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Two souls are dwelling in my breast: Uncovering how individuals in their dual role as consumer-citizen perceive future energy policies

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ABSTRACT

The future of energy depends on present decision-making, and present decision-making depends on assumptions about future effects of energy policy. Individuals have two roles in this: In their citizen-role they have to consent to measures and support their implementation, in their consumer-role they have to adopt and implement measures in their behaviour. Our question is, how distinct these roles are with regard to how they inform individuals' perceptions and concerns related to energy policy options. By applying the "Futures Wheel" method we explored how individuals think future energy policy measures would impact their lives (consumer-perspective). By asking them whether and for what reasons in a voting they would say "yes" or "no" to them we inquired into their assessment of these measures from a citizens' perspective. Our results show that the two roles consumer and citizen trigger different patterns of thinking. Energy policy design and decision-making should consider both. Life quality and justice are important for individuals in both roles. The "Futures Wheel" method helps uncovering assumptions about the future individuals are unaware of and is a suitable method to explore anticipated effects of energy policy options. It might be useful to facilitate societal debate about the future of energy.

1. Introduction – why it makes sense to explore into individuals' assumptions related to future energy options

A transition to a sustainable 'energy future' cannot be achieved by addressing only technological issues (e.g. [1–4]). Rather, the energy use of individuals and households has to be addressed as well. Individuals (and households) are consumers of energy products and services (incl. infrastructures). In this role as consumers they account for a significant proportion of energy use (when accounting is done by actors and not by sectors or similar, as has been shown by Stern ([5], 43) and Stern [6], 93), and because the potential of reducing the energy use of individuals (and households) is quite large, addressing consumers and their behaviour is an important part of sustainable energy policy (e.g. [7–9]). The necessary behavioural change is not restricted to changes towards energy efficiency, but entails fundamental changes of consumption patterns leading to a significantly reduced demand of energy (called "strong sustainable consumption" by Fuchs and Lorek [10]).

But individuals play a crucial role not only in their role as consumers. Designing and deciding about energy policy is not confined to governmental bodies, politicians, and technical experts, it involves individuals in their role as citizens as well (e.g. [2,5,6]). Citizens influence decision-making either indirectly by accepting, supporting or resisting changes and thus influencing other policy-making actors or directly by consenting or refusing policy options in democratic decision-making processes.

In the case of policies that address consumer behaviour, individuals are actors participating in enacting change, actors affected by change, and "essential contributors to the effective execution of the selected (…) options" ([11], 191). Most scholars agree that the transition to a sustainable 'energy future' cannot be achieved without societal acceptance by consumers and citizens, and they also agree, that this is one of the major challenges of energy policy (e.g. [2,11–18]). With regard to policies aimed at changing patterns of consumption, the challenge of acceptance can be specified as follows: In their role as citizen individuals have to consent to such policy measures and to support their implementation, and in their role as consumer they have to adopt and implement such measures in their behaviour.

The complexity of the challenge is augmented by the circumstance that there is no such thing as absolute certainty and completeness of knowledge to draw on in designing and deciding on policy options leading to a sustainable 'energy future' for sure. Even "for an expert, it is not easy to validate or falsify" knowledge, because there might be different context-specific truths ([19], 1012). Accordingly, policy decisions cannot be based solely on scientific knowledge [20]. Rather, the

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knowledge to proceed from is a mixture of "personal knowledge" and "community knowledge" the way it is represented in a society, and in a democratic society "worldview pluralism" has to be acknowledged ([20], 1016), because a plurality of roles, perspectives and practices impacts the future of energy and energy policy [1]. This entails much more than just acknowledging the existence of different bodies of declarative knowledge. For energy policies to be accepted and effective, they have to be in line with the concerns and values of the different stakeholders, and with their perception and assessment of the outcomes of these policies (e.g. [2,11–18]). With regard to policies aimed at changing patterns of consumption individuals as consumers and as citizens are relevant stakeholders whose concerns and perceptions have to be considered in policy design and in the design of decision-making processes. Thus, there is a need to find out more about policy-related concerns of consumers and citizens and how they perceive policy options, because knowing more about these concerns and perceptions would allow to design and frame policy processes in ways addressing citizens' and consumers' concerns and with that increasing acceptance of policy options. And because an individual acting in the role of citizen might affect its own scope of action in its role as consumer, there is a need to find out whether and to what extent individuals proceed from different patterns of thinking when acting in these two roles.

Assuming that there is such a thing as *the* worldview of consumers or of citizens to draw on in designing policy options would be rather naïve. Perceptions and concerns differ and change, at least in part, across time and society. And how policy options are perceived is not independent of how the specific policy options are designed and of how they are publicly discussed. Hence, knowledge about concerns and perceptions of consumers and citizens is at least partly transitory. It would thus not be advisable to design future policy options exclusively based on the knowledge about the perceptions and concerns related to past policy options. Furthermore, knowing whether policy-making was in line with concerns and perceptions of consumers or of citizens or not in the aftermath of public decision-making might shed light on why policy-making succeeded or failed, but such knowledge is of academic value only. In order to improve future energy policy, knowledge about perceptions and concerns informing decisions lying ahead is needed, and it is necessary to know how to uncover such perceptions and concerns in advance. This complies with the call of Vries and Peterson who argue in favour of looking for and applying methods that help exploring possible futures and different policy options from the perspectives of different worldviews in order to increase the effectiveness, legitimacy and robustness of policies ([19], 1016). We know from recent research on life events that anticipating the future is actually done by individuals, and that it informs decisions and actions of individuals in the present. This research shows that individuals anticipate the impacts of future events on their everyday life and take decisions on this basis long before the event occurs (e.g. [21]). This sums up to the conclusion that it might make sense to inquire into the perceptions and concerns of consumers and of citizens related to (potential) future energy policy options not only in research, but also in the process of policy-making.

We investigate consumers' and citizens' perception of (future) policy options and their concerns in a research project funded by the Swiss National Science Foundation (SNSF) as part of its National Research Programme (NRP) 71 "Managing Energy Consumption" (2015–2017).[1] In this paper we will present results to the following research questions: What are the individuals' assumptions about future impacts of energy policy measures on their own life (consumer perspective)? How do individuals assess energy policy measures in their role as citizens and what are their reasons for accepting/rejecting measures (citizen perspective)? Are anticipated impacts of energy policy measures on peoples' own life (consumer perspective) decisive for how they decide upon these measures in their role as citizens (citizen perspective)?

The paper is structured as follows: In Section 2 we explain our choice of methods, our choice of energy policy measures serving as point of departure for our study, and how the interviews were executed. In Section 3 we present the results of our study. In Section 4 we discuss our results, and in Section 5 we draw some conclusions with a view to future societal debates on energy policy.

2. Methods applied and point of departure for the interviews

Uncovering how individuals perceive (future) energy policy measures in their role as consumer and as citizen and uncovering their concerns related to these measures is not bound to observing their actual behaviour as consumer and as citizen. A discursive, narrative approach allowing for individuals to unfold their thoughts is suited to inquire into these topics. What is necessary though, is to find a narration matching a 'cognitive activity' of an individual as consumer and a 'cognitive activity' of an individual as citizen.

2.1. Choice of methods

2.1.1. Method 1: "Futures Wheel" to inquire into anticipated impacts of policy options (consumers' perspective)

Inquiring into (real or assumed) impacts of energy policy measures on the individual lives of consumers necessitates an approach taking into account the comprehensive nature of consumption for one thing, and of behavioural change for another thing (e.g. [7,22,9]). Consumption is the utilisation of goods (products, services, infrastructures, both material and non-material) in order to manage daily life and to realise an individuals' notion of a life he/she values. It encompasses a broad range of interacting acts, it is embedded in a complex web of social, cultural, and material contexts, and it is informed by both individual as well as social norms and values. Behavioural change in turn has to be embedded into daily practices, and to capture behavioural change the complexity of everyday life has to be considered.

Investigating an individuals' assumptions about future impacts of a (potential) future energy policy measure on his/her own life necessitates a method meeting two criteria: It has, firstly, to be suitable in helping to explore a possible future. It has, secondly, to allow for a comprehensive narration covering the complexity of everyday life the way this life is perceived by the individual to be after the posited implementation of the energy policy measure. This led us to the field of futures studies. Futures studies is a research area "concerned with a wide range of views about possible, probable and preferable futures" (; see also e.g. [24–26]). A common and rather basic classification of methods aimed at generating information about the future distinguishes prescriptive (normative) and descriptive (exploratory) methods, the first being normative in their approach in that they seek to define how the future should be, the latter seeking to describe what the future will or could be (e.g. [27]). Another basic differentiation is to distinguish quantitative from qualitative methods [27]. More sophisticated classifications distinguish extrapolative methods, exploratory methods, modelling, scenarios, participatory methods and normative methods (e.g. [23]). Furthermore, the methods can be differentiated according to the level of professionalization in terms of in-depth scientific knowledge and/or technical skill needed by those applying them and/or being subjected to them. To serve our goal, the method to apply had to be descriptive (to explore a possible future), qualitative (to cover the complexity of daily life as perceived by individuals), easy to understand, and it had to proceed from possible (future) policy decisions.

The "Futures Wheel" method best met these requirements: Invented by Glenn in 1971, it is a descriptive and qualitative method (e.g. [28]; [27], 3f; [26], 8), not only especially designed to explore consequences

[1] Project title: "Towards societal consensus – Influencing the perception and evaluation of energy policy measures by means of self-reflection and information". Project team: Rico Defila (attorney at law, co-leader), Antonietta Di Giulio (philosophy, co-leader), Patricia Holm (biology, co-leader); Philipp Hirsch (biology, research associate), Corinne Ruesch Schweizer (educational sciences, research associate).