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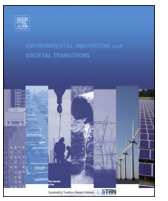

Urban sustainability transitions in a context of multi-level governance: A comparison of four European states

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ABSTRACT

Urban sustainability transitions have attracted increasing academic interest. However, the political-institutional contexts, in which these urban sustainability transitions unfold and by which they are incited, shaped, or inhibited, have received much less attention. This is why we aim at extending previous studies of sustainability transitions by incorporating a multi-level governance perspective. While multi-level governance has been a long-standing theme in political science research, it has remained under-explored in the study of sustainability transitions. This claim is the starting point of our comparative analysis of urban sustainability transitions in Brighton (UK), Dresden (Germany), Genk (Belgium) and Stockholm (Sweden). Our approach "brings the politics back in" by elucidating the dynamics of power concentration and power dispersion generated by different national governance contexts. In our analysis, we explore which opportunities and obstacles these diverse governance contexts provide for urban sustainability transitions.

1. Introduction

One of the key frameworks in the field of sustainability transitions is the multi-level perspective (MLP).[1] Originating from science and technology studies and evolutionary economics, it adopts a systems perspective. As such "the MLP is an abstract analytical framework that identifies relations between general theoretical principles and mechanisms" (Geels and Schot, 2010, p. 19). Therefore, the MLP has been criticised for lacking a conception of agency (Geels, 2011, 29–31; Markard et al., 2012; Smith et al., 2005). Or, as Geels and Schot put it, agency remains "backgrounded" in the MLP (Geels and Schot, 2010, p. 28). The same criticism has been made of the technological innovation systems approach (e.g. Kern, 2015; Markard and Truffer, 2008), another key framework within the field of sustainability transitions, which has increasingly been used to focus the analysis on how well particular functions are fulfilled by the system (Bergek et al., 2008; Hekkert et al., 2007; Hekkert and Negro, 2009).

A number of recent studies have therefore attempted to address this gap and to bring agency to the fore (e.g. Avelino and Wittmayer, 2015; Hess, 2014; Raven et al., 2016). For example, a special section on "Actors, Strategies and Resources in Sustainability Transitions"

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[1] For an introduction to the MLP see Geels (2002); Geels (2004); Geels (2005); Geels (2011); Geels and Schot (2010); Kemp et al. (1998).

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was published in the journal *Technological Forecasting and Social Change*. It "aims to provide a closer look at how strategies, resources and capabilities of individuals, firms and other organisations impact the overall system and trigger transformation processes, and how these changes at the system level feed-back into the observed strategies at the actor level" (Farla et al., 2012, p. 992). Similarly, a stream of papers on the politics of "protective spaces" explores how actors try to achieve institutional change which is favourable to "their" desired niche technologies (Raven et al., 2016; Smith and Raven, 2012). Others have explored the role of agency in transition processes by studying civil society actors and social movements, that is so-called "grassroots innovations" (Frantzeskaki et al., 2016; Seyfang and Smith, 2007). They illustrate how societal change can be promoted by non-state actors from the bottom-up (e.g. Boyer, 2015; Dóci et al., 2015; Feola and Nunes, 2014; Seyfang and Haxeltine, 2012; Seyfang and Longhurst, 2013). This literature on the agency of actors within transition processes was also partly a response to early criticisms that studies of sustainability transitions did not pay enough attention to the politics of such processes (e.g. Meadowcroft, 2009; Meadowcroft, 2011; Scrase and Smith, 2009; Shove and Walker, 2007; Smith et al., 2005). In the meantime, the politics of transitions has become a core research strand within the literature (e.g. see Avelino et al., 2016; Geels, 2014; Markard et al., 2016; Normann, 2015).

The agency of actors is of course partly shaped by existing dominant socio-technical configurations (which is what transitions research has paid much attention to) as well as wider institutional contexts. Institutions are widely acknowledged to shape transition processes and institutional change is considered key for transitions to unfold (e.g. Brown et al., 2013; Fuenfschilling and Truffer, 2014; Fuenfschilling and Truffer, 2016). However, our argument is that wider institutional contexts (which are not normally conceptualised to be part of the regime, such as the nature of the political system in a country) are key in shaping agency and stretch over various governance levels (e.g. national, regional, local). These need to be systematically analysed, rather than simply distinguishing between the "system level" and the "actor level" as Farla et al. (2012) propose. We argue that existing research on transitions focuses on one level of governance, only. In the early literature, research predominantly focused on the national level (most of the research referred to above), while more recently there has been a lot of work on urban sustainability transitions (see for example Bulkeley et al., 2011; Ernst et al., 2016; Hodson and Marvin, 2010; Moloney and Horne, 2015; Truffer and Coenen, 2012; Wittmayer et al., 2015; Wolfram, 2016; Wolfram and Frantzeskaki, 2016). Bulkeley et al. (2011) for example focus on urban responses to climate change and how such efforts are shaped by the dynamic tension between processes of experimentation and efforts to promote systemic change towards low carbon futures. Hodson and Marvin (2010) point out that many cities have aspirations to manage transitions towards more sustainable cities and develop a framework to better understand city scale transition processes. Many of these studies, however, focus mainly on the agency of local actors but do not cover their wider multi-level governance contexts, or do not do so explicitly, or not in a well conceptualised manner.

The novelty of our proposed analytical approach is to focus on the local level while specifically conceptualising how wider multi-level governance structures shape the agency of local actors. We argue that the concept of multi-level governance is useful in the context of studying sustainability transitions because it (1) allows analysis to explore the influence of institutional structures at different governance levels and (2) captures the agency of state as well as non-state actors. Moving beyond traditional forms of governing by the state, it includes the agency of societal actors such as the private sector, academia, or civil society. The concept of multi-level governance expresses a dispersion of political authority across multiple territorial levels (rather than the MLP levels of niches, regimes and landscapes). State and societal actors interact in both vertical and horizontal directions across international, transnational, European, national, regional and local levels. While multi-level governance has been a long-standing theme in political science research, it has remained under-explored in the study of sustainability transitions. It has already been suggested that the study of transitions within cities should account for the multi-level institutional contexts, in which these evolve (Hodson and Marvin, 2012).

We address this research gap through our comparative analysis of urban sustainability transitions in Brighton (UK), Dresden (Germany), Genk (Belgium) and Stockholm (Sweden). In our study, we elucidate the embeddedness of local agency in multi-level governance contexts by distinguishing between four different types of political systems. By doing so, we contribute to the emerging research on the politics of transitions by elucidating the dynamics of power concentration and power dispersion which characterise different governance contexts. Our approach, therefore, replies to the sustained call for extending analysis beyond detailed micro studies of urban initiatives to take into consideration the wider institutional contexts of local agency (Hodson and Marvin, 2012; Markard et al., 2012). It also replies to the sustained call for comparative studies of sustainability transitions (Markard et al., 2012). We argue that a comparative perspective is especially important in analysing the role of institutional structures in shaping agency: Without such systematically designed comparative research that distinguishes between different political-institutional contexts, any finding can be attributed to a specific institutional context.

In order to hedge calls for putting agency central in the study of (urban) sustainability transitions, we focus on the collective agency of local transition initiatives (TIs), operating within the four city-regions studied. We define TIs as collective agents who aim to drive transformative change towards environmental sustainability (so an urban sustainability transition in their city-region) with their locally-based activities, i.e. the enactment of sustainable ways of organising (structures), thinking (culture), and doing (practice) (Frantzeskaki and de Haan, 2009). We emphasise the notion of city-regions, since TIs do not follow a logic of political-administrative borders. Local TIs rather operate in "soft spaces" (Haughton et al., 2010; Illsley et al., 2010). Depending on their field of action (mobility, energy, food, etc.), they act within completely different spatial geographies, often including urban, sub-urban and rural areas at the same time. Such an agency oriented perspective is deliberate and implies a "flat" ontology compared to the hierarchical niche-regime distinction used in the MLP to investigate multi-level relations between niche-innovations, regimes and landscapes (Geels, 2010). Instead we study urban transitions as they unfold through the agency of local transition initiatives pushing for change in ways of organising, thinking and doing.

With the notion of local transition initiatives, we build on the concept of urban experimentation as proposed by Bulkeley and Castán Broto (2013). They do not conceive of experiments in a formal scientific sense, but rather defined them as "purposive

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