

# Generating Alternatives for Policy Design

*Irene Pluchinotta, Alexis Tsoukiàs*

LAMSADE-CNRS, Université Paris Dauphine, PSL Research University  
irene.pluchinotta@dauphine.fr, alexis.tsoukias@dauphine.fr

*Alberto Colorni*

Design Department, Politecnico di Milano  
alberto.colorni@polimi.it

## 1 Extended Abstract

Public policy consists of political decisions [6] with an influence on the life of stakeholders [26], since it “decides who gets what, when and how” [21]. A policy is designed to achieve a societal goal or is oriented toward a desired state [4]. It is expressed by a set of actions taken by a government: to control a given system, to help solve problems within it, or to obtain benefits from it [24].

Policy making is a sequence of interactive stages structuring policy problems and making choices concerning them [7]. In Lasswell’s works ([22], [23]), the policy making or “policy cycle” is viewed as an ideal and continuous process, cycling through discrete activities conceptualizing policy outputs. The policy cycle can be divided into stages ([12], [22], [23], [9], [17], [2], [7]): issue identification, defining policy objectives, policy design, policy testing, policy refinement, policy implementation, policy monitoring and evaluation, policy readjustment and innovation. The endless sequence of the Lasswell’s tasks has been criticized over the years (e.g. [13], [17]) and inspired several new articulations of the policy cycle. Anderson et al., [3] and Jones et al. [18] contained slightly different interpretations of the names, number and order of the stages, but retained the basic staged-feedback-cycle structure [15].

Policy making is by nature complicated. It is a public decision making process, developing in time and space, merging actions and decisions [8]. It is characterized by: i) the use of public resources and commons [25]; ii) the involvement of multiple stakeholders in a “de facto” participative process, linking interacting decision makers and their own objectives, values [19], preferences [11] and public engagement [33]; iii) the long time horizon; iv) the requirements of accountability and the search of legitimacy; v) the need for deliberative acts of deciding (e.g.[31], [8]). These difficulties increase the risks of policies being rendered obsolete or seriously flawed sometimes even before their implementation.

Given this context, underestimating the importance of any of such stages may result in shortcomings, such as increased costs, lack of legitimacy, enduring conflicts, etc. Policy making is an intricate task for policy makers [32]. A policy problem has no simple single answer. If it did, it would be more than likely become a guideline, or rule implemented by the private sector [30]. Consequently, the role of tools supporting the public decision making is changing, in order to address the peculiarity of the policy issues. Changes in policy making generate the need to shape it by a formal framework [31]. Without a formal analysis, important policy choices are based on hunches and guesses sometimes with regrettable results [32].

Policy makers create policy alternatives [14], producing multiple consequences that are far-reaching yet difficult to anticipate, and differently perceived and valued by diverse stakeholders [32]. Policy alternatives sometimes fail to meet their purposes of solving public problems, and supporting democratic institutions [29].

In the policy cycle, policy design represents a crucial phase since it has a preponderant impact on the quality of the policy alternatives being considered. Lasswell [23] argued that policy design or “the invention of policy proposals” is as essential to the development of policy as it is an integral part of public decision making [34]. As a consequence, the issue of assisting formally the policy design has been identified as a critical element for supporting the policy cycle, since the quality of policy design has direct influence on the quality of the resulting policies. A policy cycle should include deliberate policy design and not blindly accept given options: a design of a good new alternative is likely to be worth a lot more than a thorough evaluation of some unsatisfactory old alternatives [10].

Formal policy design is a new theme of contemporary policy research. Policy design is typically done through the application of the available knowledge about policy means gained from experience and reason to the development and adoption of courses of action expected to attain desired goals or aims [16]. In spite of its potential as “an ubiquitous, necessary but difficult step in any policy cycle” [5], a formal policy design has never been developed into a self-standing scientific field, with systematic research and rigorous theoretical frameworks (for notable exceptions see [1], [5], REF EJOR). Theorization of policy design has lagged, the cumulative impact of empirical studies has not been great and understanding of the phenomena, despite many observations of its significance in policy studies, has not improved significantly over the past three decades [15].

Due to a greater awareness of the complex nature of public policies (e.g. [33], [8], [7]), we claim the need of formal *ad-hoc* approaches and innovative methodologies, to support public decision process, referred to as “wicked” problems [28]. In order to apply a Decision Aiding perspective to policy making, we need to use formal tools for the design of policy alternatives.

Nevertheless, policy design is a domain of research and practice influenced by informal approaches. More conceptual than formal frameworks have been explored and there are not examples in which formal Design expertise has been applied [20]. There are not significant research activities examining formal design processes in the policy making domain and yet little awareness of recent developments in practice. Within this context, a formalization of the policy design should aim at sharing a set of rules, activities and processes to support the reinforcement of Design capabilities at all levels of the policy cycle [27].

To bridge the gap, we take advantage of the combination between Decision Aiding methodologies and Design Theory, in order to support the formalization of the policy design process.

Design Theory, originally conceived for assisting practitioners in “designing”, has evolved in a more formal version aiming to assist and organize any process of creating “objects”, possibly immaterial and abstract such as a strategy or a policy. These “objects” do not exist within our knowledge, but can be designed out of it. In this regard, Design Theory offers formal approaches and methodologies, that can be used to for-

malize the design process of different objectives, enabling to formal generate sets of policy alternatives.

Based on these premises, the present work aims at seeking ways in which Design Theory and Decision Theory may assist the policy making process using formal analytic tools. More precisely, we are interested in formalizing the policy design in the domain of the Decision Analysis through the support of phases requiring Design activities.

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