Weimer 1993). This desire to husband resources involved in goal attainment was seen to involve governments of all types and persuasions in processes of more or less conscious and rational efforts at design and was a central subject of interest in traditional design studies (Dryzek 1983). Thus, all governments, of whatever stripe, were assumed to be interested in applying knowledge and experience about policy issues in such a way as to ensure the more or less efficient and effective realization of their aims (deLeon 1999; Potoski 2002).

Different types of ideas, however, have different effects on different elements of policy-making and hence upon instrument choices and policy designs. Policy goals, for example, consist of a range of ideas from general philosophical and ethical principles to specific causal logics and sociological constructs (Campbell 1998; Goldstein and Keohane 1993). And the same is true of policy means, which can embody some knowledge of past practices and concepts of successful and unsuccessful policy implementation, but also extend beyond this to ideological and other ideational structures informing 'practical' choices for goal attainment.

In the new policy design orientation understanding the origins and implications of the ideas held by decision-makers and advisors is a major subject of analysis. And investigating how certain types of ideas become a central focus of designers is at the forefront of new design research (Considine 2012). Ideas such as symbolic frames and public sentiments are often seen to affect the perception of the legitimacy or 'correctness' or 'appropriateness' of certain courses of action, while others represent a 'set of cognitive background assumptions that constrain action by limiting the range of alternatives that policy-making elites are likely to perceive as useful and worth considering' (Campbell 1998, 2002: 385; also Surel 2000). Thus, symbolic frames and public sentiments are often argued to largely influence policy goals (Stimson 1991; Suzuki 1992; Durr 1993; Stimson et al. 1995), while more cognitive aspects such as policy paradigms and programme ideas, on the other hand, more heavily influence choices of policy means (Stone 1989; Hall 1993).

In this view, in order to be able to make an appropriate decision about when to introduce new instruments and when to renew old ones, policy-makers must be familiar not only with the technical aspects of the menu of instruments before them, but also with the nature of the governance and policy contexts in which they are working and thus require training and experience in both these aspects of the policy design process (Braathen 2005, 2007; Grant

2010; Skodvin et al. 2010). Whether or not or to what extent they have the skills needed for design, and what exactly those skills are, are key questions for contemporary design studies. Much more research remains to be done in this area, but the findings and methods used by Considine, Alexander and Lewis in this issue represent the state of the art of current empirical investigations into these issues.

How do they design? From technical to contextual considerations

As Linder and Peters (1991) argued, policy design can be thought of as a spatial activity. That is, as:

> a systematic activity composed of a series of choices… design solutions, then, will correspond to a set of possible locations in a design space… this construction emphasizes not only the potential for generating new mixtures of conventional solutions, but also the importance of giving careful attention to tradeoffs among design criteria when considering instrument choices.

Designing successful policies requires thinking about policy-making in such a way as to fully take into account the dual purposes—substantive and procedural—which polices can serve and the nature of the multiple levels of policy elements or components which make up a typical policy: that is, to understand the '*design space*' (Hillier et al. 1972; Hillier and Leaman 1974; Gero 1990).

Establishing the nature of the policy design space is therefore a crucial activity for policy designers and another important subject of current research. Designers must avoid simply advocating 'stock' solutions unless this is called for by the limited nature of the space available for new designs (May 1981). Rather they should 'consider the range of feasible' options possible in a given circumstance and package these into sets of 'competing strategies' to achieve policy goals (May 1981: 236, 238). As David Weimer (1992) has argued, 'Instruments, alone or in combination, must be crafted to fit particular substantive, organizational and political contexts' (373).

Much of the old design literature focused attention on 'technical' analysis. That is, upon efforts to assess the functional capacities of specific tools. The new design literature keeps this focus but adds to it the need to also assess other factors, especially political ones. While the old design literature recognized that the process of design and instrument selection is made simpler once the fact that some of the elements of public policies remain more amenable to careful thought and deliberate government manipulation than others is recognized (Schön 1992; Gero and Kannengiesser 2008; Kannengiesser and Gero 2012 and Gero 1990), the new design field is concerned with understanding exactly how instrument choices are constrained by higher-order sets of variables (Baliga and Maskin 2003; Maskin 2008). Araral examines both these issues in his contribution to this issue, focusing on the situation in developing countries and utilizing the lenses of transaction cost and mechanism design theory.

How do designs evolve? From replacement to layering

Policy formulation typically occurs within the confines of an existing governance mode and policy logic which simplifies the task of policy design by restricting the number of alternatives which are considered feasible in any given planning situation, reducing to manageable proportions the otherwise almost infinite range of possible specific micro-level instrument choices (Meuleman 2009a, b). However, the new design orientation notes how

this requires designers to be capable of making a match between text and context (Lejano and Shankar 2013) and diagnosing accurately whatever contextual constraints and opportunities may exist within a design space (Considine 2012).

As Christensen et al. (2002) have argued, the leeway or degree of maneuverability policy designers have in developing new designs is influenced not only by existing contextual factors and polity features but also by historical-institutional ones. As they argue, 'these factors place constraints on and create opportunities for purposeful choice, deliberate instrumental actions and intentional efforts taken by political and administrative leaders to launch administrative reforms through administrative design' (2002: 158).

The old design thinking focused mainly on the situation faced by designers of a new policy area in which they had a blank slate against which to plan. However, in practice such blank slates are relatively rare, and the new design orientation focuses on the much more common situation where designers are faced with an already existing policy mix and designs must take into account significant policy legacies (Thelen 2003; Thelen 2004). That is, many existing policy mixes or portfolios were not 'designed' in the classical sense of conscious, intentional and deliberate planning according to well established or often-used principles, but rather emerged from a gradual historical process in which a policy mix is slowly built up over time through incremental changes or successive reformulation. In such instances of policy 'layering' (van der Heijden 2011), later changes are not necessarily congruent with the original aims and intents of early policy elements.

The work of historical institutionalists, such as Thelen (2003; Thelen 2004) others, has suggested that mixes emerge from several different change processes—layering, drift, replacement, conversion and exhaustion—which helps explain why many existing policy mixes suffer from inconsistent, incoherent or incongruent elements. These arrangements commonly have emerged or evolved over relatively long periods of time through previous design decisions, and even if they had a clear logic and plan at the outset they may no longer do so (Bode 2006). This is because they have evolved through temporal processes in which instruments and goals are simply added to existing ones without abandoning the previous ones, or change their meaning and intent over time; both processes which have been linked to incoherence among policy ends and inconsistency with respect to policy means (Howlett and Rayner 1995; Orren and Skowronek 1998; Rayner et al. 2001; Torenvlied and Akkerman 2004; Hacker 2005).

In these contexts, designers are faced with the additional challenge of redesign or the replacement—'patching'—of existing regime elements in the context of a design space which has been altered by the continued existence of the remnants of earlier policy efforts. In such situations designers often attempt to patch or restructure existing policy elements rather than propose alternatives *de novo* although the situation may require the latter if any degree of coherence and consistency is to be achieved (Gunningham and Sinclair 1999; Thelen 2003; Thelen 2004; Eliadis et al. 2005; Howlett and Rayner 2013).

It is not at all certain whether multiple policy tool portfolios which have evolved over a long period time through processes of incremental layering or policy 'patching' can achieve complex and ambitious policy goals in as efficient and effective a way as those designs which are consciously created as interlocking packages of measures. The new policy design orientation deals with many questions related to the resiliency of policy arrangements and questions not only as to whether such arrangements are inherently inefficient but whether they should be designed to be more or less difficult to change and

why. The article by Jordan in this issue examines these questions and suggests areas for future research dealing with these aspects of the temporality of policy designs.

Conclusion: the renewal of policy design studies and the 'new policy design' orientation

In spite of its centrality and importance to public policy-making, policy design still remains in many respects a 'missing link' in policy studies (Hargrove 1975; Alexander 1982). The design process is complex, often internally orchestrated between bureaucrats and target groups, and usually much less accessible to public scrutiny than many other kinds of policy deliberations, but this should not be allowed to stand in the way of its further elaboration and refinement (Kiviniemi 1986; Donovan 2001). Scholars need more empirical analysis in order to test their models and provide better advice to governments about the process of tool selection and how to better match tools to the job at hand. Innovative policy design, especially, requires that the parameters of instrument choice be well understood, both in order to reduce the risk of policy failure and to enhance the probability of policy success (Linder and Peters 1990a, b, c, d; Schneider and Ingram 1997; Considine 2012).

Studies in fields such as political science, economics, law, and public administration have all underlined that translating policy aims and objectives into practice is not as simple as might first appear. The new design orientation begins with the observation that a variety of different actors interacting with each other over a relatively long period of time within the confines of a set of political and economic institutions and governing norms, each with different interests and resources, and all operating within a climate of uncertainty caused both by context and time-specific knowledge and information limitations, lies at the basis of design efforts (Bressers and O'Toole 1998, 2005).

Given the complexity of policy-making, it is not surprising that many noble efforts by governments and citizens to create a better and safer world have foundered on poor policy design. However, while not an optimal outcome, this has led to a greater appreciation of the difficulties encountered in designing public policies, and to the attempt to correct the gaps in our understanding, a process which, albeit slowly, has improved our knowledge of the principles and elements of the nature of policy instruments and their governance contexts (Skodvin et al. 2010).

The analysis presented here suggests that many traditional ways of thinking about policy instruments and policy design are useful but out of date. While the old design thinking began to grapple with the complexity of all the issues raised above, the globalization and 'governance turn' of the late 1990s impoverished design thinking and delayed progress in this area of research. Promotion of dichotomous sets of policy alternatives like 'market versus state' or 'hierarchical versus collaborative' governance characteristic of this era led to blunt thinking about instruments and their modalities which is not helpful for furthering understanding of policy design. The new policy design orientation argues that administrators and politicians involved in policy design need to expand the menu of government choice to include all types of substantive and procedural instruments and a wider range of options of each, and to understand the important context-based nature of instrument choices.

The real challenge for a new generation of design studies is to develop greater conceptual clarity and the methodological sophistication needed in order to sift through the complexity of new policy regimes, policy mixes, alternative instruments for governance,

and changing governance networks and link these to a deeper theory of design (Eliadis et al. 2005; Howlett and Rayner 2007; Howlett 2011; Hamelin 2010). Rather than reinventing the wheel, however, students of the design and implementation of calibrated policy measures have an invaluable resource in the templates developed by Ingraham, Bobrow, May, Doern, Hood, Linder and Peters, Schneider and Ingram, Salamon and others in the mid-1980s and early 1990s design literature. Coupled with more recent investigations in to both design processes and outcomes, the concepts and ideas pioneered in the old design literature can help inform the new.

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