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Roles for university researchers in urban sustainability initiatives: the UK Newcastle Low Carbon Neighbourhoods project

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ABSTRACT

There is considerable debate regarding the contribution to be made by higher education institutions and the researchers they employ in realising environmentally sustainable urban spaces, and the relationship between academic research and lay knowledge. Drawing on previous work, the paper identifies roles that may be played by academic researchers in building sustainable urban locations. Adopting a focus on sub-city scale phenomena the paper illustrates how the roles played are affected by structural and non-structural factors which also shape the nature of collaboration among university researchers and other participants in urban sustainability projects. The paper does this on the basis of analysis and reflection upon research and related activities taking place over the period 2007–2011 in Newcastle upon Tyne in the North East of England, focussing on a project called Newcastle Low Carbon Neighbourhoods. The paper finds that academic researchers play multiple, sometimes conflicting roles in such initiatives, and that national structural and locally contingent factors affect the manner of collaboration with non-specialists and the durability of urban sustainability projects. It concludes that more conventional project arrangements may avoid some difficulties associated with such complex projects but potentially denude them of their richness and originality.

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1. Introduction

The contribution to be made by higher education institutions and the researchers they employ to sustainable development in general and more specifically to the creation of environmentally sustainable urban locations has attracted much attention in recent years. These concerns have been registered in pertinent developments at the international level which include the United Nations' Decade of Education for Sustainable Development (United Nations General Assembly, 2005), the Talloires Declaration (2005), and Chapter 31 of the Agenda 21 document from the Earth Summit held at Rio (United Nations Sustainable Development, 1992). In parallel, there has been increasing concern about the relationship between academic research and lay knowledge, the legitimacy and credibility of science, and the process by which difficult science, technology and environmental issues are governed in, for and by society (Gibbons, 2000; Gibbons et al., 1994; Jasanoff, 2003a,

2003b; Nowotny et al., 2001). Together these developments assert the social responsibilities of higher education institutions, which should make an active contribution to sustainable development which values both engagement with stakeholders and diverse communities and 'sound' science.

A perspective that needs to be developed concerns the roles to be played by higher education institutions and the researchers they employ. This is particularly so at sub-city (e.g. community or neighbourhood) scales involving multiple dwellings, there having been a number of insightful contributions to the made at regional and city levels in the recent past (Devine-Wright et al., 2001; Frantzeskaki et al., 2014; Healy, 2008; Zilahy and Huisingsh, 2009). The paper addresses concerns regarding the role of universities and university researchers, the impact of their work on society (for example in confronting the challenges of climate change) and the influence of civil society on the research agenda. The aim of the paper is to deepen our understanding of the potential roles of academic researchers in facilitating the development of low carbon and more generally environmentally sustainable neighbourhoods and communities.

The paper seeks to achieve its aim by analysing and reflecting upon on a multi-partner project known as Newcastle Low Carbon

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Neighbourhoods (NLCN) and related activities which took place in Newcastle upon Tyne, in the North East of England, over the period 2007–2011. The core research questions underpinning the project may be stated as follows: (1). what roles do university researchers play in sub-city scale sustainability initiatives? and (2). what structural and other factors affect the capacity of academic researchers to play such roles? Over and above these questions lie concerns about whether they ought to perform such roles in any case, or whether they should continue to focus on research as conventionally understood. These issues are implicated in the relationships that researchers and their employing institutions have with citizens, firms and ‘third sector’ organisations, the roles played by the various protagonists, and the assumptions underpinning these.

The structure of the paper is as follows. Section 2 reviews literature related to the aims and questions which inform the conduct and interpretation of the project at the heart of the paper. Section 3 describes the methods employed for setting up and executing the NLCN project, and for analysing and reflecting upon it. Section 4 outlines the results and benefits of the project. Section 5 presents an analysis of macro-structural and local structural and other factors affecting the NLCN project, and reflects on the significance of these for the various roles played by the research team therein and for collaboration among the university researchers and non-university partners. Finally, Section 6 comprises a concluding section which brings together the various strands of the paper and reflects on the contribution it makes to developing research and practice on the matters at hand.

2. Literature review

Much of the work discussed below is informed by contributions on mode 2 science (Gibbons et al., 1994, 2000; Nowotny et al., 2001), in which “differences between mode 1 and mode 2 can be described in terms of the context of discovery, the role of the disciplines, the skill mix of researchers and forms of organisation they adopt, social accountability and reflexivity of the researchers and quality control.” (Gibbons, 2000: 159). The mode 2 paradigm may be connected with reshaping and reworking the agora, the arena in which (environmental) problems are generated and solved and in which knowledge is contextualised and co-produced by a plethora of experts, publics and institutions.

One criticism of ‘mode 2’ and of Collins and Evans’ (2002; 2003) third wave of science approach is that they only accord limited access of laypeople to the ‘magic ring’ of expertise, which seems especially odd in the context of the ‘participatory turn’ (Jasanoff, 2003a). Jasanoff (2003b) argues that increasing participation is not the same as promoting a culture of governance in which relations amongst citizens, politicians, university research and industry, and the ‘substance of participatory politics’ are transformed. To democratise expertise Jasanoff (2003b) suggests the development of ‘technologies of humility’ (to supplant prevailing ‘technologies of hubris’).

Cada and Ptackova (2013) develop a model of structural and non-structural factors affecting collaboration between ‘science’ and non-governmental organisations (NGOs). They find that structural factors affecting relations among professional researchers (e.g. those working in universities) and lay people include the regimes governing research funding, the criteria by which research institutions are assessed and the prevailing values associated with the scientific community. On the other hand non-structural factors can variously impact institutions subject to the aforementioned structural factors. These are connected with: the ‘personal biographies’ of the researchers, the ‘specifics of individual research fields’, and the fit between experience-based and more

conventional researcher-produced scientific knowledge (Cada and Ptackova, 2013: 25). Harris and Lyon (2013) are interested in how collaboration operates. They show the importance of trust in transcending professional boundaries, and how trust is built among researchers, NGOs, firms and advisory companies. They conclude that trust is built when research collaborators, having knowledge of and experience of working with each other, share norms.

There are contributions that observe the shift from regulatory to more collaborative and dialogue-based approaches to realising sustainable consumption or production at local or regional levels but which do not specify or only hint at the roles of researchers therein. Fadeeva (2004a) argues that in such initiatives as the cases she studies in Sweden ‘diverse stakeholders acquire new roles’, including the expert (i.e. university employed) scientists. However she does not stipulate what these now are, or how they differ from the roles they played prior to the initiative in question. Fadeeva does say that we may understand the redefinition of the actors’ roles as being the outcome of their engaging in new relations and new activities (Fadeeva, 2004b). In one research discipline (urban geography) the practice of adaptive experimentation among researchers, communities, firms and policy-makers is ascribed to ‘resilient ecology’ in which the actors have to adopt new action paths (Evans, 2011). Concepts such as sustainability science partnerships (de la Vega-Leinert et al., 2009) and ‘development hubs’ (Cada and Ptackova, 2013) denote approaches to collaboration in which the partners actively seek to engender social change and various ‘types of knowledge intersect’ potentially to promote sustainable consumption and/or production in universities and beyond.

Research on community engagement initiatives to promote sustainable urban environments emphasises the need to: engage with identifiable groups of residents; work with pre-existing groups; use ‘strong’ facilitation; ensure sufficient time to develop trustful relationships; build strong support networks; and to make clear the potential benefits of engagement (financial, environmental, and social) (Impetus Consulting, 2008; IPPR, 2009). Further, Bull et al. (2008) point to the role of ‘gatekeepers’ or ‘connectors’, possible intermediaries whose inclusion in an environmental public engagement process may not be defensible on the grounds of representativeness but justified on the basis that their ‘environmental alertness’ could ‘serve as a [two-way] conduit for information and influence’. It could be argued that fundamentally it is necessary to go beyond questions of representativeness or the facilitation of participatory episodes. Instead what is required is appreciation of more fluid, open-ended sets of relations developing among diverse actors, for which a network perspective is justified. Here the role of researchers as boundary managers may be critical, whilst a commonality of roles or interests positively influences joint learning across actor or spatial boundaries (Valkering et al., 2013). However, an awareness that ‘elitist’ low carbon networks may marginalise certain groups to the detriment of related initiatives is warranted (Dieleman, 2013; Khan, 2013).

Healy (2008) considers the potential roles of university researchers (net) working across the various domains in the facilitation of social action in defined urban locations (Table 1, below, provides a list of researcher roles and those played by higher education institutions in building sustainability either in specific domains such as energy or carbon reduction or across the board). The success of initiatives may depend on the capacity of researchers to be institutionally entrepreneurial in changing local incentives to promote sustainable behaviour (Klein Woolthuis et al., 2013). Alternatively, it is argued that successful collaborative projects rely on researchers becoming embedded in durable, supportive institutional and political networks (de Jong et al., 2013; Frantzeskaki et al., 2014). Healy’s work identified the overarching role played

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