Shaping policy development in a UK Government department

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Abstract

Policy-making organisations are often accused of linear and narrow-focused thinking and decision-making, failing to account for the diversity of human needs and goals, even the diversity of goals existing across different government departments.

Accordingly, resulting government policies can be fragmented and do not account for the multiple aspects important for human wellbeing. As unintended consequences arise across a broad range of outcomes, an integrated, system-wide and participatory approach to policy-making is needed. It needs to shape thinking around policy-making to interlink the different individuals and organisations interacting with these policies.

This paper suggests a participatory systems approach that engages diverse policy-makers in a process of co-creation and shared learning. Instead of focusing on narrow policy development, it develops a process fuelled by systems thinking and participatory system dynamics modelling to shape policy-making. It refers to a collaboration with a UK government department and takes policy-making about domestic heating energy from a home-owner and market perspective as an example. The collaborative approach uses interviews, workshops, qualitative mapping, causal loop diagramming and simulation modelling to jointly establish causal maps of nonlinearities, complex interrelationships and feedback processes in the area of domestic heating energy efficiency and use.

The collaborative project shows that interest in systems thinking can be triggered through a participatory research project and interaction with a simulation environment. It also presents a process for engaging collaborators with different interdisciplinary background and discusses challenges and successes. Finally it reveals how participants unfamiliar to systems thinking can engage in a new way of thinking and collaborating.

Extended abstract of the full conference paper

Introduction

Policy-making organisations are often accused of linear and narrow-focused thinking and decision-making, failing to account for the diversity of human needs and goals, even the diversity of goals existing across different government departments (Davies & Oreszczyn, 2012). Accordingly, resulting government policies can be fragmented and do not account for the multiple aspects important for human wellbeing (Macmillan et al., 2016). As unintended consequences arise across a broad range of outcomes (Shrubsole, Macmillan, Davies, & May, 2014), an integrated, system-wide and participatory approach to policy-making is needed. It needs to provide a causal understanding of the mechanisms of policy, test policy outcomes, and shape thinking around policy-making to interlink the different individuals and organisations interacting with these policies.

This paper suggests a participatory systems approach that engages diverse policy-makers in a process of co-creation and shared learning. It develops a process fuelled by systems thinking and participatory system dynamics modelling to shape policy-making. It refers to a collaboration with a UK government department and takes home-owner retrofit as an example. The collaborative approach uses interviews, workshops, qualitative mapping, causal loop diagramming and simulation modelling to jointly establish causal maps of nonlinearities, complex interrelationships and feedback processes in the area of domestic heating energy efficiency and use.

The collaborative project shows that interest in systems thinking can be triggered through a participatory research project and interaction with a simulation environment. It presents a process for engaging collaborators with different interdisciplinary background and discusses challenges and successes. Finally it reveals how participants unfamiliar to systems thinking can engage in a new way of thinking and collaborating.

Our participatory system dynamics method for integrated policy-making

The project focused on the policy area of home-owner decision-making and the energy efficiency retrofit market and intended to develop, within the policy team in the respective Government department, an overarching understanding of the processes involved in this system. The discussion was steered by interest in a specific policy area and by the need to capture the interactions between the industry sector, homeowners and lending sector, and to understand the dynamics that drive the retrofit uptake rate in order to explore strengths and pitfalls of policies under consideration.

We have combined group model building workshops, as they are typical for participatory system dynamics (Andersen et al., 2007; Rouwette et al., 2016; Vennix, 1996), with interviews and phases of quantitative system dynamics modelling between these events (Lane, 2016).

Shaping integrated policy development: discussion and conclusion

Although project was concluded too little time ago to clearly understand its long-term impact, numerous insights can be gained from this project, especially looking at the participants' feedback, modelling results and unfolding process.

Participants highly appreciated the facilitated discussions during the workshops. It helped them to bring out and structure concerns, thoughts and links between elements in the systems that had not been as deeply understood or explicit among the team. Having a causal map showing the elements of the system and their relations made the policy team literally 'see' what they were talking about.

The map created a group memory, serving as a common ground for their discussions during the workshops: overlooking what was said before was not possible; the interventions of the participants needed to relate to the common map, thus decreasing the possible misunderstandings; unfocused, unstructured and time-consuming talks were limited because, to be integrated into the map, they had to be formulated coherently with the causal framework of the model (participants were forced to think about the causality involved in their ideas). Moreover, having facilitators guide the discussion permitted all the participants to be involved and present their opinions, making sure that any expertise of the policy team was not left out. From this point of view, the facilitated process with the use of causal maps supported the policy team to share and integrate the different knowledge in the group.

The process of sharing and integrating knowledge made clear the complexity of the retrofit market system, to both researchers and participants. Moreover, system dynamics methodology allowed the participants to include into the map and broadly discuss social elements, such as awareness, credibility or aesthetics that usually are not well explored since not straightforwardly quantifiable.

Not only the active involvement of the participants in the workshops but also the quantified model, based on the causal maps built by the policy team and presented to the group at the end of the project, helped shape the process. The model runs helped to make first estimates of the magnitude of the policies and what might be important policy resistances. Moreover, the policy team that started with some policy options targeting only a specific area of the system ended up considering to support and integrate these policies with additional policy instruments aiming to stimulate other more 'sensitive' parts of the system.

In conclusion, participatory system dynamics seemed to have an impact on the policy making process. Preliminary participation in such a process triggered further interest in employing the participatory system dynamics approach for concrete policy questions. This investigated project seems to have supported policy-makers' active learning and the process helped the participants to identify possible policy resistance factors. Moreover, it persuaded them of the benefits of a broader perspective, shaping the policy development process. However, the results of this paper report only short-term impacts based on the policy team feedbacks and researchers' memos. Further studies will be needed in the future to understand the medium and long term effects of such an approach.

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