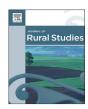
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Narratives of transition/non-transition towards low carbon futures within English rural communities[☆]



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ABSTRACT

Drawing on Anderson's (2010) identification of calculative, imaginative and performative modes of anticipatory action where futures are made present in the present day, this article explores how rural studies have explored futures before focusing its attention on the degree to which residents in four villages in England make evaluations of rural futures linked to issues of low carbon lifestyles and climate change. Particular attention is paid to the role of imaginative constructions of rurality in influencing anticipatory actions associated with carbon dependency and climate change. The study reveals the presence of disjunctures between expressed concerns over energy consumption and climate change, and associated mitigative and adaptive actions. It is noted that such disjunctures have been widely observed in previous studies and interpreted through some variant of a 'deficit model of public understanding'. It is argued, however, that such models ignore the presence of cultural and material constraints on action, the presence of pre-existing imaginative and performative interpretations of futures, and the degree to which people are aware of such disjunctures and construct narratives for the self that seek to resolve, deny or displace dissonances between beliefs and actions. The paper outlines five narratives that promote stasis as well as three narratives of transition, considering how they make a range of futures both present and absent.

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1. Introduction

"peak oil is but one of the crises humanity will encounter over the coming 20–50 years ... Solutions to any of these problems, taken in isolation, might well exacerbate others ... For example, a technologically-optimistic reading would suggest that long term price rises associated with peak oil might well make currently uneconomic petrochemical resources like tar sands exploitable, given existing or in-the-pipeline technologies, ... But we cannot afford to release the carbon locked up in high emission alternatives like tar sands, ... Greater use of biofuels will lead to food shortages"

North, 2010, p. 586

"I ... argue for a 'resource turn' in sociology, whereby societies should be examined through the patterns, scale and character of

Urry, 2011, p. 16

"The politics of climate change has to cope with what I call 'Giddens's paradox'. It states that, since the dangers posed by global warming aren't tangible, immediate or visible in the course of day-to-day life, however awesome they appear, many will sit on their hands and do nothing of a concrete nature about them. Yet waiting until they become visible and acute before being stirred to serious action will, by definition, be too late"

Giddens, 2009, p. 2

their resource-dependence and resource-consequences. Rather than a Post-Fordist or post-modern sociology, a *post-carbon sociology* is elaborated. This emphasises how modernity has consisted of an essentially carbonised world, but that this carbonisation has been obscured and ignored by most social thought. Such social thought, we might say, was carbon blind, never interrogating the resource and energy bases of economic life. I seek nothing less than the development of a post-carbon sociology and, much more importantly, a post-carbon society"

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These three quotes set the context for this paper, which explores the degree to which rural life in England, and indeed elsewhere, may be facing a series of inter-locking challenges related to its reliance on carbon-based energy and the degree to which people in these communities are willing to accept or even recognise these challenges, or whether, in part because of prevailing imagined geographies of rurality, they are likely to undertake few of the transitional activities required to address them.

Recent expansion in the use of production techniques such as fracking has thrown doubt on the calculative predictions associated with concepts such as peak-oil and post-carbon societies (see Chapman, 2014). However, the claims of North about the interlocking character of contemporary challenges is clearly evidenced in both contemporary resistance to the employment of such techniques, which have often sought to highlight how they may adversely impact on water and other environmental resources, and by calculative predictions concerning the continued growth of carbon consumption and the impacts of its combustion on climatic conditions (e.g. see Verbruggen and Al Marchohi, 2010). As a consequence, for many people the notion of a transition towards a low carbon future is as significant, pressing and challenging as ever, not least because, as highlighted by Giddens' self-entitled paradox, people may remain resistant to actions that could realise such a future until a point in time whereby such a future cannot be attained. In a sense, therefore, the future is both a very active presence for some people – as Brown et al. (2012, p. 1607) note, the term 'transition' often "implies a pressing sense of temporality" – but for many others such a future may be a presence that they prefer to keep absent from their everyday consciousness.

Anderson and Adey (2012, p. 1529) have recently claimed that the present time is a "geohistorical moment" in which questions over the future overshadow events in the present. The folding of the future into the present is, they suggest, an issue that warrants detailed empirical investigation, not least because it is achieved through a range of modes of practices, has significant effects on the present, and is "folded into the making of subjects in the present". As Brown et al. (2012, p. 1608) have noted, such practices can be clearly discerned in relation to notions of transition, which has become a term deployed "in policy discourses, everyday lives, and socio-scientific research". This deployment, they suggest, has significant impacts in the present and on the future, acting, for instance, to draw "together diverse groups, ideologies, and visions of the future" (p. 1619) in a way that is open to change but also quite conservative in that much of the future is constructed as a continuation of the present. They further suggest that notions of transition often imply compulsion in the sense of "a mode of affective governance that uses barely spoken inevitable threats in order to rewire the psyche of individuals and communities" (Brown et al., 2012, p. 1619). One might add that such affective modes of governance may well be resisted and that social integration does not necessarily have to be achieved through affective governance: even those who might be sceptical of futures associated with notions such as post-carbon and climate change may well be affected through the actions of people and agencies that have come to orientate their actions to avoid, adapt to or align with such futures.

The present paper seeks to illustrate the significance of such arguments, which have hitherto been largely absent from rural studies, by drawing on a research project conducted as part of Research Council UK's Rural Economy and Land Use (RELU)

programme. This research investigated how people in rural communities respond to issues of climate change mitigation and adaptation, focusing on four rural villages located in three contrasting English rural districts: East Lindsey, Harborough and West Berkshire (see Fig. 1). These districts were chosen to reflect some of the diversity or differentiation of rural England, being, for example, local authority Districts respectively classified as 'deep rural', 'transient rural' and 'dynamic commuter' in the classification created by the '*Rural Futures*' project commissioned by Defra (see Future Foundation, 2002; Lowe and Ward, 2009, Table 1).

This classification was created as a base-line from which projective scenarios of rural futures could be created (Future Foundation, 2002; Lowe and Ward, 2009). As such it represented an instance of the long-running, albeit far from extensive, series of rural studies that exhibit some explicit future orientation (other examples include Coughenous and Busch, 1978; Blunden and Curry, 1985; Lockhart and Ilbery, 1987; Marsden, 1999; Countryside Agency, 2003; Dockerty et al., 2006; Future Foundation, 2006; Amcoff and Westholm, 2007; Moseley and Owen, 2008; Soliva et al., 2008; Shucksmith, 2012). For Ray and Ward (2006) the growth of these studies in the mid-1990s reflected governmental requirements for risk management and the 'engineering' of public discourses, along with a neoliberal 'modernisation imperative' which sought to reconfigure both governance and rurality, with the latter being increasingly viewed as "in large part, an outcome or artefact of the forces of change in wider society" (p. 4). Rather more generally, Anderson (2010, p. 777) has argued that "acting in advance of the future is an integral, yet taken-for-granted, part of liberal-democratic life". He adds, that such 'anticipatory action' has often been relatively ignored in academic studies, although suggests that there are at least three 'modes of practice' through which futures are made present in the present: the calculative, the imaginative and the performative.² This paper will outline these three modes relating them to the study of rural futures before focusing attention on the imaginative one, detailing how rural residents were able to fabricate visions of the future of their place of residence and whether these did, or did not, imply change from the present. Attention is then paid to exploring the explanations, or narratives, given by people as to the degree to which they could foresee transition or non-transition. The paper concludes by briefly considering the significance of the study to attempts at fostering transitions to rural low carbon futures.

2. Modes of practicing rural futures in the present

2.1. The calculative: calculating probable/plausible rural futures

The first mode of practice identified by Anderson is 'calculation', which he identifies as the making present of futures "through the domain of numbers". Such a mode of practice is enacted in many of the rural future texts cited previously, which make use of a series of empirical-analytical analysis techniques based on measurements of some present and/or past extrapolated into the future through use of some form of trend analysis (such as linear, non-linear or stochastic modelling). Such an approach is clearly evidenced in the Defra commissioned *Rural Futures* project, which made use of a Monte Carlo simulation techniques to propose 'probable futures' based on the variables used to construct the typology of contemporary rural areas (see Lowe and Ward, 2009; for details). The use of the phrase 'probable futures' is, as Gidley et al. (2009) note,

¹ Further details of the programme are available at www.relu.ac.uk. This work was supported by the Economic and Social Research Council [grant number RES-240-25-0025], with the project being entitled 'Adaptations to rural communities through living with climate change'.

² Anderson also identifies styles and logics as part of his 'conceptual vocabulary' for understanding anticipatory actions, but for the present purpose his identification of practices is deemed to suffice.



Fig. 1. Location of case study Districts.

widespread amongst such empirical-analytical approaches, as indeed is 'plausible futures' (see Fish, 2005). Both phrases, however, have been critiqued for privileging the past and present over the future; seeing the future as being, in large part, the product of existing presences in that they reflect the same dynamics as the past and present, rather than seeking out possibilities for being different and challenging existing states of affairs. Fish (2005), for example, suggests that the Countryside Agency's (2003) use of the notion of plausibility in its State of the Countryside Report 2020 is as "another way of saying acceptability: acceptability to what already is in place; acceptability to the prevailing order of things; acceptability to a priori assumptions about the inexorable nature and direction of change".

Such approaches cannot only be criticised from a critical social science perspective as reproducing existing relations of domination and inequality, but have also been critiqued from natural science perspectives for failing to recognise the irreversibility of some forms of change, with notions such as 'tipping points' being increasingly used to suggest that the future could be "radically different from the here and now" (Anderson, 2010, p. 780). To counteract such criticisms, some future studies have sought to develop 'alternative' as opposed to 'probable' or 'plausible' scenarios, although the latter are often retained in some form (see Haines-Young et al., 2010). Within such alternative perspectives, use is often made of Anderson's second mode of practice, 'imagination', which he describes as involving "practices based on creative fabulation" (Anderson, 2010, p. 784).

2.2. The imaginative: fabulating alternative rural futures

Anderson does not detail precisely what he means by the term creative fabulation, save for suggesting that its practices include "techniques such as visioning, future-basing, link analysis and scenario building" which create "affectively imbued representations that move and mobilize" (Anderson, 2010, p. 784-5).

The employment of such techniques is evident in work on rural futures, including the aforementioned *Rural Futures* project, which illustrated at least three techniques for imaging futures. First, it used images to represent the outcomes of the statistical analyses of both current and future states of the countryside (see Fig. 2), a practice that seeks to harness together practices of calculation and imagination. Secondly, these images were presented as part of an exercise in storytelling, being used to illustrate a set of scenarios that were described as "a way of telling stories about the future" (Future Foundation, 2002). Third, the images and narratives were promoted as artefacts in on-going processes that can yield as yet unthought-of futures, by presenting alternative stimuli for thought, discussion and thereafter action that serves as an "intervention on the future" (Anderson, 2010, p. 785).

The degree to which scenarios live up to the third descriptor can be questioned. Reference has already been made to Fish's critique of the Countryside Agency's *State of the Countryside Report 2020*, which not only argued that the report's 'alternative futures' were limited through the emphasis given to plausibility, but also via expectations of future users and uses of these scenarios, such that they become foreshadowed by expectations as to 'preferred futures'. These scenarios might hence be viewed as 'normative', even if not as explicitly as those created through techniques such as backcasting (see Fish, 2005).

Gidley et al. (2009) suggest that alternative as opposed to normative preferred scenarios can be constructed through what they term 'cultural-interpretive' approaches. In examining these it is useful to note that the term fabulation, used by Anderson, has circulated in discussions of science fiction, utopian, post-structural and feminist fiction writings where it has been used to refer to imaginings of worlds that are structured in ways that are 'other' than the present world (e.g. see Scholes, 1975; Barr, 1987, 1994; Deleuze and Guattari, 1994; Bogue, 2010). These fabulations seek to make present things that are absent from an existing world. They could be entirely imagined or be, and in practice arguably more

Table 1Rural character of case study Districts.

District	Rural futures area classification	Key features as identified in Lowe and Ward (2009)
East Lindsey	Deep rural	Areas that "resonate most closely with popular perceptions of the 'traditional' countryside" (Lowe and Ward, 2009, p., 1324). Agriculture still seen as major component of the local economy, often alongside tourism. Limited in-migration or commuting and relatively poor infrastructure and spatial connectivity.
Harbrough	Transient rural	Described as lacking in the "the energizing commuting systems" of the 'dynamic commuter' zones and the "prominent agricultural sector" of the 'deep rural areas', although having above-average levels of commuting centred on nearby 'provincial centres' and at least retaining current levels of population (p. 1325).
West Berkshire	Dynamic commuter	Areas seen to exhibit socio-economic dynamism and large numbers of commuters, some travelling considerable distances. Areas exhibit a 'de-localization' of residents' life-worlds "driven by affluence and lifestyle choice" with residents tending to be "well-connected into networks of power and influence" (p. 1323).

often are, drawn from other places or situations. Gidley et al. (2009), for example, suggest that the 'cultural interpretive' approach to scenario building explores alternative futures through engagements with 'non-Western' cultures, an approach that could potentially encompass explorations of indigenous, local, alternative and indeed, non- or more than human perspectives (see Bogue, 2010).

Whilst such perspectives have all been explored within rural studies (e.g. Wynne, 1996; Kearns, 1997; McClean et al., 1997; Gullo et al., 1998; Suchet, 2002; Jones, 2006; Halfacree, 2006, 2007; Panelli et al., 2008; Riley, 2008; Pickerill, 2008; Morris, 2010), they are rarely linked to notions of the future. One notable exception to this is Halfacree's (2006; 2007) attempt to add consideration of 'radical ruralities' into models of emergent post-productivist countrysides. In accordance with the notion of fabulations as worlds structured in other ways, Halfacree (2007, p. 131) defines radical ruralities as attempts to "take rural development in a fundamentally different direction to that which dominates today". He adds that such 'radical ruralities' can take many forms, or "subspecies", before focusing attention on what he describes as "arguably the most significant", which he characterises as "green 'radical rurality" that draws on,

"the established and deep foundational wells of communism and, most of all, anarchism ...but is most clearly manifested in such things as 'direct action'-orientated 'green' politics ... [and] has links with ... 'constructive' green politics ... [ranging from] ... ecological citizenship that foregrounds the search for 'sustainability', ... anti-capitalist economics, to celebratory statements such as Notes from Nowhere's (2003) We are Everywhere"

Halfacree, 2007, p. 131

Fabulations of the future in the sense of imaginings of worlds structured in ways other than the present can be quite central to the lines of thought identified by Halfacree, with rurality figuring prominently within many of them. Anarchists writings such as Kropotkin's (1899) *Fields, Factories and Workshops Tomorrow*, for example, promoted the future value of small, low density settlements with seemingly organic and localised relationships with the land and nature, as has more recent ecological and alternative-living texts such as Goldsmith et al.'s (1972) *Blueprint for Survival* and Simon Fairlie's (1996) *Low impact development.* It is, however, noticeable that such studies and associated imaginings fail to figure

within the range of 'alternative scenarios' being considered in most rural future studies. As Halfacree (2006, p. 312) argues, at the very least their inclusion would "extend the scope of rural possibilities" within deliberations over what sorts of rural future could be possible, as well as potentially acting to "critique forms of rural space that are emerging".³

Anderson's use of the term fabulation can hence be interpreted as providing an avenue for not only exploring the anticipatory practices of specialist 'futurologists', who in many instances can be seen as creating normative 'preferred futures' that are still very much tied to existing presences, but as also pointing to absences in the mainstream accounts of the present that appear in a range of alternative imaginings, such as those encompassed in Halfacree's description of radical ruralities. Anderson himself focuses his discussions on specialist futurologists, but the significance of including alternative futures can be seen in the scenarios created by John Urry and co-workers in relation to climate change and the emergence of post-carbon societies. Both 'After the car' (Dennis and Urry, 2009) and 'Climate change and society' (Urry, 2011) include a 'local sustainability scenario', which is explicitly visualized as representing "what many environmentalists argue for" and encompasses, amongst other features, "a network of self-reliant (and probably also semi-isolated) communities in which people live, work and mostly recreate" (Dennis and Urry, 2009, p. 149). Such a scenario is significantly different to the alternatives presented in, for example, the State of the Countryside Report 2020 and the Rural Futures project. Interestingly the former report included very limited reference to climate change, carbon emissions or energy supplies, whilst in the latter it was far from the principal driver of scenario construction. By contrast, in the works of Urry and coworkers, these factors are viewed as central social challenges to the future.

A third perspective on fabulation is that the term could encompass more mundane, routinized anticipatory imaginings connected to the performance of everyday life. As will be discussed in the next section, the significance of such assessments has been highlighted by work on public assessments of climate change and associated actions to reduce dependency on carbon based sources of energy and raw materials. Although this work can be seen to demonstrate the significance of both imaginative and performative modes of anticipatory action, much of it has emerged from studies adopting a calculative perspective. The next section will explore this movement, focusing in particular on its relevance to studies of rural futures.

2.3. The performative: climate and energy futures — from calculations and imaginings through to performance

The lack of reference to climate change and energy issues in reports such as *State of the Countryside Report 2020* and those related to the *Rural Futures* project can be seen to reveal how

³ There are interesting parallels between Halfacree's identification of green radical rurality and Cruickshank's (2009) identification of mental and material 'alternative rurality' in Norway, although Cruickshank, and also Winther and Svendsen (2012), emphasises the integration of these ruralities with modernisation perspectives rather than the extent to which they might open out alternative futures

Representations of present and future countryside: images from the Rural Futures Project

Present ruralities















Fig. 2. Representations of present and future countryside: images from the Rural Futures Project. Source: Future Foundations (2002) Scenario building for twenty year and fifty year futures Department for Environment Food Rural Affairs, London.

assessments of the future are conditioned by the concerns of a particular present: as Whitmarsh (2011, p. 690) has observed, the first decade of the twenty-first century has seen "a striking degree of scientific agreement" about the "human influence on climate and the significant risks posed by climate change for humans and nonhuman life"; an explicit acceptance by policy actors in at least some countries about the need to "curb greenhouse gas emissions"; and an acceptance by a clear majority of the population of such countries that climate change is an issue of future concern and contemporary action. As yet there have been few studies that have sought to examine the spatiality of such concern with respect to its rurality or urbanity: two recent surveys of public attitudes towards climate change in the UK, for example, make no reference at all to the possibility of geographical variability (Upham et al., 2009; Spence et al., 2010), although a series of localised studies have posited potential reasons for both heightened and lower levels of climate change concern amongst rural residents (e.g. Davidson

et al., 2003; Buys et al., 2012; Reser et al., 2012). On the other hand, it is clear that calculative assessments of the contributions that rural areas/populations may make to future climate changes are more widely made and have been drawn into public policy making.

The Commission for Rural Communities, for example, began to include increasingly complex calculations in its State of the Countryside Reports concerning the contributions that rural areas were making to greenhouse gas emissions, suggesting in its final report prior to abolition, that rural England was already experiencing climatic changes and that per capita greenhouse gas emissions were 8 per cent higher than in urban districts, with the difference being even greater in relation to transport where emissions were 26 per cent higher (Commission for Rural Communities, 2010; Fahmy et al., 2011). This situation is seen, in part, to reflect rural travel patterns, it being calculated that people living in areas classified as 'Villages' or 'Hamlets and Isolated Dwellings' travelled 42

per cent further than those in England as a whole (see also Anable et al., 1997, p. v). It was also calculated that people generated as much greenhouse gas emissions in relation to living within their homes as they do through travel (Commission for Rural Communities, 2010), with per capita emissions again being higher in rural areas than urban ones. These urban/rural differences are linked to the presence of larger proportions of 'hard to heat' and 'hard to treat' homes in rural areas where there is a greater relative number of old properties with solid walls whose insulation properties are less than those with cavity insulation and cannot be easily improved (BRE Housing, 2008). State of the Countryside Reports, for example, have repeatedly demonstrated that per capita domestic energy consumption is higher in rural areas than urban ones, although they also importantly caution that there may be crosscorrelation between rurality and spatial variations in socioeconomic variables such as social class, income, housing form and tenure, and levels of car ownership (Commission for Rural Communities, 2007; Department for Environment Food and Rural Affairs (Defra), 2008b). Attention is also drawn in these reports to calculations of fuel poverty that suggest that this impacts a higher proportion of households in some rural areas than it does urban households in the same region, in part due to large numbers of 'hard to heat'/'hard to treat' properties, low levels of pay in some rural businesses, and because many householders are not connected to the gas network and are reliant on other, often higher cost, fuels (Commission for Rural Communities, 2007, 2008, 2010; see also Preston et al., 2013).

Some rural studies have explored the imaginative and indeed performative modes of practice associated with climate change. For instance, work by Geoghegan and Leyshon on the Lizard Peninsula in Cornwall, England (Geoghegan and Leyshon, 2012; Leyshon and Geoghegan, 2012; Brace and Geoghegan, 2011), has sought to understand what climate change, or as they prefer to term it, "climate and the ways it may change" or even "weather variability" (Geoghegan and Leyshon, 2012, p. 57, 59), means to people within the course of their everyday lives. They recognise that complex calculative mechanisms of climate forecasting and projections of change have been established and are routinely 'translated' by people into the performance of their everyday lives (see Holloway, 1999), but suggest that these 'expert knowledges' are 'stalked' by "inconsistencies and ambiguities" (Brace and Geoghegan, 2011, p. 285) and that there are 'local knowledges' of climate constructed through everyday encounters. These two points are also made more generally by Hulme (2008, p. 7) who argues that climate needs to be seen as "an imaginative idea, an idea constructed and endowed with meaning and value through cultural activity", with climate being "read" in memory, behaviour, text and identity as

much as "measured through meteorology". He further adds that attention needs to be paid to the practices of translation through which calculative measures of climate are produced and circulated, whereby, "[w]eather is first captured locally and quantified, then transported and aggregated into regional and global indicators", which are then "abstracted and simulated in models before being delivered back to their starting places (locales) in new predictive and sterilised forms" (Hulme, 2008, p. 7). The reference to sterilisation relates to a claim that this process of translation involves a purification process in which "what climate means for people and places and the relationships between people and places over time" becomes lost through processes of abstraction, which are yet further heightened in relation to the discourse, and associated calculative practices, of global climate change. These construct and disseminate the notion of a 'globalised atmosphere', which has but a singular meaning, that of being a "depository for greenhouse gas emissions" (Hulme, 2008, p. 6).

Whilst providing a series of calculative devices for representing the future in the present, Hulme argues that this process of abstraction creates problems in that the artefacts created appear "distanced and un-situated" (Hulme, 2008, p. 8) relative to any particular individual person and their everyday life. In a subsequent study he states that climate change is "widely perceived by most people as distant in both space and time, affecting more vulnerable people and places elsewhere, or future generations" (Lorenzoni and Hulme, 2009, p. 385). Similar arguments are made by Slocum (2004, p. 413) who suggests that engaging people in climate change mitigation and adaptation is "especially difficult because global climate change is perceived as spatially and temporally distant", adding in a manner that accords with the argument of Hulme, that this should not be seen as unexpected "given that scientists, advocates, policymakers, and constituents have constructed a global interpretation, vision, and community around climate change". Giddens (2009, p. 2) makes a similar claim, suggesting that no matter how much people are told about the threats a changing climate might create, it is "hard to face up to them, because they feel somehow unreal – and, in the meantime, there is life to be lived, with all its pleasures and pressures".

For Giddens, this disjuncture between abstract representations and everyday interpretations has significant behavioural consequences as it facilitates climate change becoming "a back-of-mindissue rather than a front-of-mind-issue" (Giddens, 2009, p. 2), with people thereby failing to consciously transform their behaviours. A series of studies have shown that awareness of climate change is high, as are expressions of a willingness to take action to mitigate its emergence (e.g. Poortinga and Pidgeon, 2003; Norton and Leaman, 2004; Poortinga et al., 2006; Upham et al., 2009; Whitmarsh, 2009; Whitmarsh et al., 2011). However, these same studies also indicate that much lower percentages actually undertake these actions, a situation also observed in relation to carbon energy use (e.g. see Upham et al., 2009; Whitmarsh et al., 2011).

Such disjunctures have been interpreted through a variety of concepts, including the 'attitude-behaviour gap' (Ungar, 1994; Department for Environment Food and Rural Affairs (Defra), 2005), the 'intention-behaviour gap' (Barr, 2004b; Barr et al., 2006), the 'value action gap' (Burgess et al., 1998; Blake, 1999; Barr, 2004a) and some variant of the 'deficit model of public understanding' (Owens, 2000; Miller, 2001; Sturgis and Allum, 2004; Lorenzoni et al., 2007). The last can be seen as a broader umbrella concept encompassing aspects of the others such that lack of knowledge, trust, experience, perceptible outcome or motivation is seen to account for the lack of activity. The focus of such interpretations often lies on accounting for these deficits, with attention concentrated on issues such as the amount and form of information disseminated to people, the extent to which source

⁴ These cautionary remarks are significant not least in highlighting the risks that calculative approaches can run of reproducing a rural-urban dichotomy. Whilst percapita energy levels have been shown to be higher in rural areas than urban ones, this pattern may well not be reflective of specifically rural characteristics. Preston et al. (2013, p. 42), for example, have argued that rural-urban differences household carbon dioxide emissions are "modest relative to other socio-demographic variations", particularly income, and suggest that whilst rural domestic fuel emissions are 25 per cent higher in rural areas than urban ones, such variations may be a product of socio-economic circumstances, as well the lack of mains gas supply in some rural areas. It is also important to recognise that there may also be important intra-rural, and indeed, intra-urban variations. Similar cautions are made, from a radical green perspective, by Fairlie (1996) with respect to transport emissions. He argues, for instance, that whilst statistics relating to car ownership and use tend to place rural populations above urban ones, significant numbers of people "live successfully in the countryside without regular access to cars" (p. 65), as well as highlighting how many low income residents that were most reliant on public transport "have been eased out of the countryside by an invasion of rich motorized incomers" (p. 66) and suggesting that rural settlements have a much greater potential to supply themselves with localised resources.

and mode of dissemination may influence information reception, and the extent to which incentives or 'nudges' might be created to induce closing the dissonances of stated attitudes and behaviours (e.g. see Monroe, 2003; Moser and Dilling, 2004; Lowe et al., 2006). Such 'deficit' interpretations can, however, be criticised for neglecting consideration of the material and cultural barriers, or 'lock-ins', that can limit behavioural implementations of intentions (see Unruh, 2000: Sanne, 2002: Shove, 2003: Barr and Gilg, 2007: Lorenzoni et al., 2007; Nye et al., 2010); the "rich assembly of reactions" (Stoll-Kleemann et al., 2001, p. 107) that can surround people's engagement/non-engagement with mitigation and adaptation activities; and the degree to which people have established imaginative constructions that pre-exist those constructed through the calculative practices of climate change or energy 'experts' (see Whitmarsh et al. (2011) on the 'empty vessels' assumptions of 'deficit models').

In relation to the last argument, Nye et al. (2010) argue for the study of on-going everyday energy use rather than a narrow focus on the adoption of low carbon practices, whilst Hulme (2008) has argued for research that explores how people in the course of their everyday lives endow climate with cultural meanings, often through practices that are quite different from the calculative practices of climate scientists and weather forecasters. Hulme et al. (2009, p. 200), for example, argue that people and communities often construct understandings of climate through memories of unusual or personally salient events or affective experiences, current experiences and expectations about the future, and climate related cultural norms and imagery (such as the "expectation of a white Christmas ... reiterated every festive season"), with technological changes such as the adoption of central heating also playing a role. Geoghegan and Leyshon (2012) similarly stress the significance of 'embodied and experiential knowledges', suggesting that farmers or other land managers may assess changes in climate through the presence/absence or timing of "the extra labour of the harvest", or when "in the summer" they might "stop wearing ... wellies", or through more affective practices such as "the stressful anticipation of rain", or indeed, no rain.

Such arguments connect to Anderson's discussion of imaginative and performative modes of practice, particularly when conjoined with claims that attitudes and behaviours are more likely to change after involvement with imaginative and performative interventions. O'Neil and Hulme (2009, p. 408), for example, suggest that people engaged with climate change information that they could connect to their "daily lives, local area or nature" but were, at times, actively disengaged by expert knowledge when it appeared to be overly complex or "invoked emotions such as helplessness or boredom" (see also O'Neil and Nicholson-Cole, 2009). Nicholson-Cole (2005, p. 264) identified similar findings, suggesting that people were often "more touched by national and local imagery concerning climate change", a finding they ascribe to this imagery having more experiential resonance, being both easier to cognitively relate to and also, in some cases, more emotionally "upsetting". She also argued that people's understandings of climate change were influenced by inter-personal communication with friends and relatives, and that people often constructed highly imaginative constructs when they were uncertain or confused.

Whilst performative and imaginative practices and associated affective feelings may foster or discourage engagement, and thereby behavioural change, it is important to recognise the significance of both material conditions and the complex responses associated with interventions. In relation to the former, a series of studies of climate change and energy conservation interventions have detailed how behavioural changes can be induced in the short-term but dissipate over time (Milne and Boardman, 2000; Lowe et al., 2006; Sorrell et al., 2009). It has also been

highlighted that interventions may not only fail to elicit any engagement but can also create active rejection or hostility to the concept being promoted: or as O'Neil and Hulme (2009) phrase it, create not only 'non-engagement' but also 'disengagement'. Such studies highlight the need to examine the range of reactions to interventions, as argued by Stoll-Kleemann et al. (2001).

These reactions can be seen to encompass not only those related to direct interventions but also responses to the more general situation identified by deficit studies, namely the presence of disjunctures between awareness of climate change and carbon issues and enactions of mitigation or adaptation behaviours. Within these studies there is something of a presumption that it is only academics, policy experts and committed environmentalists that are aware of, and concerned about, these disjunctures between awareness and behaviour. However, Stoll-Kleemann et al. (2001) claim that such disjunctures are widely recognised by people, albeit in often highly complex and far from transition focused ways. They argue, for instance, that people often make use of a range of "psychological devices" (p. 107), or self-focused "interpretations" or "stories" (p. 115), to resolve, deny or displace this dissonance. Whilst the former might well involve seeking to 'close' the gaps between beliefs and actions, the latter do not, instead providing interpretations or narratives that people can use to explain to themselves, and others, why this disjuncture exists.

Such arguments are an important addition to understanding how people engage with the future, highlighting how engagement and disengagement are not simply the products of the dissemination of calculative assessments or fabulations but involve emotional and affective relations as well. As Stoll-Kleemann et al. (2001, p. 108) put it, studies need to recognise that transformations to behaviour and lifestyle patterns are the product of more than just discursive awareness-raising but involve "personal, social and psychological influences that are not readily shifted around by language or by exhortation". Nye et al. (2010) make similar comments in a review of psychological and sociological perspectives on energy and calls for transitions in energy use, whilst Lorenzoni and Hulme (2009) make reference to Stoll-Kleemann's ideas in a study that identifies four distinct positions, or narratives of engagement, with the notion climate change, ranging from the 'engaged' who are "worried and concerned about climate change", through people who express 'doubt' or are 'uninterested' in the concept, and onto those who 'deny' its existence. Public discourse has tended to focus on the two more extreme positions, as arguably has academic discourse, although increasingly there is recognition of the need to investigate intermediate positions, and explore not only the formation, or non-formation, of engaged positions but also those of non- or dis-engagement. Research commissioned by Defra, for example, has identified 7 environmental attitudinal/behavioural clusters, ranging from the 'honestly disengaged' through to the 'positive greens' via a range of intermediate positions differentiated according to their motivation and ability to act (Department for Environment, Food and Rural Affairs (Defra), 2008a; see also Barr et al., 2006, Department for Environment, Food and Rural Affairs (Defra), 2006). However, despite such work, Wolsink's (2007, p. 1199) comment that research of public attitudes to wind farms have tended to "leave the cause of opposition unexplained" can be viewed as having more general relevance, with opposition to or non-engagement with many forms of environmental transition being relatively unexamined.

The issue of narratives of transition and non-transition have clear significance to rural studies. As already mentioned, calculative practices have sought to detail how rural areas might contribute and be impacted by energy and climate futures, but relatively little work has been done on how people imaginatively and performatively relate to such futures. It has been noted that there have been

long-standing if often over-looked 'green radical' imaginings of rural futures, but as Ray and Ward (2006, p. 7) argue, dominant rural imaginaries appear to find it "difficult ... to imagine a rural futurology" in the sense that the rural is widely defined as the "antithesis of change". As they, and people such as Murdoch and Pratt (1993) and Cruickshank (2009) argue, the rural is widely conceived as being the opposite or other of modernity: as being the place of the pre-modern, the natural, the historic, the timeless, the unchanging. Ray and Ward (2006, p. 8) suggest that attempts to inject change into imaginings of the future ruralities were seen to imply "the liquidation of the rural" as it became, in effect, viewed as some form of urban space.

3. Anticipating futures in four English villages

Having explored anticipatory modes of practice and their relation to rural studies in general, attention now moves to considering these in relation to people residing in the four villages that were the focus of a study investigating how people in rural communities respond to issues of climate change mitigation and adaptation. In each village, a questionnaire-based survey was conducted, with 194 residents over the age of 18 being interviewed across the four villages between October 2011 and May 2012.⁵ The questionnaires involved open and closed questions exploring people's everyday practices within and beyond the settlement, their understandings of the place in which they lived, and the degree to which they could, or could not, foresee these changing in the future. The questionnaire opened up potential for both the deployment of calculative anticipations of the future focused on taking some "measure of the world" (Anderson, 2010, p. 784), and also allowed a range of imaginative and performative assessments of the potential futures of these villages, as illustrated below.

3.1. Calculative anticipations of energy and climate futures

In relation to calculative modes of practice, for example, the questionnaire enabled assessments of the degree to which life within these villages was 'carbonised' in the sense implied by Urry (2011, p. 16): that is, dependent on the consumption of carbon-based energy. As outlined elsewhere (Phillips et al., 2012; Dickie and Phillips, forthcoming; Phillips and Dickie, forthcoming), analysis indicated, for instance, that residents of the four villages demonstrated heavy reliance on private motor vehicles, with under 3 per cent of households having no vehicle access and almost 86 per cent of respondents stating that they had never used public transport from their villages. It was also evident that people within the case study villages travelled considerable distances to work (Fig. 3), with cars also being used extensively to access a range of resources and services (Fig. 4). In both practices, urban locations figured strongly as the destination of travel.

The questionnaire enabled localised patterns of domestic energy use to be explored, recording, for instance, that over a quarter of the interviewed households appeared to have domestic electricity bills of over £1000 per annum, well above the annual average for England and Wales, which lay at £469 in 2011 (Department of Energy and Climate Change, 2012). Despite these large energy bills, 64 per cent of households apparently made no attempt to

monitor their energy bills, even through examination of their bills, with 20 per cent of household respondents stating that they did not even know roughly how much they were paying annually for electricity. It did appear, however, that householders were seeking to change aspects of their everyday life, environments and behaviours to mitigate domestic energy use: 91 per cent apparently making use of energy-saving light bulbs, 74 per cent turning appliances off standby and 69 per cent turning their heating down to save energy.

The questionnaire also clearly demonstrated that responses related to contemporary energy use were regularly linked into assessments of the future. Fig. 5, for example, shows that rising energy costs were an issue of concern for many households, with 56 per cent of respondents stating that they were 'very concerned' that fuel for transport would become unaffordable and a third more being 'fairly concerned'. This Figure also indicates that similar levels of concern were expressed in relation to the price of domestic energy and that people were concerned about issues of national energy security of supply and reliance on public transport. Less immediate issues relating to the longer-term availability of fossil fuels were also in evidence, with just over a quarter of residents stating that they were 'very concerned' about fossil fuels running out and a further third stating that they were 'slightly concerned' about this issue.

Comparison with Fig. 6 suggests that levels of concern related to future energy costs and availability were similar to expressions of awareness about climate change, with 77 per cent of respondents stating that they thought that the world's climate was changing, a figure markedly higher than the proportion of people who thought that their village had changed physically, that their local environment was changing, or were worried about these changes. These findings support the contention of people such as Lorenzoni and Hulme (2009) and Slocum (2004, p. 413) that climate change is often seen as something abstract that does not impact on people's

Places of work of residents of 4 case study villages



Fig. 3. Places of work of residents of 4 case study villages.

⁵ The identity of the villages has not been disclosed in this paper, principally because some of the people interviewed expressed a wish that their village not be identified within the outputs of the project. Whilst no guarantee was made to this effect, both because it may prove difficult to sustain anonymisation even when the identities of these villages are not given and because some participants expressed a counter-desire, in the case of the current paper it was decided that the identity of the villages could reasonably remain undisclosed.

Distance travelled to access basic commodities and services

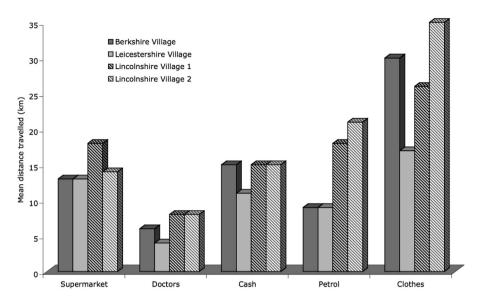


Fig. 4. Distance travelled to access basic commodities and services.

local environment, although in contrast to these studies, it was found that 78 per cent of the people who thought that climate change was occurring also thought that the UK was already experiencing its impacts.

As previously discussed, the distancing of climate change from local contexts has been associated with disjunctures between popular understandings of climate change and the calculative pronouncements of climate change scientists, and between stated expressions of concern about climate change and the adoption of climate change mitigation and adaptation practices. Both disjunctures were evidenced in the study villages. Reference, for example, has already been made to the lack of monitoring of energy consumption amongst the people interviewed, despite clear expressions of concern about energy prices. Similarly, despite seemingly widespread expressions of concern about climate change, as Fig. 7 illustrates, many of the residents interviewed were seemingly unengaged with, or indeed even contemplating, many carbon- and

energy-reducing activities, even though many undertook other environmentally friendly activities such as recycling. Furthermore, when residents were asked about how other people in the village thought about climate change, there were repeated responses indicating that the issue of climate change was rarely, if ever, expressed within everyday conversations in the village:

"I wouldn't have a clue. It's not a thing that tends to come up in conversation very often";

"Don't think they do [think about climate change] really, I was just thinking, when we did the community plan nobody raised it as an issue";

"think to most people it's the elephant in the room. It's one of those things that everyone knows about but no one really talks about".

Levels of future energy concerns

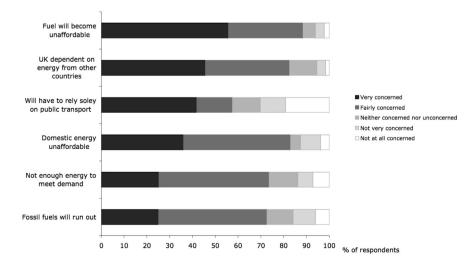


Fig. 5. Levels of future energy concerns.

Environmental awareness and concern

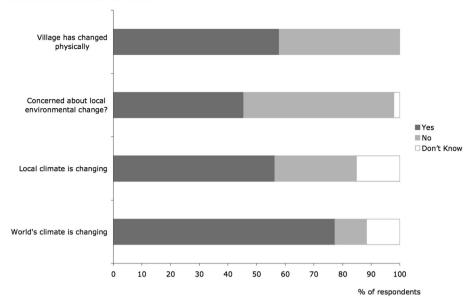


Fig. 6. Environmental awareness and concern.

This lack of everyday discussion indicates that climate change was far from the normative influence on attitudes and behaviour that, say, recycling has become in the UK (see Barr, 2004a,b; Barr and Gilg, 2007). Despite awareness of the risks of climate change it very much appears to remain an absent presence in everyday anticipatory reflections.

This is not to say that people were oblivious to changing weather or environmental conditions. Figs. 8 and 9, for example, indicate that many respondents clearly perceived that there had been change in both climate and environmental conditions over the previous 5—10 years, although there was considerable variation in the changes identified, stemming at least in part because people's

interpretations of change were, as suggested by the likes of Hulme (2008) and Hulme et al. (2009), clearly connected to memories of unusual, personally salient or affective experiences:

"we've had snow but prior to that I've brought up 2 children who are now in their 30s and the toboggan was never got out but it would have done in the last 10 years or the last 5 years";

"I don't have all the facts and figures and charts and temperature ... I go on how many times I have to break the ice in the water bucket, I'm sort of in tune with climate but I can't say it's any more or, people say the winter's getting warmer, but in the 70s we'd get those heat waves".

Engagement with Environmental Activities

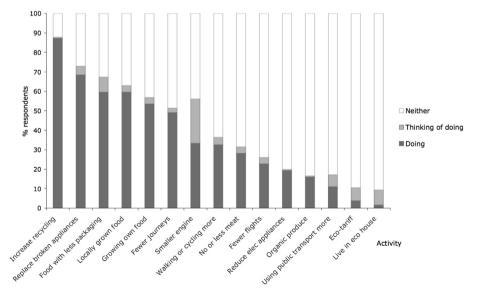


Fig. 7. Engagement with environmental activities.

Observed changes in local weather conditions over preceding decade

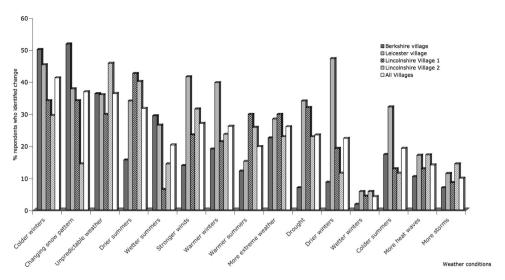


Fig. 8. Observed changes in local weather conditions over preceding decade.

Such interpretations illustrate the imaginative and performative ways in which residents engage with issues of climate change, with the disjunctures between these everyday interpretations and the calculative ones of climate change scientists not being one of simple disengagement but rather one of alternative modes of practice. Furthermore it was clear that Leyshon and Geoghegan's (2012, p. 240) claim that climate change is a term that is 'pervaded' by variability and contrariness, as well as denial, can be seen to resonate clearly with the responses of many of the villages being studied. There were, for example, numerous seemingly highly contradictory assertions about the climate, as well as clear evidence of ambiguity and uncertainty:

"I'm in two minds about climate change and the rising of sea levels: it's either going to happen or scientists are scare mongering and it's not going to happen in which case it'll be much the same as it was before". Uncertainty and contradictory viewpoints were also very much in evidence in discussions of energy options, as well as quite strident voices of support and opposition to renewable energy developments:

"I've nothing against turbines but I don't know how efficient they are, some people say they're efficient and others don't, so I don't really know about those too much";

"The only threat we have at the moment is the bloody wind farms they are trying to put in. I am very much against it ... It won't spoil my view at all but they are so, the whole country is broke and they are wasting money. The bloody politicians are wasting money on these fanciful ideas";

"There's lots of people very opposed to them but they don't bother me to much extent. They are using natural energy aren't they and if you watch them they are quite fascinating I'd like solar power but I can't afford it".

Observed changes in garden and village conditions over preceding 5 to 10 years

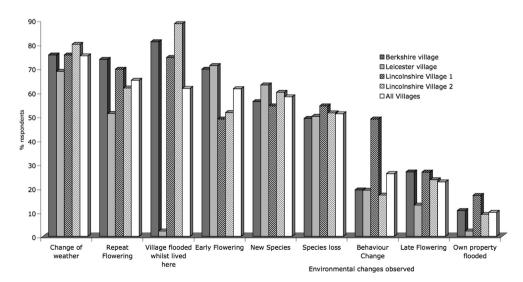


Fig. 9. Observed changes in garden and village conditions over preceding 5–10 years.

The presence of uncertainty has been viewed as an important contributor to the disjuncture between expressions of concern and the adoption of mitigation and adaptation practices: Lorenzoni et al. (2007, p. 452), for example, argue that many people in Britain are "ambivalent about the reality and severity of climate change" feeling that the "scientific evidence was unreliable, incomplete, conflicting; and because they were aware of political and societal controversy and inaction over climate change". Advocates of deficit models of public understanding tend to respond by arguing for more clarity and certainty in the communication of climate change calculative predictions and the use of more imaginatively centred forms of representation. However, such approaches can be criticised for presenting misleading purifications of knowledge, as well as continuing to neglect detailed consideration of the content and formation of everyday understandings of issues such as climate change.

Overall, the questionnaire based calculative practices have confirmed that life for the majority of residents in the study villages was heavily carbonised, and also that there was widespread anticipatory concern about future energy prices and availability, plus a broadly similar level of anticipation of climate change. In relation to both energy and climate change there was, however, considerable uncertainty and differences in opinion over the form and causes of future change and/or the mitigative or adaptive responses that could/should be adopted. Such contestation and uncertainty may well have contributed to a disjuncture between anticipatory concerns and mitigative/adaptive actions that was also strongly evidenced though the calculative practices of the guestionnaire, although such practices may themselves be in disjunction with everyday imaginative norms and performances. However, as will be argued in the next section there may well be more to the formation of such disjunctures than the presence of ambiguity and uncertainty.

3.2. Narratives of transition and stasis

One important facet of examining people's imaginative and performative anticipatory actions is considering how they incorporate responses to apparent disjunctures between expressions of concern and action, and indeed between expert calculative predictions and people's everyday anticipatory reflections. As discussed previously, Stoll-Kleemann et al. (2001) argue that people are often highly aware of such dissonances and seek to deal with them using a range of psychological devices, including self-justifying narratives.⁶

Drawing on this suggestion, attention was paid to the arguments that people were presenting in accounting for their interpretations of rural futures and the role that issues such as climate change and carbon dependency might play in these. These arguments emerged as transcriptions of responses to the open questions questionnaires were analysed using code-and-retrieve methods carried out using NVivo, an approach which Wiles et al. (1995, p. 90) argue is widely

adopted by researchers seeking to "capture the pluralism and polyvocality of lived experience". They further argue that such features can lead researchers into the analysis of narratives, which might minimally include "closely examining how a story is told within an interview, or how the interview itself unfolds as a kind of narrative" (Wiles et al., 1995, p. 92). In the present context, the former focus, which might be described as a 'paradigmatic analysis' of prosaic narratives' (Polkinghorne, 1995; Smeyers and Verhesschen, 2001), was adopted. Within this, the code-andretrieve methodology was focused upon the identification and analysis of interview segments which involved more than simple reportage of views, events or practices but included attempts to tell a story about them, in the sense the interviewee took responsibility for "making the relevance of the telling clear" (Polanyi, 1985, p. 13). In other words, the interviewee went beyond reportage to provide some elements of evaluation, justification or legitimation for the views, events or practices they were describing.

The code and retrieve method was used to not only identify "brief stories within ... each interview" but also "larger overall narratives" that emerged sequentially through the course of interviews and as common elements could be identified across interviews (Mills, 2001, p. 298). In the context of rural futures, eight such narratives were identified, which broadly fell into two groups.⁷

The first group of narratives was ones of stasis, or non-transition, whereby people provided arguments as to why they, and/or others, would not change. One of the strongest of these narratives was one of 'can't see or imagine change', whereby people claimed that change was not apparent or conceivable. This narrative often drew upon notions of rurality, which as previously discussed, has been widely represented as the antithesis of change, being variously characterized as a place of the pre-modern, the natural, the historic, the timeless and the unchanging. Whilst we are not suggesting that such a narrative of not being able to imagine or conceive of change cannot exist in urban or suburban areas, it was evident that notions of the rural as some anti-thesis of change were indeed widely enacted in interviews with residents of the case study villages:

"I would still describe it as a village, and when I have defined it as a village I mean it has a core, there is the community around the church/village pub ... I don't think if you went back to 1980, even post-war, here, I don't think there's really been a great deal of change. There has been some property development, [but] the pub was there, the church was there, probably there was a post office and a village stores. I don't envisage there being significant change ... [nor that] between now and 40 years time that [this] would dramatically change, and I think the kind of

⁶ The concept of narrative is both simple and complex, being used in the former sense to refer to situations that seem to involve people 'telling stories' that are, as Wiles et al. (2005) note, minimally seen as involving a sequence of connected events or situations. Wiles et al., however, identify a series of other aspects of narratives, including that narratives can be viewed as "both a mode of representation and a mode of reasoning", being a mechanism by which people "learn about, explain and organize experience" that is particularly significant "with respect to difficult and intense emotional concepts" (p. 90, original emphasis). This last feature is significant in the present context given that the studies of Stoll-Kleemann et al. (2001) and Lorenzoni and Hulme (2009) both emphasise affective dimensions of engagement and non-/dis-engagement.

⁷ Given that these narratives emerged a posteriori to the questionnaire rather than were an a priori focus, it is not possible to establish a comprehensive quantitative assessment of their relative significance. This is because they emerged only when people chose to provide evaluative/justificatory/legitimatory accounts in response to open questions rather than there being explicit questions requiring such responses. It is also clear that the narratives were not mutually exclusive, with some residents expressing elements of more than one narrative. For these reasons, and to stress the connections of these narratives to imaginative and performative modes of anticipatory action, the focus in this paper is on presenting the content of some of the stories presented to the research team in the interviews. In line with the emphasis on 'capturing the pluralism and polyvocality of lived experience', the content of these narrative will be presented through a series of illustrative quotes that we feel both 'give voice' to some of people that were interviewed as well as provide a 'thick description' as to the forms of argument being presented (see Geertz, 1973 for elaboration of these concepts and their value to qualitative research, and also Cloke et al., 2004). Clearly there are other forms of analysis and presentation of narratives that could have been adopted, including ones that make greater use of more quantitative descriptions.

environment that people live in [here] ... will [not make them] want to significantly change things ... cities and large towns will change much more ... The strong communal identity of village life is such that there is an in built reluctance to change";

"I don't think the village will change too much. I'm trying to think at what changes really could happen ... individual properties may change a little, but really, nothing much gonna happen";

"I can't see many differences, 2050, ... might be one or two more houses but not many ... I mean if you do it in reverse, let's go back 30 years, what the difference? Not much".

A second, also widespread, narrative of stasis was that the need for or direction of change was uncertain, so inaction was reasonable until greater certainty was evident. The presence of uncertainties over particular technologies and climate change has already been highlighted, and it was clear that such features fed into accounts of why actions were not being taken to mitigate or adapt to climate change or energy challenges:

"I've seen really compelling arguments ... that shows almost irrefutable evidence of it [climate change] yet I am also aware of some really smart people who are saying that it is not that cut and dried ... naturally it will change but we are also influencing it";

"The evidence is out on wind power. If there is evidence that wind farms are really making an impact I think I would be supportive".

Such accounts bear similarities with Lorenzoni and Hulme's (2009) identification of a 'doubting' attitude to climate change, although issues of uncertainty and doubt clearly also extended to a series of other issues including the value of particular forms of renewable energy production.

As previously noted, Lorenzoni and Hulme (2009) also identify an attitude of denial, whereby people explicitly reject arguments about climate change, considering that it either is not happening or likely to happen, or if it is, it will not significantly impact either them or other people. Such views are characteristic of the 'honestly disengaged' cluster identified in Department for Environment, Food and Rural Affairs (Defra) (2008a) and, as has already been illustrated, were often expressed very vocally by some case study interviewees. Hence a third narrative was that of non-transition because of an explicit rejection of calls for change.

A fourth narrative of stasis was centred around a desire to simply keep things as they are, which can be seen to be a variant of Lorenzoni and Hulme's (2009) 'uninterested' category of response that corresponds closely with Stoll-Kleemann et al.'s (2001, p. 107) identification of a 'comfort interpretation' of inactivity. Within this narrative people may appear to be more content with their current situation than with prospects of having to change. It was very clear in the current study that many residents had invested materially and psychologically in their current place of residence and lifestyle and did not wish to see this being changed:

"truthful answer, I don't want to think about it ... I think there will be some huge changes and I hope there won't be";

"I hope pretty much the same, I fear that the village could lose its identity... I think it would be bigger, I hope not this area, if that happened I wouldn't be here";

"Oh God, there will be solar panels everywhere, everything will be shining, all the rooftops will be shining, and there will be wind turbines I would imagine, if not small ones in people's gardens there will definitely be big ones surrounding the village, all around us ... Oh my God, I don't want to [imagine it], I don't know, it's just makes me feel sad, I don't know, I worry, I just worry".

A fifth narrative was one in which people were quite accepting of the notion of some form of transition being needed, but could not see how they personally could change, or effect the required level of change:

"Making fewer car journeys is personally impossible, and I don't think you can buy food with less packaging, it's up to the supermarket":

"I try not to concern myself with things I cannot influence ... If I thought I could do something about it I would worry";

"Obviously human causes contribute to the heating up but ... we've had cars for hundred odd years and there's, what, 50 million of us. Chinese have 1000 years of riding round on bicycles, millions of those start driving Range Rovers around the place it's going to have a far bigger impact than England switching off my tea to standby, it's just not going to make any sniff of a difference globally".

Such accounts can be seen to accord to some of the attitudes and views expressed by people classified as 'stalled starters', 'cautious participants' or 'sideline supporters' in Department for Environment, Food and Rural Affairs (Defra) (2008a), and they exhibit at least three of the four "closely interlinked interpretations" of denial identified by Stoll-Kleemann et al. (2001, p. 112), namely an unwillingness to give up customary habits and favoured lifestyles (the 'comfort interpretation' mentioned above); claims of a disjuncture between personal costs and public benefits, with the former outweighing the latter; and calls to the power of technology and state regulation to solve the problems of the future, perspectives clearly enacted in the following account by a rural resident addressing their concerns and actions with respect to energy and climate futures:

"I am concerned but I think it is in the gift of the government to do something about it ... they will come up with something, the technology is there, the oil companies just don't want to press the go button".

The five narratives of stasis outlined above were very widespread in the case study villages, perhaps unsurprising given the level of mitigation and adaptation activities previously documented. They were also often intertwined in people's accounts of their imaginings of rural futures and their associated anticipatory actions in the present, or their accounts as to why such actions were not being undertaken. There were, however, also people who adopted more transitional narratives, with at least three being clearly identifiable.

First, there were clearly some people who seemed to hold the view that change was simply inevitable, a view that often constructed rural areas as places that were in effect inescapably at the mercy of much wider forces of change:

"The only thing we can say about the future is that it'll be different to what it is now. [Even] if there's no climate change I think there's... going to a be a need for more housing ... I think that's inevitable, if there's more people there's going to be more houses and they're going to expand the existing areas of housing rather than start a completely new town somewhere";

"I think inevitably there is going to be some development on green belt land";

"I think it'll be the same in 8 years and then I think after 2020, when these farmers have died off and their sons have taken over, then the conglomerates will be buying the land and so you won't have the community because they'll just come in with contractors. ... [O]nce the conglomerates take over they'll want all the land, they'll amalgamate fields ... so they can use bigger machines because the machines are huge. Yes I think the fields will get bigger and ... I don't think there'll be much beef production: I think people then will be vegetarian almost ... I don't think it will be like it is now".

In such accounts change was not necessarily welcomed, but seen as something that would simply have to be accepted or accommodated in some way or another, a viewpoint clearly articulated by a resident in one of the Lincolnshire villages:

"If it's going to flood, it's going to flood, I was here when the East Coast flooded in 1953 ... [B]y today's costs, it was billions and billions of pounds put into creating a floodwall ... well they should have let it go, you know, and moved everybody because it's just costing too much. I think if it's going to flood, let it flood and move somewhere else".

A second set of narratives of transition could be described as utopian in that they foresaw that change might make existing conditions better, even though they themselves might not necessarily be advocates of such change⁸:

"I guess it might be more self-sustainable, I think that might be the way things might go... it will be more efficient I hope, efficient in terms of energy production";

"I think we need to ensure that the village doesn't become fossilised, we need more young people with young families ... I don't think it will become an idyllic village with a Midsomer Murders setting because it is too mixed and I like the economic mix as well as the rural mix";

"we're relatively progressive thinking family, so things have to change basically, you can't sit in the same houses and same way for ever".

Finally, there were people who were quite explicitly arguing for change related to climate change. These people, who might be variously characterised, at least in terms of attitudes and behaviours, as the 'engaged' (Lorenzoni and Hulme, 2009) or the 'positive greens' (Department for Environment, Food and Rural Affairs (Defra), 2008a), were in a clear minority in the study. They were, however, often very articulate and passionate about the need for action and change:

"We do try and make fewer car journeys, we do all our shopping and various things in Louth, well we try and do that once a week, rather than going in every few days for stuff. ... We avoid packaging like the plague, we buy fresh food, we have a policy in our family where we try and buy as locally grown as possible, during summer we grow as much as we can ourselves. ... We recycle virtually everything we can. We make the house as eco as well we can in a 300 year old house, we have deliberately not bought things like dishwashers and tumble driers and we only have one telly, we don't have a microwave";

"my concerns are mainly to do with the future, I worry myself sick ... I have arguments about everything, like, for instance, I am an eco-queen, I have recycled for years, I have recycled when Leicester didn't do it, I hated the fact that there was these landfills and England being a country that's not very big and everyone just dumps so we've got mountains and mountains of everything ... Regardless of what the outcome may or may not be, do you not think even if you did recycle and you cut back on energy consumption and your water consumption, that at the end it would always be good regardless of what the outcome is. It's a good thing and so I have, you know, I do get a real bee in my bonnet on many aspects".

4. Conclusion

This article has explored how the residents in four English villages engage with the future of their locations of residence in the course of their everyday lives. It has drawn on claims that the future is an important, if hitherto rather unexamined presence in the contemporary present. Rural studies provide a clear illustration of this in that although there have been a series of future orientated rural studies extending back over many decades, these appear marginal to the mass of past and present focused research, a situation that arguably reflects the significance of stasis in many imaginings of the English countryside. Having said this, Matless (1990, 1994; 1998) has clearly demonstrated that many texts interpreted as espousing anti-modernist preservationist resistance to change can often, under detailed examination, be read as actually promoting particular forms of change. Such divergent interpretations suggest that more attention needs to be paid to constructions of change and stasis within and beyond the countryside, particularly given claims that the contemporary present is a 'geohistorical moment' in which issues of transition and the questions over the nature of the future are especially prominent. It is clear that issues of transition and stasis have become of widespread, if arguably still of under-acknowledged significance, within studies of and discourses on the countryside, both in England and elsewhere.

These studies and discourses clearly extend beyond academic texts, with Ward and Ray (2004) highlighting how the UK Government became increasingly engaged in rural future studies in the mid-1990s, whilst Whitmarsh (2011) has highlighted how issues of climate change became an object of Governmental concern in the early 2000s. Whilst climate change is an issue extending beyond rural areas, there are grounds for suggesting that it is important for rural communities to consider it, not least because Governmental and other studies have suggested that these areas exhibit high per capita levels of carbon energy consumption and greenhouse gas emissions. Furthermore, rural areas are favoured sites for many forms of low carbon energy production as well as valuable carbon sinks. Given this, it is unsurprising that reports by organisations such as the Commission for Rural Communities began to evaluate the role of rural areas within climate change formation and mitigation, as well as the potential impacts of climate change on rural communities.

Many of these evaluations have taken the form of empirical-analytical analyses and hence fall within Anderson's (2010)

⁸ There is a potential link here to notions of altruistic values as discussed in an environmental context by Stern et al. (1995), Gilg et al. (2005) and Barr and Gilg (2006, 2007). However, the notion of utopianism is preferred here, as it arguably does not imply the notion of self-disinterest implied by the notion of altruism. Furthermore, whilst it is argued in the text that enactments of utopian narratives might not necessarily involve direct promotion of change this does not preclude that such narratives might, in some instances, come to motivate action.

calculative mode of making futures present. This study has engaged in aspects of such practice, presenting some calculative assessments of carbon dependency amongst residents of four villages located in three contrasting areas of England. These assessments have produced figures that support many existing interpretations of the significance for rural residents of carbon-based private travel and their high levels of domestic energy use, much of which is again carbon-based. It was also apparent that some residents in these villages were themselves undertaking calculative assessments as to the future viability of their current patterns of energy use, particularly with regard to travel costs. However, many people had low levels of energy awareness, not even monitoring their own domestic consumption levels, and there was little mitigative or adaptive actions related to concerns of energy futures.

A similar lack of mitigative or adaptive actions was evident in relation to climate change, albeit in this case there was little engagement in personal calculative assessments although awareness of such assessments made by government agencies and climate scientists was widespread. This study, like many others, details that a clear majority of people expressed general acceptance of climate change assessments, although this was accompanied neither by high levels of understanding or mitigative/adaptive actions. Whilst such disjunctures have been widely interpreted via some deficit model, this study has sought to develop an interpretation that explores the degree to which they reflect the presence of imaginative and performative constructions of climate change and energy, as well as material and cultural relations that limit actions and narratives to the self that act to resolve, deny or displace dissonances between beliefs and actions. The study identifies five such narratives as well as three narratives of transition that were employed with significantly less frequency within the case study villages.

The presence and strength of narratives of stasis, along with the evidence of highly carbonised lifestyles, suggest that there are major challenges in facilitating transitions towards low carbon rural futures. The arguments advanced in this paper imply that addressing these challenges does not simply require the establishment and/or greater dissemination of ever more rigorous empirical-analytical studies of plausible/probable futures. Such studies might make the future more clearly present in the present, thereby reducing some of the uncertainties that this study has demonstrated often act to provide a rationale for present inactivity with respect to mitigative or adaptive actions. However, the degree to which uncertainty reduction is possible is a complex issue given claims that the very notion of climate change is saturated with high levels of uncertainty. Attention therefore needs to be paid to whether there is scope for encouraging responses to uncertainty that are other than 'inactivity until the trends of the future make themselves evident in the present with a reasonable degree of certainty', by which time there might be, as emphasised by Giddens in his self-entitled paradox, little or no scope for creating any alternative futures. Anderson (2010), for example, highlights how the 'precautionary principle' has been widely promoted as an anticipatory logic because of its recognition of uncertainty.

Notions of alternative futures also potentially embrace issues of uncertainty, although as discussed in this article, endeavours to construct plausible or probable futures can be seen to reduce this by restricting futures to re-runs of past and present presences. By contrast, this article has promoted the notion of future fabulations, which are based around imaginings of worlds that contain desires that are absences from the present. Such imaginings could encompass the raft of radical ruralities discussed by Halfacree (2007), although these have hitherto been largely excluded from rural future works which, even whilst making use of creative visualisations, often remain firmly anchored to the contours of past and present worlds. An important area of future work is, we would

argue, to encourage engagement with fabulations of potential other worlds, both by researchers and people within or with governmental responsibilities for rural communities.

Such work is arguably of particular significance in rural contexts given that, at least within the four English villages studied here, there were significant numbers of people finding it difficult to conceive or imagine change within rural spaces. This inability encompassed past, present and future, with there being repeated claims that rural areas had remained unchanged from the past and would remain the same into the future. Such views may reflect the biographies of people's engagement with rural space, as well as the significance of stasis in many representations of the English countryside, with recent migrants to the countryside clearly having less extensive experiences of this space from which to make their assessments. Further areas of potential research would hence to be explore how attitudes to change may reflect migrational histories, whether greater awareness of past changes impacts on people's anticipatory assessments and images of the future, and whether empirical-analytical predictions and/or creative fabulations can alter people's ability and willingness to imagine other futures.

Uncertainty is not the sole reason given for disjunctures between acceptance of climate change and energy as objects of future concern and mitigative/adaptive actions, which in various ways act to make the future present in the present as well as account for a person's activity or inactivity. Indeed, whilst the thrust of work by people such as Anderson (2010) has been on how the future is made present in the present, Jones et al. (2012, p. 262) have recently argued that attention should also be paid to the range of "processes" that keep absences absent". Many of the narratives of stasis can indeed be seen as being ways to make futures absent from the present. The narratives of 'denial' and 'keep things as they are', for example, both seek to keep absent from the present future concerns related to climate change and energy shortage. They do this, however, in quite different ways: in the first instance by direct rejection of anticipations of such futures, whilst in the second a focus on the present is used to displace future concerns. The narratives of 'can't see change' or 'change is so uncertain' also serve to displace some future concerns although the future is still a highly active presence within these narratives. Attempts to shift behaviours in relation to climate change and low carbon transitions, we would suggest, need to take seriously the way these, and no doubt other, narratives to the self make certain futures both present and absent.

References

Amcoff, I., Westholm, E., 2007, Understanding rural change - demography as a key to the future, Futures 39, 363-379,

Anable, J., Boardman, B., Root, A., 1997. Travel Emissions Profiles. Environmental Change Unit, Research Report 17, University of Oxford, Oxford, Anderson, B., 2010. Pre-emption, precaution, preparedness: anticipatory action and

future geographies. Prog. Hum. Geogr. 34, 777-798. Anderson, B., Adey, P., 2012. Future geographies. Environ. Plan. A 44, 1529-1535.

Barr, M., 1987. Feminist fabulation; or, playing with patriarchy vs. the masculinization of metafiction. Women's Stud. 14, 187-191.

Barr. M., 1994. Feminist Fabulation. University of Iowa Press, Iowa City.

Barr, S., 2004a. Are we all environmentalists now? Geoforum 35, 231-249.

Barr, S., 2004b. What we buy, what we throw away and how we use our voice. Sustain, Dev. 12, 32-44.

Barr, S., Gilg, A., 2006. Sustainable lifestyles. Geoforum 37, 906–920.

Barr, S., Gilg, A., 2007. A conceptual framework for understanding and analyzing attitudes towards environmental behaviour. Geogr. Ann. B 89, 361-379.

Barr, S., Gilg, A., Shaw, G., 2006. Promoting Sustainable Lifestyles: a Social Marketing Approach — Final Summary Report. University of Exeter, Exeter.

Blake, J., 1999. Overcoming the 'value-action gap' in environmental policy. Local Environ. 4, 257-278.

Blunden, J., Curry, N., 1985. The Changing Countryside. Croom Helm, London. Bogue, R., 2010. Deleuzian Fabulation and the Scars of History. Edinburgh University Press, Edinburgh.

Brace, C., Geoghegan, H., 2011. Human geographies of climate change. Prog. Hum. Geogr. 35, 284-302.

BRE Housing, 2008. A Study of Hard to Treat Homes Using the English House Condition Survey. Defra and Energy Saving Trust, London.

Brown, G., Kraftl, P., Pickerill, J., Upton, C., 2012. Holding the future together. Environ. Plan. 44, 1607–1623.

Buys, L., Miller, E., van Megan, K., 2012. Conceptualising climate change in rural Australia. Reg. Environ. Change 12, 237–248.

Burgess, J., Harrison, C., Filius, P., 1998. Environmental communication and the cultural politics of environmental citizenship. Environ. Plan. 30, 1445–1460.

Chapman, I., 2014. The end of peak oil? Energy Policy 64, 93-101.

Cloke, P., Cook, I., Crang, P., Goodwin, M., Painter, J., Philo, C., 2004. Practising Human Geography. Sage, London.

Commission for Rural Communities, 2007. The State of the Countryside 2007. Countryside Agency Publications, Wetherby.

Commission for Rural Communities, 2008. The State of the Countryside 2008.

Commission for Rural Communities, 2008. The State of the Countryside 2008 Countryside Agency Publications, Wetherby.

Commission for Rural Communities, 2010. The State of the Countryside 2010. Countryside Agency Publications, Wetherby.

Coughenous, C.M., Busch, L., 1978. Alternative futures for rural America. In: Ford, T. (Ed.), Rural USA: Persistence and Change. Iowe State University Press, Iowa, pp. 211–228.

Countryside Agency, 2003. The State of the Countryside 2020. Countryside Agency, London.

Cruickshank, J., 2009. A play for rurality — modernization versus local autonomy. J. Rural Stud. 25, 98—107.

Davidson, D., Williamson, T., Parkins, J., 2003. Understanding climate change risk and vulnerability in northern forest-based communities. Can. J. For. Res. 33, 2252–2261.

Deleuze, G., Guattari, F., 1994. What is Philosophy. Verso, London.

Dennis, K., Urry, J., 2009. After the Car. Polity, Cambridge.

Department for Environment Food and Rural Affairs (Defra), 2005. Securing Our Future, HMSO, London.

Department for Environment, Food and Rural Affairs (Defra), 2006. An Environmental Behaviours Strategy for Defra. HMSO, London.

Department for Environment Food and Rural Affairs (Defra), 2008a. A Framework for Pro-Environmental Behaviours. HMSO, London.

Department for Environment Food and Rural Affairs (Defra), 2008b. Distributional Impacts of Personal Carbon Trading. HMSO, London.

Department of Energy and Climate Change, 2012. Average Annual Domestic Electricity Bills for UK Countries. Department of Energy and Climate Change, London.

Dickie, J., Phillips, M., 2014. Why do rural householders use so much energy? Energy and Buildings (forthcoming).

Dockerty, T., Lovett, A., Appleton, J., Bone, A., Sünnenberg, G., 2006. Developing scenarios and visualisations to illustrate potential policy and climatic influences on future agricultural landscapes. Agric. Ecosyst. Environ. 114, 103–120.

Fairlie, S., 1996. Low Impact Development. Jon Carpenter, Charlbury.

Fahmy, E., Thumim, J., White, V., 2011. The Distribution of UK Household CO2 Emissions. Joseph Rowntree, York.

Fish, R., 2005. Un-accomplishing the rural future. In: Lobley, M., Butler, A. (Eds.), Annual Review 2004: Centre for Rural Research. Centre for Rural Research, University of Exeter, Exeter, pp. 81–89.

Future Foundation, 2002. Scenario Building for Twenty Year and Fifty Year Futures.

Department for Environment Food and Rural Affairs, London.

Future Foundation, 2006. Rural Disadvantage. Commission for Rural Communities, London.

Geoghegan, H., Leyshon, C., 2012. On climate change and cultural geography. Clim. Change 113, 55–66.

Geertz, C., 1973. The Interpretation of Cultures. Basic Book, New York.

Giddens, A., 2009. The Politics of Climate Change. Polity, Cambridge.

Gidley, J., Fien, J., Smith, J.-A., Thomsen, D., Smith, T.F., 2009. Participatory futures methods. Environ. Policy Gov. 19, 427–440.

Gilg, A., Barr, S., Ford, N., 2005. Green consumption or sustainable lifestyles? Futures 37, 481–504.

Goldmith, E., Allen, R., Allaby, M., Davoll, J., Lawrence, S., 1972. A Blueprint for Survival. Houghton Mifflin, Boston.

Gullo, A., Lassiter, U., Wolch, J., 1998. The cougar's tale. In: Wolch, J., Emel, J. (Eds.), Animal Geographies. Verso, London, pp. 139–161.

Halfacree, K., 2006. From dropping out to leading on? Prog. Hum. Geogr. 30, 309—336.

Halfacree, K., 2007. Trial by space for a 'radical rural'. J. Rural Stud. 23, 125—141. Haines-Young, R., Potschin, M., Paterson, J., Moore, K., Silfwerbrand, G., 2010. The Development of Scenarios for the UK National Ecosystem Assessment. Centre

for Environmental Management, University of Nottingham, Nottingham. Holloway, L., 1999. Understanding climate change and farming. Environ. Plan. 31, 2017–2032.

Hulme, M., 2008. Geographical work at the boundaries of climate change. Trans. Inst. Br. Geogr. 33, 5-11.

Hulme, M., Dessai, S., Lorenzoni, I., Nelson, D., 2009. Unstable climates. Geoforum 40, 197–206.

Jones, R., Robinson, J., Turner, J., 2012. Between absence and presence. Space Polity 16, 257–263.

Jones, O., 2006. Non-human rural studies. In: Cloke, P., Marsden, T., Mooney, P. (Eds.), Handbook of Rural Studies. Sage, London, pp. 185–200.

Kearns, R.A., 1997. Constructing (bi)cultural geographies. N. Z. Geogr. 53, 3-8.

Kropotkin, 1899. Fields, Factories and Workshops Tomorrow. Freedom Press, London.

Leyshon, C., Geoghegan, H., 2012. Anticipatory objects and uncertain imminence. Area 44, 237–244.

Lockhart, S., Ilbery, B. (Eds.), 1987. The Future of the British Rural Landscape. Geo-Books, Norwich.

Lorenzoni, I., Hulme, M., 2009. Believing is seeing. Public Underst. Sci. 18, 383—400. Lorenzoni, I., Nicholson-Cole, S., Whitmarsh, L., 2007. Barriers perceived to engaging with climate change among the UK public and their policy implications. Glob. Environ. Change 17, 445—459.

Lowe, P., Ward, N., 2009. England's rural futures. Reg. Stud. 43, 1319–1332.

Lowe, T., Brown, K., Dessai, S., Doria, de França Doria, M., Haynes, K., Vincent, K., 2006. Does Tomorrow Ever Come?, vol. 15, pp. 435–457.

Marsden, T., 1999. Rural futures: the consumption countryside and its regulation. Sociol. Rural. 39, 501–526.

Matless, D., 1990. Ages of English design. J. Des. Hist. 3, 203-212.

Matless, D., 1990. Ages of English uesign. J. Des. 118t. 3, 207–212.

Matless, D., 1994. Doing the English village, 1945–90: an essay in imaginative geography. In: Cloke, P., Doel, M., Matless, D., Phillips, M., Thrift, N. (Eds.), Writing the Rural. Paul Chapman, London, pp. 7–88.

Matless, D., 1998. Landscape and Englishness. Reaktion Books Ltd, London.

McClean, R., Berg, L.D., Roche, M., 1997. Responsible geographies. N. Z. Geogr. 53, 9–15. Miller, S., 2001. Public understanding of science at the crossroads. Public Underst. Sci. 10. 115–120.

Mills, J., 2001. Self-construction through conversation and narratives in interviews. Edu. Rev. 53, 285–301.

Milne, G., Boardman, B., 2000. Making cold homes warmer. Energy Policy 28, 411–424.

Monroe, M., 2003. Two avenues for encouraging conservation behaviors. Hum. Ecol. Rev. 10, 113–125.

Morris, C., 2010. Environmental knowledge and small-scale rural landholding in south-west England. Geogr. J. 176, 77–89.

Moseley, M., Owen, S., 2008. The future of services in rural England. Prog. Plan. 69, 93–130.

Moser, S., Dilling, L., 2004. Making climate hot. Environment 46, 32–46.

Murdoch, J., Pratt, A., 1993. Rural studies. J. Rural Stud. 9, 411–427.

Nicholson-Cole, S., 2005. Representing climate change futures. *Computers*. Environ. Urban Syst. 29, 255–273.

North, P., 2010. Eco-localisation as a progressive response to peak oil and climate change. Geoforum 41, 585–594.

Norton, A., Leaman, J., 2004. The Day After Tomorrow. MORI Social Research Institute, London.

Notes from Nowhere, 2003. We Are Everywhere. Verso, London.

Nye, M., Whitmarsh, L., Foxon, T., 2010. Sociopsychological perspectives on the active roles of domestic actors in transition to a lower carbon electricity economy. Environ. Plan. 42, 697–714.

O'Neil, S., Hulme, M., 2009. An iconic approach for representing climate change. Glob. Environ. Change 19, 402–410.

O'Neil, S., Nicholson-Cole, S., 2009. Fear won't do it. Sci. Commun. 30, 355–379.

Owens, S., 2000. Engaging the public. Environ. Plan. 32, 1141–1148. Panelli, R., Allen, D., Ellison, B., Kelly, A., John, A., Tipa, G., 2008. Beyond Bluff oys-

ters? J. Rural Stud. 24, 41–55. Pickerill, J., 2008. From wilderness to WildCountry. Environ. Polit. 17, 95–104.

Phillips, M., Comber, A., Harper, D., Jarvis, C., Kaduk, J., Page, S., Pickerill, J., 2012. Adaptions to Rural Communities Through Living with Climate Change. ESRC End of Award Report, RES-240-25-0025. ESRC, Swindon.

Phillips, M., Dickie, J., 2014. Moving to or from a carbon dependent countryside? Energy Policy (forthcoming).

Polanyi, L., 1985. Telling the American Story. Ablex, Norwood.

Polkinghorne, D., 1995. Narrative configuration in qualitative analysis. In: Hatch, J., Wisniewski, R. (Eds.), Life History and Narrative. Falmer Press, London, pp. 5–23.

Poortinga, W., Pidgeon, N., 2003. Public Perceptions of Risk, Science and Governance. University of East Anglia and MORI, Norwich.

Poortinga, W., Pidgeon, N., Lorenzoni, I., 2006. Public Perceptions of Nuclear Power, Climate Change and Energy Options in Britain. Understanding Risk Working Paper 06–02. Centre for Environmental Risk, University of East Anglia, Norwich.

Preston, I., White, V., Thumim, J., Bridgeman, T., 2013. Distribution of Carbon Emissions in the UK: Implications for Domestic Energy Policy. Joseph Rowntree Foundation, York.

Ray, C., Ward, N., 2006. The Futures of Rural Policy. Centre for Rural Economy Discussion Paper Series No. 7. University of Newcastle, Newcastle upon Tyne.

Reser, J., Bradley, G., Glendon, I., Ellul, M., Callaghan, R., 2012. Public Risk Perceptions, Understandings and Responses to Climate Change and Natural Disasters in Australia and Great Britain. National Climate Change Adaptation Research Facility, Gold Coast.

Riley, M., 2008. Experts in their fields. Environ. Plan. 40, 1277-1293.

Sanne, C., 2002. Willing consumers or locked-in? Ecol. Econ. 42, 273–287.

Scholes, R., 1975. Structural Fabulatio. Notre Damme University Press, Paris.

Shove, E., 2003. Comfort, Cleanliness and Convenience. Berg, Oxford.

Shucksmith, M., 2012. Future Directions in Rural Development? Carnegie UK Trust, Dumfermline.

Slocum, R., 2004. Polar bears and energy-efficient light bulbs. Environ. Plan. 22, 413–438.

Smeyers, P., Verhesschen, P., 2001. Narrative analysis as philosophical research. Int. J. Oual. Stud. Educ. 14, 71–84.

Soliva, R., Rønningen, K., Bella, I., Bezak, P., Cooper, T., Egil Flø, B., Marty, P., Potter, C., 2008. Envisioning upland futures. J. Rural Stud. 24, 56–71.

- Sorrell, S., Dimitropoulos, J., Sommerville, M., 2009. Empirical estimates of the direct rebound effect. Energy Policy 37, 1356–1371.
- Spence, A., Venables, D., Pidgeon, N., Poortinga, W., Demski, C., 2010. Public Perceptions of Climate Change and Energy Futures in Britain, Understanding risk working paper 10-01. School of Pychology Cardiff University, Cardiff.
- Stern, P., Dietz, T., Guagnano, G., 1995. The new ecological paradigm in social-psychological context. Environ. Behav. 27, 723-743.
- Stoll-Kleemann, S., O'Riordan, T., Jaeger, C., 2001. The psychology of denial concerning climate mitigation measures. Glob. Environ. Change 11, 107–117. Sturgis, P., Allum, N., 2004. Science in society. Public Underst. Sci. 13, 55–74.
- Suchet, S., 2002, 'Totally wild'? Aust, Geogr. 33, 141–157.
- Ungar, S., 1994. Apples and oranges. Can. Rev. Sociol. 31, 288–304.
- Unruh, G., 2000. Understanding carbon lock in. Energy Policy 28, 817–830.
- Upham, P., Whitmarsh, L., Poortinga, W., Purdam, K., Darnton, A., McLachlan, C., Devine-Wright, P., 2009. Public Attitudes to Environmental Change. Research Councils UK. Swindon.
- Urry, J., 2011. Climate Change and Society. Polity, Cambridge.
- Verbruggen, A., Al Marchohi, M., 2010. Views on peak oil and its relation to climate change policy. Energy Policy 38, 5572–5581.

- Ward, N., Ray, C., 2004. Futures Analysis, Public Policy and Rural Studies, Centre for Rural Economy Working Paper 74. University of Newcastle, Newcastle upon
- Whitmarsh, L., 2009. What's in a name? Commonalities and differences in public understanding of 'climate change' and 'global warming'. Public Underst. Sci. 18, 401-420.
- Whitmarsh, L., 2011. Scepticism and uncertainty about climate change. Glob. Environ. Change 21, 690-700.
- Whitmarsh, L., Seyfang, G., O'Neill, S., 2011. Public engagement with carbon and climate change. Glob. Environ. Change 21, 56–65.
 Wiles, J., Rosenberg, M., Kearns, R., 2005. Narrative analysis as a strategy for un-
- derstanding interview talk in geographic research. Area 37, 89–99. Winther, M., Svendsen, G., 2012. 'The Rotten Banana' fights back: the story of a Danish discourse of *inclusive* rurality in the making. J. Rural Stud. 28, 466–477. Wolsink, M., 2007. Wind power implementation. Renew. Sustain. Energy Rev. 11,
- 1188-1207. Wynne, B., 1996. May the sheep safely graze? In: Lash, S., Szerszynski, B., Wynne, B. (Eds.), Risk, Environment and Modernity. Sage, London, pp. 44–83.