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Commentary

Market formation in the context of transitions: A comment on the transitions agenda

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ABSTRACT

Transition studies has recently underscored the need to focus on upscaling and diffusion of innovations. A key question is how these innovations, already existing in niche markets, can become diffused and embedded in broader markets. As a first step, we offer ideas about the design and formation of what one might call ‘markets for transitions’. We argue that less attention has been paid to legitimized perceptions of market boundaries, the roles of actors, the interplay between markets, and the process character of market formation.

Transition studies has recently underscored the need to focus on upscaling and diffusion of innovations (Hyysalo et al., 2018; Köhler et al., 2019). The emphasis is inspired by the recognition that in several functional areas, such as energy provision, numerous technological solutions already exist that could help to reduce carbon emissions. A key question is how these innovations, already existing in niche markets, can become diffused and embedded in broader markets. As a first step, we offer ideas about the design and formation of what one might call ‘markets for transitions’.

Influential conceptualizations of transitions have recognized market formation as important in systemic or regime-level processes (Hekkert et al., 2007; Schot and Geels, 2008), emphasizing the role of market segments, transactions and end-user profiles (Dewald and Truffer, 2012). Market formation has been studied in terms of which user groups to target and how to improve innovation adoption, in essence taking a diffusion perspective. We argue that less attention has been paid to legitimized perceptions of market boundaries, the roles of actors, the interplay between markets, and the process character of market formation.

Given this gap in the literature, we suggest to deepen and enrich the study of ‘markets for transitions’ by drawing on bodies of literature that have also addressed markets. *Economics* conceptualizes the functioning and structure of markets. Nelson (1959) and Arrow (1962) were the first to contribute to understanding market failures and imperfections influencing diffusion, which were the result of e.g. information asymmetries, first-mover disadvantages and time-inconsistent preferences (Von Auer, 1998). Overcoming market imperfections is relevant for niche players, because during market formation they face questions such as what consumer demands to address and who should be the first mover (Geroski, 2003). Economics also serves as inspiration for analyzing the role of market structures in transitions. Evolutionary economists articulate the trade-off between perfect competition promoting higher R&D variety versus monopolies having more resources for R&D (Mazzucato, 2000). The trade-off is relevant on the regime level where incumbents might block market formation, and in niches that are sometimes non-perfectly competitive, posing questions about whether to support protective market-creation policies. For studying markets for transitions, economics further emphasizes the

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emergence of markets as dominant product categories established by suppliers, consumers and regulators (Suarez et al., 2015), geographical differences in market institutions, and the functioning of alternative, informal, community-based markets (Feige, 1990).

From the *sociology of markets* we learn about markets as discursive spaces in which material work runs parallel to processes of creating new consumption categories that have sufficient moral support and cognitive legitimacy from consumers as well as other audiences like regulators (Fligstein and Dauter, 2007; Santos and Eisenhardt, 2009). Moreover, it presents the perspective of markets being part of ecologies of multiple market spaces between which actors and products travel. Are there different market formation pathways to be discerned, e.g. focusing on creating completely new spaces, extending or conjoining existing markets, or 'moving' from one market space to another? (Navis and Glynn, 2010; Fligstein and McAdam, 2011; Ozcan and Santos, 2015).

Marketing and management studies emphasize the cognitive side of markets, investigating how preferences get articulated against a background of technological possibilities and consumers' bounded rationality (Sarasvathy and Dew, 2005). Preferences vary (Rogers, 2003) which invites for research into consumer segmentation over time. How to characterize 'early-adopters' in newly-created niches and how to extend diffusion in larger consumer bases? Beyond its focus on consumer preferences and individual companies relating to these preferences, marketing has become interested in how multiple firms, together with e.g. public agencies actively co-create markets. Against a background of uncertainty and unclear ex-ante rationales, stakeholders individually and collectively contribute to market formation (Lee et al., 2018). Furthermore, marketing has begun to study 'market practices' like the creation of images and visions used to advocate the existence of a market (Kjellberg and Helgesson, 2007).

Mobilizing the different strands of literature enables us to study market formation in the context of transitions along four lines. First, an important part of market formation concerns the creation of moral support and cognitive legitimacy. What constitutes a market is not taken for granted and even contested in the context of radical innovation on niche and regime levels. This cognitive perspective underlines the importance of the construction of dominant and legitimized perceptions of what constitutes a market.

Second, we can focus more systematically on the micro-level of transitions, on individual actors and actor groups that are critically involved in shaping crucial elements of markets like exchange mechanisms and user practices. We can distinguish actions by single stakeholders that contribute to market formation from collective actions. A research question is to what extent can market characteristics become locked-in due to dominant involvement of early-stage stakeholders.

Third, the perspective of markets being part of ecologies of multiple market spaces is relevant for transitions as well. As potentially transformative innovations promise deep shifts of socio-technical systems, system transition only happens if complementary innovations are diffusing into the system. Transition is then an interplay of multiple, intertwined market formations, examples of which we might see in cases like mobility-as-a-service, the sharing economy and the circular economy. The synchronization and concertation of entangled market formations is important, most notably as we need to understand if and how a delay in the formation of one market acts as an inhibitor for a potential system transition.

Fourth, the abovementioned bodies of literature all emphasize that market formation follows various stages. Therefore, we want to emphasize the process character of market formation in transitions, inviting for hypotheses about when collective action gives way to competition in nascent markets.

These four lines of further research help in extending the conceptualization of market formation beyond the diffusion perspective, advancing into studying the processes of organization and legitimization of markets for transitions.

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