Disruption to place attachment and the protection of restorative environments: A wind energy case study

Patrick Devine-Wright*, Yuko Howes

School of Geography, University of Exeter, Amory Building, Rennes Drive, Exeter, Devon EX4 4RJ, United Kingdom

ARTICLE INFO

ABSTRACT

Deepening understanding of public responses to large-scale renewable energy projects is of academic and practical importance, given policies to lessen fossil fuel use in many countries. Although the NIMBY (Not In My Back Yard) concept is commonly used to explain public opposition, the concept has been extensively critiqued. This study applies an alternative approach based upon the notion of disruption to place attachment, and the theory of social representations, with a focus upon the symbolic meanings associated with a proposed project and the places affected by it. Empirical data is provided from a case study of a proposed 750 MW offshore wind farm in North Wales, using group discussions and questionnaires distributed to local residents in two coastal towns ($n = 488$). Results indicate significant differences between each town's residents in their responses to the project, and how opposition arises from nature/industry symbolic contradictions: between a place represented in terms of scenic beauty that provides a restorative environment for residents and visitors, and a wind farm that will industrialise the area and 'fence' in the bay. In one of the towns, the data suggests that contradiction between project and place was experienced as a threat to identity for those with strong place attachment, leading to negative attitudes and oppositional behaviour. Levels of trust in key actors moderated the relation between place attachment and negative attitudes to the wind farm. The results provide further evidence of the role of place attachment in shaping so-called 'NIMBY' responses to development proposals, and challenge the assumption that offshore wind farms will prove less controversial than those onshore.

© 2010 Elsevier Ltd. All rights reserved.

1. Introduction

Although numerous UK and European opinion polls have indicated high levels of public support for renewable energy, actual projects have met with local opposition, leading to delays or even abandoned projects (Toke, 2005). Opposition is commonly referred to as NIMBYism (Not In My Back Yard) (Burningham, Barnett, & Thrush, 2007), a concept used both to describe opponents and explain their actions: '*in plain language … [NIMBYs are] residents who want to protect their turf. More formally, NIMBY refers to the protectionist attitudes of and oppositional tactics adopted by community groups facing an unwelcome development in their neighbourhood*' (Dear, 1992, p. 288). However, the pejorative nature of the concept, together with concerns about its explanatory utility, has led researchers to recommend that the concept be abandoned (e.g. Devine-Wright, 2005; Wolsink, 2006). For example, several empirical studies have failed to find evidence for the presumed negative effect of spatial proximity upon public attitudes (Jones & Eiser, 2009; Michaud, Carlisle, & Smith, 2008).

This paper describes an empirical study of public responses to a proposed offshore wind farm in the UK. Offshore wind energy is important because many experts view this sector as the most likely vehicle for meeting climate change policy targets to reduce greenhouse gas emissions from electricity generation. Whilst it has been presumed that offshore wind farms will prove less socially controversial than those onshore, being distant from people's 'backyards' (Haggett, 2008), to date there is a dearth of empirical research on public responses to offshore development proposals, particularly in the UK. This study draws on an alternative explanation for so-called 'NIMBY' opposition that is based upon the psychology of place, arising from disruption to place attachment (Devine-Wright, 2009).

Place attachment is complex phenomenon incorporating an emotional bond between individuals and/or groups and the familiar locations they inhabit or visit such as the home or neighbourhood (Altman & Low, 1992). It is typically a positive bond, although sometimes ambivalent or negative (Manzo, 2005), correlating with length of dwelling (Brown & Perkins, 1992), often featuring social and physical sub-dimensions (Hidalgo &

Hernandez, 2001) and leading to action, both at individual and collective levels (Lewicka, 2005; Manzo & Perkins, 2006). A related concept is place identity, which refers to the ways in which physical and symbolic attributes of certain locations contribute to a positive sense of personal or social identity (Proshansky, Fabian, & Kaminoff, 1983; Twigger-Ross, Bonaiuto, & Breakwell, 2003), guided by principles such as continuity over time, distinctiveness from others, self-efficacy and self-esteem (Twigger-Ross & Uzzell, 1996; Devine-Wright and Lyons, 1997). Korpela et al. have argued that place attachment and place identity can arise from processes of emotional- and self-regulation, in which individuals seek out typically natural locations, which can become favourite places, and which provide opportunities for psychological restoration (Korpela & Hartig, 1996; Korpela, Hartig, Kaiser, & Fuhrer, 2001; Korpela, Ylen, Tyrvainen, & Silvennoinen, 2009).

Whilst there is not yet consensus in the literature about the precise relation between place attachment and identity (Chow & Healey, 2008), researchers have recognised them as distinct, yet related constructs (Giuliani, 2002), and called for tolerance of pluralistic approaches (e.g. Patterson & Williams, 2005). Recent research has suggested that place identity arises out of attachment, a process often hidden by the nature of respondent sampling in research studies (Hernández, Hidalgo, Salazar-Laplace, & Hess, 2007). In this study, they are regarded as mutually interdependent aspects of self-environment relations, implicating multiple levels of analysis (Manzo & Perkins, 2006) and power relations amongst individuals, groups and institutions (Dixon & Durrheim, 2004).

The impact of change has sometimes been labelled 'disruption' to place attachment (e.g. Brown & Perkins, 1992) or 'threat' to place identity (e.g. Bonaiuto, Carrus, Martorella, & Bonnes, 2002). This can arise from diverse causes, including relocation (Bogac, 2009; Fried, 2000; Inhalan & Finch, 2004), change to the physical fabric of places arising from natural or human events (e.g. landslides or burglary, Brown & Perkins, 1992; racial or ethnic conflict, Dixon & Durrheim, 2000) or changes to a place's legal or symbolic designation (e.g. Bonaiuto et al., 1996, 2002; Carrus, Bonaiuto, & Bonnes, 2005; Stoll-Kleeman, 2001). The literature has repeatedly identified the upsetting nature of place change, leading to feelings of grief or loss (Chow & Healey, 2008), disruption to social networks (Fried, 2000) and diverse coping responses, including denial of change (Bonaiuto, Breakwell, & Cano, 1996).

Only one study to date has empirically examined links between place attachment and support for a renewable energy project. Vorkinn and Riese (2000) investigated the role of place attachment in explaining attitudes to a proposed hydropower project in Norway. In their results, the more strongly local residents felt attached to the affected place, the more negative were the attitudes shown, suggesting that the power station proposal was perceived to disrupt place attachments. Yet, it would be misleading to presume that

energy projects specifically, and proposals for place change more generally, will *necessarily* disrupt place attachments. For example, two studies of the same type of place change (re-designating a place to be environmentally protected) revealed diverse results for the pattern of association between place identity and social acceptance, being negative in one case (Bonaiuto et al., 2002) yet positive in another (Carrus et al., 2005). Diversity of response was also shown in a study of responses to housing proposals in a lakeland area of Wisconsin. Stedman (2002) revealed that intentions to protect a place from change by means of a variety of behavioural responses were explained by two factors: strength of place attachment and whether participants interpreted the place as being 'up north' (i.e. a place to 'escape from civilization'). Importantly, the more local residents interpreted the place as being 'a community of neighbours', the less they were likely to oppose change (Stedman, 2002, pp. 570–571).

This diversity in response suggests that how changes to places are interpreted, rather than the form of change *per se*, is critical in determining whether the pattern of association between place attachment and acceptance is positive or negative. It also suggests that conflicts are particularly likely when restorative places (i.e. those considered to be natural, wild or places to escape from cities) are impacted by development proposals that are interpreted to be 'industrial' or 'technological' in nature. But these studies leave open the question as to how large-scale development proposals that affect more than one place are responded to by residents from different places, since disruption to place attachment has typically been researched in only one location (e.g. Bonaiuto et al., 1996; Carrus et al., 2005).

Devine-Wright (2009) has proposed an alternative to the so-called 'NIMBY' concept in which the focus of explanation shifts away from the physical aspects of development sites towards the socially constructed, symbolic attributes of places, and how these are interpreted by residents to 'fit' with development proposals. A multi-stage framework was proposed to capture the dynamic nature of individual and collective responses to place change over time, encompassing identification (becoming aware of change), interpretation (making sense of the change by creating and adopting symbolic meanings), evaluation (judging change to be positive or negative, with emotional and attitudinal responses), coping (e.g. denying or accepting change) and acting (see Fig. 1). Building upon previous studies, interpretation of change was argued to be critical in determining whether place attachment correlates with positive or negative evaluations of change. The framework does not presume that attachment automatically leads to resistance to change – the outcome of evaluation can be positive or negative, depending upon whether change is regarded as enhancing or disrupting a place. It is the symbolic meanings that people adopt when interpreting change, about the specific changes
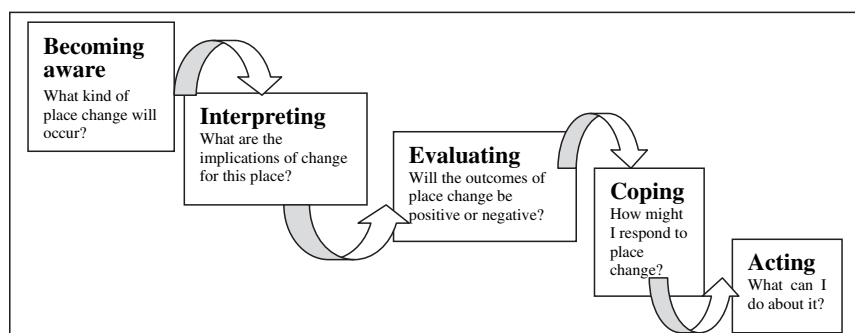

Fig. 1. Stages of psychological response over time to place change (Devine-Wright, 2009).