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Towards an 'alternative' geography of innovation: Alternative milieu, socio-cognitive protection and sustainability experimentation

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ABSTRACT

This paper highlights the hitherto unrecognised role of 'alternative' places in protecting different forms of sustainability innovation. The paper uses the concept of an alternative milieu to illustrate how a geographically localised concentration of countercultural practices, institutions and networks can create socio-cognitive 'niche' protection for sustainability experiments. An alternative milieu creates protection for the emergence of novelties by (i) creating ontological and epistemological multiplicity; (ii) sustaining productive spatial imaginaries; and (iii) supporting ontological security. These different dimensions of protection are explored with reference to an in-depth, empirical case study of Totnes in the United Kingdom. The paper concludes with some reflections on the theoretical implications of this research for the theorising of niche protection and for the geographies of innovation more generally, along with some recommendations for future areas of enquiry.

1. Introduction

Over the past decade there has been increasing interest in the complex co-evolution of socio-technical systems which deliver key societal functions such as energy and transport in late capitalist

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countries. In focusing on 'systems innovation', much of this work has sought to explore the conditions under which new radical sustainability innovations are able to 'break through' and 'scale up' displacing existing socio-technical systems. As such, a range of different theoretical tools have been developed to not only explain such processes, but also to be deployed in order to support the development of 'radical' technologies (see Markard et al., 2012; Grin et al., 2010; Smith et al., 2010, or Kemp, 2010 for recent reviews of this literature). Within this literature, the concept of the *protective niche* has become a key theoretical metaphor. The idea that niches are significant in nurturing the development of new technologies has its root in evolutionary theories of technological change (Schot and Geels, 2007). Yet critical questions remain relating to how such protection should be understood and how it is created (Verhees et al., 2012; Raven, 2012; Smith and Raven, 2012).

Within research on sustainability transitions there is a growing body of work which argues that most literature has overlooked the significance of geography (Coenen et al., 2012; Coenen and Truffer, 2012; Bridge et al., 2013; Truffer and Coenen, 2012). These authors make a number of linked arguments. First, there is a need to understand the uneven spatiality of socio-technical transitions and the way in which they are simultaneously geographical *and* historical processes. Second, whilst transition theory borrows geographical concepts – 'space' and 'scale' being obvious examples – these are often underdeveloped particularly with reference to the relational turn within geography (Raven et al., 2012). Third, critics highlight the fact that (sub)disciplines such as economic geography and regional studies have already developed a number of concepts that may help to explain the uneven spatiality of transition processes, particularly related to socio-spatial *embeddedness*. A spatially informed, co-evolutionary transition model would insist on the recognition that new 'green' niches arise from an inherently asymmetrical process of regional development (Truffer and Coenen, 2012). Accordingly, they suggest that a productive line of research would be to engage with how certain cities or regions provide protected 'spaces' for the emergence of sustainability innovations.

This paper seeks to contribute to both the theory surrounding the nature of niche protection and this growing body of work on geographies of transition. It does so by describing how a geographical *alternative milieu* can produce forms of protection for nascent sustainability experiments. The paper argues that the presence of an alternative milieu – a localised density of countercultural institutions, networks, groups and practices – creates a particular form of geographical protection for the emergence of different forms of sustainability experiment. Alternative milieu can provide a range of different kinds of support for experimentation, including financial and practical, but this paper focuses in particular on the way in which the milieu creates socio-cognitive space for new experiments to emerge, arguing that there are three dimensions to this protection: (i) ontological and epistemological multiplicity; (ii) sustaining supportive spatial imaginaries; and (iii) creating ontological security. The way in which an alternative milieu can protect sustainability innovation is described with reference to a case study of an alternative milieu located in South Devon in the UK, focused around the town of Totnes. The paper proceeds as follows: Part two provides an overview of the theory relating to the geography of protective niches. Part three introduces the alternative milieu around Totnes and three examples of experimentation: grassroots innovation, market based innovation and conceptual innovation. Section 4 then describes the three dimensions of socio-cognitive space provided by the milieu. Finally, part five then draws together some conclusions, including some indications of areas of future inquiry.

2. Geography of protective niches

Strategic Niche Management (SNM) is the strand of sustainability transitions theory that helped to establish the concept of a protective niche (Kemp et al., 1998). Early proponents of SNM were interested in how technological niches could be constructed to provide protective space in which promising new 'green' experimental technologies, such as electric cars, could be developed and nurtured (Kemp et al., 1998; Hoogma et al., 2002). Niche has also become a central analytical category in the multi-level perspective (MLP), a heuristic designed to provide a tool for understanding socio-technical change over longer periods. Here the niche reflects one of three 'levels': *niches*, *regimes* and the *landscape* (Geels, 2002). The regime is the 'deep structure' which stabilises a particular socio-technical system (Geels, 2011). Socio-technical regimes are given a certain degree of durability by the 'rules' which constitute their existence, as well as the fact that they are embedded in institutions and infrastructure

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