



## Tracing discursive space: Agency and change in sustainability transitions



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### ABSTRACT

This article argues that a lack of a consistent agency-based approach in theory on sustainability transitions makes it difficult to describe processes of change. To overcome this problem, elements from transition theory will be rearticulated in terms of 'discursive fields', which are the bodies of meanings with which actors engage in social action. With that an agency-based conceptual framework is developed with which processes of change related to sustainability transitions can be researched. Discursive fields are subjected to a different degree of 'fixation'—some discursive fields are more susceptible to change than others. The notion of discursive fixation helps us to develop new insights about the some of the elementary elements of sustainability transitions, such as the establishment of a so-called socio-technological niche, as well as the scaling up of the outcomes of such a niche. Moreover, the approach developed will be used to explore how individual agents can contribute to change processes. These insights give rise to an array of new empirical research in relation to sustainability transitions.

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### 1. Introduction

In order to establish a sustainable society, we have to undergo a 'sustainability transition': a radical, structural change of society that is the result of a coevolution of economic, cultural, technological, ecological, and institutional developments [1]. In the decade or so since the concept of sustainability transitions has been introduced, some valuable theoretical insights have been made [2,3]. We may think here of the multi-level perspective [4], the theoretical elaboration of strategic niche management [5,6] and transition management [7], the establishment of the framework of functions of innovation systems [8]. (See Table 1.)

In spite of these achievements, theory on sustainability transitions is still hampered by a number of conceptual and theoretical problems, among these are lack of attention for the *role of agency* in sustainability transitions [9,10], and the issue of *scaling up* niche successes to the level of the regime [11,12]. The problem of agency involves questions like: what is or can be the contribution of actors to transitions; how can this role be theoretically captured; and how can agents

influence or contribute to a transition process? The second problem emerges from historical research on transition processes, which shows that so-called niche experiments can be a facilitator of transitions. Inside a socio-technological niche, technology users, producers, and other stakeholders can learn about a new technology so that the process of societal uptake is smoothed [13]. Studies on niche experiments appear to have created a well-defined understanding of the organization of a successful niche [5,14], but not of the process that leads from a niche to a societally implemented technology [12].

In this article, these two issues will be dealt with as intrinsically connected problems. It will be contended that the lack of a consistent agency-based approach makes it difficult to describe processes of change, which is awkward for a branch of research that is especially interested in developing insights about how to facilitate large-scale societal transformations. With that, this article takes a different approach than other critiques on the role of agency in transition theory, which especially looks at questions about who disposes over the appropriate resources, institutional power, and democratic legitimacy to effectively contribute to the instigation of a transition process [10,15–19].

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**Table 1**  
Oversight of proposed empirical research.

Changes in the niche	Possible research
Creation of niche	Niche entrepreneur
Scaling up of niche results	Spread of technology
	Widening patterns of face-to-face interaction
	Mediated transfer of discursive fields
	Establishing institutional sanctions
Changes in discursive space	
Discursive space of regime actors	Conflicts in discursive fields
	The impact of events
Discursive space of outsiders	The influence of outsiders in niches
	Discursive space in practices

This article will rearticulate elements from transition theory in order to create an agency-based conceptual framework with which processes of change related to sustainability transitions can be researched. To do so, we will consider agency in relation to change in terms of ‘discursive fields’ over which stakeholders dispose. These discursive fields are subjected to a different degree of ‘fixation’—some discursive fields are more susceptible to change than others. In turn, the presence of these different degrees of discursive fixation helps us to develop new insights about two essential change processes that are pertained by a niche: first the establishment of a niche; and second the process of scaling up—i.e. the transfer of the outcomes of the niche to wider society. Moreover, the approach developed here can generate insights about the spaces that individual agents have—next to niches—which allows them to contribute to change processes. These insights give rise to a new array of empirical research in relation to sustainability transitions.

## 2. Main insights from transition theory

In this section, some of the main theoretical insights of transition literature will be presented by sketching three major frameworks in this body of literature, which are transition management, the multilevel perspective, and strategic niche management. As will be given in Section 2.1, these frameworks share their theoretical origins in quasi-evolutionary theory and as such they show a significant amount of theoretical and conceptual overlap. These three frameworks will serve as entrance points for studying the allegation that transition theory neglects the issue of agency. Later in this paper, these approaches will be used to retrieve agency-based elements which, in turn, are used to develop an agency-based research framework.

### 2.1. Quasi-evolutionary theory and regimes

The theoretical basis of approaches connected to sustainability transitions is predominantly formed by so-called ‘quasi-evolutionary’ descriptions of technological change, which feature technological development as a result of confrontations between different technological options developed by a variation environment (manufacturers, designers, producers, etc.) on the one hand, and the choice for a subset of these options by a selection environment (consumers, users, regulators, etc.) on the other hand. Essential here is that the variation and selection environments are not

mutually independent, like in genuine evolutionary processes, but that there are feedback loops and linkages that have a profound effect on the development and societal implications of new technologies [20].

These linkages and loops are to a large extent constituted by rules, practices, expectations, routines, etc., that surround existing technologies. One may say that technologies are embedded in webs of significance which at the same time are reproduced by these technologies. Such webs of significance can be defined by the concept of *regime*:

A technological regime is the rule-set or grammar embedded in a complex of engineering practices, production process technologies, product characteristics, skills and procedures, ways of handling relevant artefacts and persons, ways of defining problems; all of them embedded in institutions and infrastructures [21].

In terms of quasi-evolutionary theory, the presence of a regime establishes a repetition of similar connections between the variation- and the selection-environment; which could lead to a self-reinforcing pattern that becomes hard to avoid—a situation that is characterized as ‘lock-in’ [20,22–24]. The normative task of researchers on sustainability transitions is to identify ways with which unsustainable lock-in patterns can be overcome.

### 2.2. Transition management, the multilevel perspective, and strategic niche management

A driving metaphor for thinking about transitions is the *S-curve*. Following the S from the bottom left point to the top right point shows the route a transition takes, according to Rotmans et al. [1] this route has four phases: a *predevelopment stage* of dynamic equilibrium where the existing status does not visibly change; a *take-off phase* where the process of change gets under way because the state of the system begins to shift; an *acceleration phase* where visible structural changes take place through an accumulation of mutually influencing socio-cultural, economic, ecological, and institutional changes; finally there is a *stabilization phase* where the speed of social change decreases and a new dynamic equilibrium is reached.

This description of the transition trajectory has been taken up to develop a management paradigm aimed at influencing such transitions into a sustainable direction, this paradigm has received the name of *transition management* [23]. There are four, consecutive, key activities related to transition management. First of these is the organization of a ‘transition arena’ in which frontrunners come together in order to develop a new perspective on transition issues outside of the dominant regime. Second, there is the development of visions of sustainable development which drive the further transition process. Based on a transition vision, the third activity concerns the establishment of so-called transition experiments which lead to processes of social learning about the transition process. The fourth activity involves the continuous monitoring of the process of transition management, pertaining to questions about the extent to which a transition experiment contributes to processes of social learning [25].

The *multi-level perspective* (MLP) developed by Geels [4] sees transitions as the result of the interplay of developments

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