Collaboration Engineering for Policy Making:  
A Theory of Good Policy in a Collaborative Action

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Abstract. This paper is concerned with the potential application of Collaboration Engineering (CE) to the field of Policy-making. We claim that CE will lead to improved policy-making processes (PMPs) i.e. the quality of the policies that are being decided on. Policy-making involves several actors with divergent interests, though a policy can only be realized on the basis of collaboration in which the actors involved contribute the resources needed. However, the analysis to realize a “good policy” in a collaborative PMP poses interesting challenges: what does it mean for a policy to be good in a collaborative effort? The aim of our research is therefore to develop a theory to improve the quality of policies and the collaborative processes.

1 Introduction

The current complexity in organizational decision-making has led to the evolution of approaches for handling them, among them being a policy (a guide that establishes parameters for making decisions; it provides guidelines to channel a manager’s thinking in a specific direction) [1].

The complexity in PMPs in organizations may be described as having to cope with large problems, (examples include: Information Technology (IT) procurement, security, and Information systems software testing etc): yet these may be affected by (i) unclear and contradictory targets set for the policy goals; (ii) policy actors being involved in one or more aspects of the process, with potentially different values/interests, perceptions of the situation, and policy preferences. Policy makers and others involved in the PMP need information to understand the dynamics of a particular problem and develop options for action. A policy is not made in a vacuum. It is affected by social and economic conditions, prevailing political values and the public mood at any given time, as well as the local cultural norms, among other variables.

In summary, policies are created in a collaborative fashion, though may be affected by complex processes; yet the results of the outcome may not be what the originators intended. The policy outcomes reflect who participates in the process, who does not, and the different resources that each policy actor brings to the decision-making arena. In short, the
purpose of our paper is to establish how to realize a “good policy” in a collaborative process and how this process can be improved by support of CE.

2 Policy and Policy-making process

Policy

There are several definitions of Policy that have been suggested. Rose [2] considered policy as “a long series of more-or-less related activities” and their consequences for those concerned rather than as a discrete decision. Rose’s definition embodies the useful notion that policy is a course or pattern of activity and not simply a decision to do something. Friedrich [3] regards policy as “a proposed course of action of a person, group, or government within a given environment providing obstacles and opportunities which the policy was proposed to utilize and overcome in an effort to reach a goal or realize an objective or a purpose.” To the notion of policy as a course of action, Friedrich adds the requirement that policy is directed toward the accomplishment of some purpose or goal. Policy, however, should designate what is actually done rather than what is proposed in the way of action on some matter. Anderson [4] defines policy as “a purposive course of action followed by an actor or set of actors in dealing with a problem or matter of concern”. Anderson’s concept of policy focuses attention on what is actually done as against what is proposed or intended. Taking into account the various perspectives of policy, we offer the following definition to help integrate them: a policy is a purposive course of action followed by a set of actor(s) to guide and determine present and future decisions, with an aim of realizing goals. Our definition emphasizes both the course of action and the behavior of the policy actors in this action, which is the major focus of this study.

Policy-making process (PMP) (Policy Cycle)

According to Sabatier [5], the process of policy-making (PMP) includes the manner in which problems get conceptualized and brought to the governing body for solution, these formulate alternatives and select policy solutions; and those solutions get implemented, evaluated, and revised. The PMP connotes temporarily, an unfolding of actions, events, and decisions that may culminate in an authoritative decision, which, at least temporarily, binds all within the jurisdiction of the governing body. In explaining the PMP, Sabatier’s emphasis is much more on the unfolding than it is on the authoritative decision. In examining the unfolding, attention is devoted to structure, to the context and constraints of the process, and to actual decisions and events that occur. PMP is also defined by Dunn [6], as “the administrative, organizational and political activities
and attitudes that shape the transformation of policy inputs into outputs and impact”. There is, it should be stressed, no one single process by which policy is made. Variations in the subject of policy will produce variations in the manner of policy-making. Foreign policy, taxation, and reform of local government are each characterized by distinguishable policy processes [4]. Sometimes the phrase *policy cycle* is used to make clear that the process is cyclical or continuous rather than a one-time set of actions. Instead of a top-down listing of each stage, it could be presented as a series of stages linked in a circle because no policy decision or solution is ever final. In the real world these stages can and do overlap or are sometimes skipped. Despite the complications, the policy process model captures important aspects of policy-making in a sequential pattern of action involving a number of functional categories of activity that can be analytically distinguished as seen in table 1.

3 IT as a potential enabler for PMPs

The application of IT has expanded from single users to supporting groups of people in organizations, involving such tasks as communication, coordination, sharing of data and shared decision making. These types of IT are often labelled as groupware, indicating IT that mediate electronic interpersonal collaboration [7]. Among the groupware technologies are Group Support Systems (GSS) described in [8], and how they can be used in several ways to provide policy group meeting needs. Herik’s approach was to prepare and execute policy meetings supported by a GSS; it takes into account the rational and social interaction characteristics of policy processes. In his approach, the strengths of GSS policy meetings are the increase in participation, idea generation, time efficiency, and goal directness, adding up to an opportunity actively to consult large, mixed, groups of people. Also [9], used GSS to support PMPs and observed that the process of idea generation, visual modelling, and the facility to provide anonymity appear to be highly successful in a multi party policy environment.

Several researchers in [11], describe views on computer modelling for policy support: (i) provide conditional, imprecise predictions; general answers to ‘if-then’ policy questions; (ii) communicate a world view or policy hypothesis; (iii) explore the viability of alternative future systems; (iv) discover unexpected problems from resource stress; eliminate physically impossible policy choices; (v) produce a management tool; select the best policy; (vi) construct a neutral synthesis of many different ideas; provide a common language to express the assumptions of various actors in a complex system; (vii) create an impressive-looking technical device for a
### Stage of the Process

<table>
<thead>
<tr>
<th>Agenda setting (Problem formation)</th>
<th>How problems are perceived and defined, command attention, and get onto the political agenda.</th>
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<tbody>
<tr>
<td>Policy formulation</td>
<td>The design and drafting of policy goals and strategies for achieving them. Often involves the use of policy analysis.</td>
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<tr>
<td>Policy legitimation (Adoption)</td>
<td>The mobilization of political support and formal enactment of policies. Includes justification of rationales for the policy action.</td>
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<tr>
<td>Policy implementation</td>
<td>Provision of institutional resources for putting the programs into effect within a bureaucracy.</td>
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<tr>
<td>Policy and program evaluation</td>
<td>Measurement and assessment of policy and program effects, including success or failure.</td>
</tr>
<tr>
<td>Policy change</td>
<td>Modification of policy goals and means in light of new information or shifting political environment.</td>
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**Table 1.** The Policy Process Model (Sources: [10, 4])

Conclusion already reached. Vennix noted that having clients participate in the modelling process ensures that the 'additional policy relevant information' stemming from the 'total' policy making situation is taken into account simultaneously with the results of the model study in arriving at policy decisions. The more the process of modelling has a participative character, the more effective it will be in supporting policy-making, i.e. participative computer modelling can improve the communication between policy makers as well as the quality of policy theories contained in the policy notes.

**Collaborative Challenges in PMPs**

The PMP is a collaborative design process that is affected by complexity in nature. Below are **collaborative challenges** that affect them in general, and particularly with the use of IT:

1. **Lack of consensus among policy actors** i.e. finding a common definition on a policy issue in a PMP by several actors is a complicated task due to personal beliefs, attitudes, biases, perceptions [8];

2. **Alignment of various perceptions on the policy issue** is difficult...where many actors are involved in a PMP yet with different values/interests to defend, and policy preferences, i.e. the more actors involved in a policy process the more complex the problem tends to be, since different actors not only tend to have different interests but also different perceptions of reality. The interests of actors and their perceptions of reality determine their objectives - that is, the outcomes they want to achieve [12, 5, 8];

3. **Contention of norms and values** e.g. power and status, which lie behind the various actions and perceptions of policy actors with respect to a complex issue, the way different actors interact, the expectations they have, and their attitude are all determined by the belief systems which are dominant in the organization or network they are part of [12, 5];

4. **Time spans of PMPs**, i.e. this process usually involves time spans
of a decade or more, as that is the minimum duration of most policy cycles, from emergence of a problem through sufficient experience with implementation to render a reasonably fair evaluation of program impact...organizing participation in policy procedure is hard and time consuming [5, 8];

5: Presence of technical disputes i.e. policy debates among actors in the course of action, typically involve very technical disputes over the severity of a problem, its causes, and the probable impacts of alternative policy solutions [5];

6: Most disputes involve deeply held values/interests, large amounts of money, and at some point authoritative coercion. Most actors face enormous temptations to present evidence selectively, to mis-present the position of their opponents, to coerce and discredit opponents, and generally to distort the situation to their advantage [5];

**with respect to technology support for PMPs:**

7: Group Support Systems (GSS) provide efficient ways of working, however, the quality of ideas produced, in the perception of the participating policy makers is reduced; Consensus and commitment cannot be increased through extensive use of electronic brainstorming sessions, electronic discussion and certainly not through electronic facilitated voting [8];

8: Opinions, ideas and views in policy processes need time to be discussed and to sink in; GSS are not suitable for in-depth policy debate on complex issues in policy-making. The output and efficiency driven approach of group supported sessions should be balanced with verbal and in-depth discussion [9];

Summarizing, despite the underlying challenges in PMPs, we acknowledge that these processes are inherently collaborative in nature, and that better support of these collaborative processes will lead to improved PMPs. In providing better support for them, we turn to CE, Guidelines on how to perform a collaborative PMP such as: what does a good policy look like? what makes a quality organizational policy design; and what methods would be useful for assessing quality outcomes? how does one moderate this process? which meeting tools would be useful? is the basis for the application of the CE approach.

**Potential of Collaboration Engineering (CE)**

*Collaboration* can be defined as the degree to which people in an organization can combine their mental efforts so as to achieve common goals" [13]. It is making a joint effort toward a goal. Yet, achieving effective team collaboration remains a challenge. Organizations struggle to make collaboration work. They often resort to implementing group ware
technologies, yet experiences show that technology alone seldom is the 
answer. What is needed is the conscious design of effective collaboration 
processes followed by the design and /or deployment of new collaboration 
technologies [14], i.e. Collaboration Engineering the design of re-usable 
collaboration processes and technologies meant to engender predictable 
and success among practitioners of recurring mission-critical collabora-
tive tasks [15]. CE focuses on recurring rather than ad hoc processes for 
two reasons. First, the benefits of designing an effective ad hoc process 
to the organization only once, while the benefits of designing a recurring 
process accrue each time the process is used. Second, participants in ad 
hoc processes have no need to learn the interventions they experience, 
because they are unlikely to repeat the process, whereas practitioners of 
recurring processes can learn to conduct its activities and even pass that 
skill on to others without learning to become general purpose facilitators. 
In order to improve collaboration processes dramatically, we would need 
to employ professional facilitators to design and conduct team interac-
tions [14], for they can move a group through a collaboration process far 
more effectively and efficiently than would be possible if the group were 
left to its own devices [16]. However, professional facilitators are scarce, 
expensive and difficult to retain [15]. CE, therefore, is an approach to ad-
address recurring collaboration processes that can be transferred to groups 
that can be self-sustaining in these processes using collaboration tech-
niques and technology [14]. Examples of recurring collaboration processes 
that have succeeded in various sectors such as in financial services, de-
defense and software development can be seen in [17, 18]. These and other 
efforts in the field have demonstrated the potential of the CE approach 
in various sectors and organizations.

4 Research Focus and Questions

Notwithstanding the great potential of CE in organizational work-practice, 
its applicability and knowledge, as well as experiences of collaborative ef-
fort to support policy-making, has not been explored. Our research will 
therefore focus on strategies that help determine the quality of policies 
and improving the collaborative processes.

Problem Identification

"Analyzing a policy is a crucial and continuous activity in all phases of the 
policy-making process of any organization. However, the analysis to derive 
a good policy in a collaborative PMP poses interesting challenges: what 
does it mean for a policy to be good (at any one phase of the collaborative 
PMP effort); and how do we measure this? More so, there is no underlying 
'Theory' in policy analysis explaining what a 'good policy' is".
Research Questions

1: What does it mean for a Policy to be good in a collaborative PMP? *In order to examine this question, we need to subdivide it into the following:* what is a quality PMP; what does it mean for a collaborative PMP effort to have quality; and what are the likely collaboration challenges a group might face while executing the process?

2: What assumptions/requirements of CE might follow from PMP; and how might CE aid in supporting to improve the quality of the collaborative PMP effort?

Research Objectives

To develop a theory in terms of a design approach to facilitate the process of improving the quality of the policies being made, i.e. the design approach should: outline strategies, techniques for achieving quality performance, and methods for assessing quality outcomes of policies.

Research Approach

A combination of rigorous theory development with Action research will be used to address our problem. A scientific theory is a model of *cause-and-effect* to explain some *phenomenon of interest*. The theory gives us a basis for understanding how we might use a process to attain the outcomes we want [19]. Action research has the dual intention of improving practice and contributing to theory and knowledge. It is an inquiry into how people design and implement action in relation to each other [20]. It can be used for theory building, as well as for theory testing and theory expanding. In this research, we will employ Action Research Method so as to address the 'how to' research questions; secondly, the continuous design and evaluation of the collaboration process for the PMP may not be easy to study in a constructed setting; thirdly, it will allow the researchers to evaluate and improve their problem-solving techniques or theories during a series of interventions.

5 Conclusion

Policy-making involves several actors with divergent interests. Each actor may have some limited resources. When resources and decision-making are spread across actors, the actors become dependent upon each other to realize a policy. Improving the quality of the policies being decided on in these processes is the focus of this study. The collaboration process design method to be used and evaluated is Collaboration Engineering.

References