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Energy consumption and everyday life: Choice, values and agency through a practice theoretical lens

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Abstract

In policy and research there is increasing recognition that the scale of transitions necessary for a low carbon society will require significant reductions in energy demand. Concurrently, advancing knowledge about energy practices has been highlighted as important in developing a basis for the delivery of less energy intensive configurations. In this paper we examine interview (participant n=53) and visual (photographic) data collected across two UK communities to develop understanding of energy consumption as part of everyday life. We conduct our analysis through a practice theoretical lens, in particular drawing on Bourdieu's concepts, to develop social theoretically informed interpretations of energy demand and its constitution through daily practice. We conclude reflecting on the implications of our analysis for conceptualising societal change and the role of policy in reducing energy demand.

Key words

Energy demand, sustainable consumption, public engagement, climate change, lifestyle change, low carbon transitions

Introduction

It is widely accepted that reductions in energy consumption will be necessary in order to meet core aims associated with delivering a low carbon energy system (e.g. Department of Energy and Climate Change, DECC, 2011; Eyre et al. 2011). Whilst historically energy as an inconspicuous form of consumption had been somewhat overlooked (Shove, 2004; Warde and Shove, 1998), it has come to be of increasing significance in debates about sustainability.

In particular, its relevance in terms of resource consumption has been highlighted, bringing focus on questions of how reductions in energy use might be achieved. In this context, energy research has engaged critically with the kinds of underlying theoretical orientations that govern interpretations of social action and social change (Shove, 2004; Shove, 2010; Gram-Hanssen, 2011; Wilhite, 2009). Scholars have called for a move away from a focus on individual attitudes and behaviours toward an analysis of practice as a way of tackling the dynamic nature of social action and the possibilities for change (e.g. Shove, 2010).

Whilst the arguments with regard to *theorising* energy consumption in terms of practice are by now well developed, to date, only a small number of empirical analyses have engaged fully with such ideas (e.g. see Gram-Hansen, 2010; 2011; Hand et al. 2005; Hargreaves, 2011; Hui, 2012; Strengers, 2011; Watson and Shove, 2008). In this paper, we seek to add to the body of empirical research that is emerging in this area through an analysis aimed at examining the way energy is consumed as part of everyday practice. **The primary concern is to contribute insights pertinent to understanding the dynamics of energy demand and opening up questions about key concepts of choice, agency and values. We tackle this using Bourdieu's practice theory, along with Richard Wilk's development of it, as a basis for critically engaging with these concepts and their dominance in debates about how to move toward less energy intensive lifestyles. Bourdieu's represents a very different practice theoretical orientation to that of Shove and colleagues, but offers a similarly critical lens for examining social action and change as complex, dynamic processes that emerge in and through practice.**

Unsophisticated notions of 'choice' and 'agency' often underpin policy and wider socio-political action in relation to energy demand reduction. In particular, the notions of individual

rational choice and a hyper-reflexive form of agency represent strong (if unstated) assumptions that are central to many endeavours (Shove, 2010; Butler, 2010). Multiple campaigns are identifiable that are directed at encouraging people to make different decisions and choices about how they use energy (e.g. DECC, 2013; Green Alliance, 2011; also see Corner and Randall, 2011). These by now familiar calls to drive less, turn T.V's off standby, turn our thermostats down, or purchase insulation, tend to position such practices as the consequence of discrete individual economic choices that are unconnected to wider structures or our relations with others (Butler, 2010). By contrast scholars have questioned such notions of agency and choice opening up discussion about the 'degree to which routines are the products of our own volition, or patterns forced upon us by circumstance and the power of others' (Wilk, 2009: 143; see also Shove, 2010). 'Choice' and 'agency', as important dimensions of social strategies to reduce energy consumption, thus represent interesting concepts for exploration.

Equally, a large body of research has been dedicated to understanding 'values' and, particularly, the possibilities for addressing what has been termed the 'value-action gap' (e.g. see Ajzen, 1991; Barr and Gilg, 2006). This notion refers to the basic observation that though people might hold 'environmental values', they often do not act in ways consistent with them. Important in this work are theoretical models such as the Theory of Planned Behaviour (TPB), which conceptualises social behaviour as being contingent on two major influences; 'intention to act' and 'perceived behavioural control' (Ajzen, 1991). Intentions are seen as arising from a combination of social norms and attitudes towards the behaviour. From this basis multiple models have emerged encompassing ever more factors that might influence social behaviour but all fundamentally maintaining the intention-behaviour link. Such factors have been broadly categorised as 1) the situational circumstances in which individuals are

placed, and 2) the socio-environmental values individuals hold and attitudes towards specific behaviours (Barr and Gilg, 2006: 908). Central to the way that values are conceptualised, in this regard, is an understanding of social action as both intentional and individual. Again this has proved the subject of debate, with authors arguing that such conceptions fail to consider the habitual, routinized and relational nature of much social action (see Hitchings et al. 2013; Shove, 2010). This forms, then, a further area of interest within the current analysis.

In their conceptual work both Bourdieu and Wilk contextualise social action as arising not through individually motivated, hyper-rationalised, and linear processes of decision-making (i.e. proceeding from values directly to action), but through complex relations between agency and structure (encompassing both social and material structures). As such, their concepts offer a basis for critical engagement with the notions of choice, agency and values that are underpinned by less dynamic understandings of social action. This paper explores data arising from qualitative interviews (participant n= 53) that were focused on discussing energy as part of everyday life. Through the analysis we use Bourdieu's (1990; 1998) concepts of dispositions, habitus, social field, and social reproduction, along with Wilk's (2009) work on 'cultivation' which builds from Bourdieu, as a basis for developing analytic insights regarding how notions of choice, agency and values might be considered differently, particularly in terms of their role in the constitution of ways of living. The concepts developed by Bourdieu and Wilk bring a lens that enables a re-examination of what these notions might offer when thought in radically ways to those dominating current debates as discussed above. It is to a brief introduction of Bourdieu and related concepts from Wilk that we now turn ahead of the methods and discussion of empirical materials.

Concepts for researching energy consumption

Several authors provide theories of social action that can be broadly described as practice theories (e.g. see Bourdieu, 1990; Giddens, 1984; Schatzki et al. 2001; Shove et al. 2012). In general terms, such theories are unified by an approach that positions the social world as emerging in and through practice; that is to say, nothing (e.g. consciousness, discourse, ideas, structures) is prior to practice. In their conceptualisations of social action they transcend the distinction between subjective and objective through commitment to the inseparability of practice and subjectivity. This means perception is not thought of in the first instance as an ‘experience’ of objects, it is in conjunction and involvement with them; consciousness is understood to be pre-reflective, pre-objective, and pre-ecological (Simonsen, 2007). In this paper, we draw primarily on Bourdieu’s (1990; 1998) concepts for what they offers in terms of elucidating social action and change as an embodied, inter-subjective, relational process. The key concepts that are significant for the following analysis are those of *dispositions*, *habitus*, *social field* and *social reproduction*- these are interrelated and offer a way of describing and analysing the world in practice theoretical terms encompassing the basic understandings set out above.

To explicate these concepts, in Bourdieu’s terms the individual develops *dispositions* (defined as lasting, acquired schemes of perception, thought and action) in response to objective structures they encounter (those of *social fields*), which then in combination form incorporated structures (those of *habitus*). In this way objective social structures are inculcated into the subjective, mental experiences of agents. For Bourdieu, then, agents absorb objective social structures into a set of somatic dispositions, making their subjective structures of action commensurate with the objective structures and extant exigencies of the social field. The result is embodied action which is largely taken-for-granted or habitual and is, ultimately, socially constructed.

This is not to say, however, that there is no possibility for reflexivity or conscious reflection on our actions. Here Wilk's (2009) development of Bourdieu offers particularly useful concepts for thinking about how need, requirements and expectations become deeply embedded in habitual action and shift in or out of conscious reflection. He sets out the notion of 'cultivation' to refer to 'the processes which bring unconscious habits and routines forward into consciousness, reflection and discourse' (Wilk, 2009: 149). Drawing on Bourdieu's terminology, he argues that cultivation brings things out of the habitus into the realm of conscious reflection. He highlights, however, that a completely cultivated self-reflective life would be impossible to live and that we therefore undergo processes of 'naturalization'. These take two forms, either conscious thought about practices is pushed back into the realm of habitus, or they are never consciously acknowledged in the first place (Bourdieu's concept of *doxa*) (Wilk, 2009: 150).

A remaining Bourdieusian (1998) concept of significance for the following discussion is that of social reproduction. This notion provides a basis for explaining who constructs the objective social categories or social fields that are subsequently inculcated as subjective categories. The commensurability of objective and subjective categories is crucial to what Bourdieu describes as the 'reproduction of the social order' (1998: 67). Using the example of 'the family' as an objective social category, he poses that such categories form the basis of corresponding subjective social categories – such subjective social categories are in turn the matrix of countless actions (such as marriages) and material arrangements (such as the size and layout of housing) that help to reproduce the objective social category. This cyclical relationship between the objective world we encounter, which is inculcated into our subjective mentalities and then enacted to reproduce the objective world, is what Bourdieu

refers to as ‘social reproduction’. For Bourdieu (1998) the state is central to such processes of social reproduction having an integral role in the institutionalisation, both ritual and technical, of particular objective social categories.

Bourdieu’s (1990; 1998) concepts offer a language for engaging with our data in ways that articulate practice theoretical understandings of the world and social action. In the analysis we use these concepts to unpack and discuss the data opening up insights pertinent to debates about choice, agency and values, and their role in shaping social action. In the conclusions Bourdieu’s theory forms a basis for reflecting on the role of government policy in the constitution of practice. In particular, it offers a foundation for developing a different understanding of how state policy can (and does) intervene in ways that go beyond notions of behavioural change and ‘nudge’.

Research background and approach

Research Methods

In-depth semi-structured interviews (participant n-53) and visual methods were utilised to engage members of the public in talk about energy as part of everyday practice. The interviews were conducted through the summer of 2009. Though each interview involved discussion about wider issues relating to energy (e.g. around energy supply) the focus here is on those aspects related to energy consumption. Participants across two case sites (South Wales and South West England) were interviewed twice with approximately four weeks in between, during which they were asked to take photos encouraging engagement with energy issues and energy related practice (e.g. washing, travelling). The photographs formed the focus of the second interviews, giving participants an opportunity to take more of a leading role in guiding discussion. Each interview lasted between 1 and 2½ hours depending on the

participant. Participants were recruited through a professional recruitment company for one of the case sites, while at the other we recruited using a database developed in previous research (see Pidgeon et al. 2008). In both instances participants were selected on the basis of a theoretically informed sampling strategy designed to ensure diversity in social characteristics (e.g. age, gender, household tenure).

Epistemology, Methodology and Analytic Approach

Due to the emphasis practice theory places on the emergence of the social world through *doing and saying*, there has been considerable debate about how to conduct research through its theoretical lens (e.g. see Hitchings, 2012). Using interviews may be seen as particularly problematic as ‘the phenomenon under research [practice] does not have a static decontextual and therefore uncoverable existence’ (Mason, 2002: 227). However, it is now well understood that interviews are theoretical projects in the sense that ‘how we ask questions, what we assume is possible from asking questions and from listening to answers, and what kind of knowledge we hear answers to be, are all ways in which we express, pursue and satisfy our theoretical orientations’ (Mason 2002: 225).

Our qualitative interviewing approach involved discussion of everyday situations, events and contexts as a way to achieve reconstructions of practices in and through talk (Mason, 2002). For example, we asked about change in daily routines over time and at different points in participant’s lives in terms of the implications for their energy use. This meant that whilst we prompted on the implications for energy use in order to give focus to the interviews, we did this in the context of a much wider ranging discussion about practices and life course change. We do not take the resulting discourse to describe what people do generally or to represent what they do but, in line with Finch and Mason (2000), we argue that it is possible to learn

about people's practices through them because people use narrative to locate and make sense of their own practices. We view this approach to the process of knowledge creation as co-constructive as it involves the combined efforts of interviewers and interviewees in conjuring the relevant contexts around which the thinking, talking, and interpreting are formed (Holstein and Gubrium, 2004; Mason, 2002).

This conjuring of relevant contexts was furthered through the second interviews and the use of auto-photography, as the talk about photographs enabled the creation of different interview contexts, as well as providing a link back to the worlds they inhabit in daily life. We interpret our talk-data, then, as narratives which involve people in displaying what they know – their practical skills and competencies. In this way talk is viewed as deliberative reasoning through which the embodied and habitual dimensions of everyday practices can be seen. Through talk it is thus possible to make visible both these knowledge encompassing practices and the embedded 'lay normativities' of everyday life that are implicated in the commitments, identities and ways of life people are enrolled in (Malpass, 2007).

Although interviews might be seen to privilege the sovereign individual allowing access only to the subjective interpretations of persons as they are constructed in the interview context, taking our cue from Wittgenstein (1953) we maintain an understanding of subjectivity as arising from intersubjectivity. For Wittgenstein, because language is developed through practical experience and learning, and since we cannot name objects without having a frame of understanding from which to do so, language can only exist intersubjectively. This has important implications; 1) practice consists of bodily doings and *sayings* alike and one should not be given priority over the other, and 2) self-consciousness has no primacy over consciousness of the existence of 'other' people, since language, which is collective in

character, provides access to both – that is subjectivity comes from intersubjectivity, not the other way around (Simonsen, 2007). This means that our talk, our ‘sayings’, can be regarded in much the same way as our ‘doings’, as arising from intersubjective relations. In this way the talk and subsequent analysis generated through our interviews allows access to the wider social world and the social relations through which it is produced. In what follows, extracts are utilised to illustrate more general points arising from analysis of the full set of interviews.

Energy consumption in everyday life through a practice lens

Energy, practice and choice

Taking up Bourdieu’s concepts as a lens for thinking about the data, we start our analysis by critically engaging with the notion of ‘choice’ and its role in the constitution of energy use. Although there are multiple ways in which ‘choice’ about energy can be (and was) read by our participants (e.g. as choice in forms of energy production, between suppliers), interestingly, talk about choice was often immediately (re)contextualised as relating to choice in using energy with attendant inferences that low use was good and high use was bad. The extent to which energy use was conceived as a matter of choice was, however, not straight forward, as the extract below indicates.



‘...I would have a choice not to wash clothes but this generation, your generation and my daughter's generation, they wash things every day, their working clothes every day. They

have showers every day and that is the way that they have been brought up...that's the way... that they don't know any different, whereas my mother's generation their clothes, their outer clothes weren't washed hardly ever. They used to have woollen stuff and things like that and washing was a real struggle once a week so they never washed anything at the drop of a hat so that's the difference, it's that we are used to having cheap, available energy all the time.'

(Debbie, 50)

Debbie distinguishes between her generation's possibilities for choice and her daughters' generation and in doing so invokes the wider social structures, mentalities and embodied enactment of lay normativities that have emerged over time. Her narrative extract highlights the complex relations between socio-technological or material structures (widespread available energy, washing machines, forms of clothing), and social structures (expectations arising from interaction with others regarding showering and washing clothes everyday), that combine in the creation of particular ways of doing social life. For Debbie the implications of such changes over time vary for different generations – she positions choice as more restricted for those that have grown up in the particular contemporary habitus that has been formed, in part, through the availability of high technology and cheap energy. That is to say, she affords herself greater 'choice' about her energy use than her daughters for whom it is 'the way they've been brought up' or, in Bourdieu's terms, it is the *habitus* they embody.

In her narrative she thus works out different expectations for her generation to those of her daughter's generation and these relate integrally to the extent of choice. In some senses, then, Debbie attributes a greater level of reflexivity, and capacity for 'cultivation' (Wilk, 2009) – the ability to pull things out of habitus in to the realm of conscious reflection – to herself than to her daughter. In line with McNay's (1999: 109) analysis of Bourdieu, reflexivity as we invoke it here does not arise from 'a disembodied, disembedded self who moves freely across

the social realm', but is linked to processes of social differentiation and 'lack of fit' between habitus and field. From Debbie's narrative, we gain insight into the way that practices are increasingly made-up as energy intensive and come to see how notions of choice and (closely related) responsibility become more problematic as ways of doing that rely on high levels of energy use are increasingly embedded in habitus, never being brought into conscious reflection or remaining as *doxa* (Bourdieu, 1990: 56).



'It absolutely winds me right up when they get up in the morning... like this morning I went into his bedroom and his light was still on... That is unnecessary use of energy and I am still trying to get him to do that not very successfully... yes total waste of energy, kids leaving lights and things on. I am guilty of it as well myself.' (Douglas, 35)

The notion of high energy consumption being bad, evident again in Douglas' extract, formed a strong generalising narrative in the ways that the meaning of energy use was constituted. This time, however, and in contrast to Debbie's extract, 'unnecessary' energy use serves as a point of intergenerational tension or conflict. This extract entails less reflection on wider processes of change and their impacts for daily practices and habitus but is particularly interesting for the way that choice and responsibility are worked out between Douglas and his son. On the one hand, there are expectations for the child but there are also expectations for Douglas both in terms of the ethos he tries to extend and what he himself does as exemplar. The reflection he offers on his own actions at the end of the extract is suggestive of the difficulty in maintaining conscious reflection on **energy use as a part of daily practice.**

Moreover, it is indicative of an iterative relation between moments of cultivation and naturalisation, highlighting that there are limits to the significance of reflective abilities in enacting change.

Through these kinds of discourses in which intergenerational tensions in the use of energy are explicated, the contours of social change become visible, as does the emergent habitus and unconscious or doxic ways of doing that are developing through in to the future. That is to say, the movement of lifestyles toward high energy intensity and the potential for greater embedding and difficulty in being reflective are hinted at through these forms of intergenerational narrative. Discussion of momentum toward higher energy usage evoked talk not just about energy in the home but about wider aspects of change, beyond the home space.

‘I think the actual infrastructure of our roads needs to be looked at in a long term way, not a short term way. Now there are so many cars on the road you are afraid of just the safety of people... *so you definitely cannot have cyclists on the road like you did when I was a youngster*, you just can’t because it... you don’t let your children go out and cycle because you are worried about them getting knocked off their bikes.’ (Lucy, 51)

The interrelated development of road infrastructure and increased road traffic are explicated here in terms of their implications for travel practices and particularly for cycling. We see the interconnections between structural development and changing practice; that is, the way that infrastructural change can play a significant role in the decline of particular practices, in this case cycling (see Van Vliet, Chappells and Shove, 2005). Of particular interest in this extract is the discourse about passing practices to new generations (i.e. encouraging your children to cycle) and the way that infrastructural issues influence this process of transmitting ways of doing from one generation to another (see also Maller and Strengers, 2013; Shirani et al.

2013). In this, it is possible to see another way in which change develops through a combination of material and social structures; i.e. transition in car use and road development operates in conjunction with the social structure of family and ideas about ‘good’ parenting and safety.

These extracts tell us something about the social reproduction of particular ways of doing – it is possible to glimpse something of how habitus emerge and form over time and how the possibilities for ‘cultivation’ around different aspects of life, in this case practices that increase energy consumption, may become more limited. It is further possible to begin to get a sense of the complexities in transferring practice between generations and the ways that relations between social and material structures play out in processes of social reproduction and change. This begins to confer a picture of energy consumption as complex, dynamic and inherently relational. In the next section we develop our analysis further, again exploring issues related to ‘choice’ but this time building to focus more on individualised concepts of agency and critically examine their capacity to explain the configuration of energy consumption.

Energy, practice, choice and agency

We live our lives as social beings (as mothers, sons, colleagues, friends and so forth) always in relation to other people, things, and places. This relationality, however, is often missed in conceptions of people as rational, freely choosing individuals with complete agency *and* from notions focused more deterministically on the impact of structure in shaping energy use. Drawing on Bourdieu’s concepts which signal the inherent and cyclical interrelation between the individual and structure, we argue that understanding relationality and connection with ‘others’ is integral to understanding how energy consumption comes to be configured in particular ways. This point is illuminated in one sense through the extract below wherein

Mark describes how changes in his energy use have been largely incidental occurring through his life course as a consequence of other developments, such as having children, and in relation to the social structures of family.

‘I use less [energy] now...because only me and the mrs live here now but obviously if there is more with your family, you are putting the water on more and there is more lights on because the kids are in the bedroom you know. So erm, I don’t use more, I use less now not from choice but because we just don’t, we don’t need to use it... *so my usage has changed certainly because my circumstances have changed.*’ (Mark, 44)

Mark’s narrative illustrates that whilst energy clearly forms an essential part of allowing us to live our lives in the ways that we do, it often does not form a conscious or considered part of decision-making processes, particularly where significant life changes are involved. Rather, our energy use is *embedded* in our inter-relational lives and as such any notion of achieving change needs to recognise that ‘choice’ and ‘individual agency’ represent only a limited basis for addressing the problem of increasing energy demand. The next extract from Cara further depicts how our choices about energy use are intricately bound up with our roles as social beings.

‘I probably don’t think about it [my energy use] enough. I would say I was pretty reckless with it. We have an 8 month old baby... so I haven’t thought about it since having a baby at all whereas before I wouldn’t necessarily use heating or electric if I didn’t need it. I would put a couple more jumpers on and I wouldn’t boil the kettle full and stuff. I just have to admit since having a baby I don’t even think about it. I just use it. So yes, I have got to be honest, I am a lot worse than I have ever, ever been.’ (Cara, 35)

Choices are rarely individual and rationally calculated but are connected to notions of, for example, wanting to provide the best or the necessary for our families, which in turn is connected to wider social structures that serve to reproduce what constitutes ‘the best’, ‘the necessary’ in different contexts. In Cara’s extract this relates to ‘socially reproduced’ (Bourdieu, 1998: 67) notions of child caring – the importance of keeping the baby at the right temperature, washing clothes, equipment sterilisation and so forth all combine to constitute a higher energy use to fulfil these other imperatives. This brings into view the moral and emotional significance of providing comfort, cleanliness and food, and the centrality of social structures, such as gender and family, in the constitution of energy demand (on family life see also Jamieson, 2011; Smart, 2007).

As highlighted in previous research, high (and low) energy usage is thus configured through complex relations between our personal lives and the wider development of infrastructures, technologies and socially reproduced ideas and ways of doing **(e.g. see also Shove, 2003).** Such interconnections between changes in practices, familial relations, technologies and so forth are further conveyed through the next extract.

Interviewer: Do you think there is a distinction between energy that you need to use and energy that is perhaps more luxurious?

Stuart: Well I wouldn't because what we use is what we need *with the way you live today*. The fridge and the telephone it is something you've got to have these days, especially if you have got families and you have got to have a fridge or your food wouldn't last 2 minutes, would it? And the way we live, we both work we do. You have got to have things that are available when you come home because you haven't got time to do anything else. It makes you think how they managed years ago with these cold slabs and what have you but there again they

bought daily then, didn't they? You know the household or the mother or whatever went and bought every day. (Stuart, 59) [our emphasis]

Through this narrative it possible to see how the development of technologies, such as fridges, wider processes of change in work (i.e. increased levels of employment in the public sphere, particularly for women), and the evolution practices, such as food shopping (i.e. the daily shop having been supplanted with more infrequent shopping trips and cold storage) are deeply intertwined. The evolution of material and social structures, in this case relating to work, employment and gender, creates the possibilities for and propensities toward particular ways of living (see also Shove and Southerton, 2000). These complex patterns of interconnection are important for understanding the dynamics of energy usage and, crucially, for thinking through processes of past and future transition.

The energy using 'things' (like fridges) that play a small but significant part in these wider configurations become necessary to sustain the modes of provisioning they have made possible. In this sense we can see that there are fundamental issues in the way such configurations have developed historically, one of which is that they have thrived on the basic premise that higher energy usage is unproblematic, moreover, that it is desirable. In the final section we advance our arguments further developing the focus on choice and now agency, this time drawing out issues related to the concept of values.

Energy, Practice, Choice, Agency and Values

In this final section, we focus on data extracts that open up insight into the connections between what might be characterised as values and action but with a more relational focus. Within much of the existing research using the concept of values, the emphasis is on

individuals and individually held values. This focus obscures the important place of social structures and relationships in shaping the role that values play in the formulation of practice. In the extract below, Ruth makes reference to a photograph she had taken during the interim between interviews (Ruth asked for the photograph to be removed from the dataset but was happy for us to use her discussion of the image). The photograph served to prompt reflection on her flying at relatively regular intervals, despite having strongly held values relating to socio-environmental sustainability.

‘This is a personal one yes (photograph of friends)... They’re my justification for flying really they’re my sense of community... I think it is a choice. I can choose not to fly. I can choose not to engage but what I choose is contentment that I get out of engaging that justifies the means to the end really.’ (Ruth, 46)

Ruth’s choice about where to live was curtailed due to the need to move back to her home town to care for her ailing mother. This change in her circumstance meant that despite her strong environmental values, she frequently flew to be part of an environmental activist community she had left behind in Ireland (see Urry, 2002 on the significance of corporeal travel). The point to be made here is that interconnections with other people, places and so forth play a highly significant role in configuring what we do, even in cases where greater levels of reflexivity might be at play, where our actions are not ‘doxic’ (Bourdieu, 1998: 56), and where our beliefs about how things *should* be, our values, are seemingly at odds with the emergent practice.

The social field in which this course of action is made possible is one made up through the increasing geographical dispersal of people around the world that has arisen with modern transportation technologies. The habitus that this brings into being is one where the benefits

of travel are often taken-for-granted even if their problematic implications are the object of reflection (see Urry, 2002). Our practices are configured through wider material and social structures that are strongly imbued with a sense of what is expected, and which continue to involve (and in some cases encourage) travel and living outside of the places where we were born and/or lived as children (see also Urry, 2011). Important in this respect is that through daily life there are often not the social structures or objective categories that would direct us to behave in more sustainable ways, in the case of travel the opposite is often the case. For instance, while Ruth responded to social structures and embedded social values that led her to care for her mother, no corresponding social structure could be identified to direct her not to fly short distances regularly. Ruth's narrative extract thus raises further questions about unsophisticated assumptions of agency, and orients one to think differently about how change might be achieved. That is, changes to wider material *and* social structures become the focus, rather than approaches that aim to influence individuals in their 'choices'.

In this last extract, from Danny, the significance of relationality in configuring our practices over and above conscious reflection and individual choice is again brought to the fore but instead of people the focus moves to landscapes, place, and other species.



‘In theory I could walk down but it takes about 25 minutes each way which is the dog walk and because psychologically I love the sea I want to spend my whole walk by the sea so I drive down there which I know I shouldn't do...’ (Danny, 58)

Here again Danny responded to social structures that saw him walk his dog each day but there appear not to be corresponding objective categories indicating that he should not drive his van; no scowling neighbour, no legal structure, no inculcated relationship of care for the environment. To return to the arguments about the ‘value-action gap’ and the related conceptualisation of social behaviour, this approach argues that it is necessary either to remove barriers preventing people from acting in ways consistent with values or that ‘activating’ the correct values (e.g. altruistic/intrinsic ones) can provide a basis for effecting change (e.g. see Crompton, 2010). If we consider the implications of the analysis here, however, it becomes clearer that the way values connect to the kinds of practices that are implicated in energy demand are complex and do not play out in such straight-forward ways.

Central to the argument here is the notion that certain values (e.g. caring for family and pets) are deeply embedded in the objective structures that are inculcated into our subjective dispositions and habitus, while others remain more abstracted. In thinking about values from a practice perspective, we thus suggest that social and material structures are significant in ensuring we act in ways that are congruent with them. Further we argue that aspects of value that are not strongly embedded are not likely to connect with action. This signals a different conception of values as inherently collective, social and inter-relational, and as embedded in practice. Conceptualised in this way, values take on a different kind of relevance for understanding action and change. The challenge becomes one of addressing values as part of the wider structures that are integral to the formulation of habitus, not of activation or removing barriers. To illustrate, if we consider change in the social values relevant to tackling sexism these have overtime been embedded within social structures, both informal and formal (such as legal structures), and materials (for example in clothing so that trousers can be worn by women or the provision of public toilets for women in places historically only

accessible to men). We can transpose this to the environmental context to imagine how values might be reflected in or become part of social and material structures. This suggests that alternative values that are inconsistent with existing structures and dispositions could be integral to catalysing change processes.

Concluding Discussion: Exploring the Implications for Change toward Reduced Energy Demand

Through the analysis we have illuminated how practice and, thus, energy consumption can be understood through concepts of dispositions, objective structures (both material and social) or social fields, and habitus (structures which have become inculcated in our subjective mental experiences). We have argued that such a conception of social action resonates with our empirical data more strongly than do images of behaviour as individually constituted through conscious choices taken in contexts where there are high levels of agency. The analysis has highlighted how change through time and the development of objective structures that run counter to sustainability creates greater difficulty for reflexivity and for bringing habitus into the realm of conscious reflection. We show further, however, that the significance of social and material structures remains even in contexts where reflexivity and reflection are apparent. In this concluding discussion we turn to consider how social and material structures are constituted and, therefore, how they might be changed, in particular, thinking through the role of reflexivity in such processes of transformation. Here, we draw on Bourdieu's concept of social reproduction and his analysis of the state as integral to the institutionalisation of objective social categories. This concept is particularly important for thinking through social change as it entails a depiction of transformations as occurring either through *challenges* that arise to disrupt socially reproduced ways of doing or through the development of *continuities* (e.g. development of the idea of cleanliness and change from bathing weekly to showering daily).

In his 1998 work Bourdieu elucidates social reproduction using the example of state processes and operations which serve to constitute 'the family' and 'family identity'. He refers to official records, family allowance, housing policy, and so on as state led practices which serve to constitute the objective social category of family. He further highlights the challenges that emerged to bring change in the objective social category of the family (e.g. breaking down of the idea of staying married, legal processes associated with divorce, development of single occupancy homes). While the example here focuses on the family, there are multiple areas of social life in which we might see the state (broadly) and state policy as engaged in the reproduction of current social arrangements and ways of living that create high and increasing energy usage. This brings into view questions concerning from *where* challenges to current social arrangements might arise and what might be the *catalysts* for such challenges.

The implication of Bourdieu's arguments regarding the key role of the state suggests that policy itself offers one means through which objective categories and habitus could be challenged. For Bourdieu state categories pervade social life meaning that the state has the potential to be a powerful source for change, however, it represents an equally significant force in limiting transformation. This leads Bourdieu (1998) to conclude that a form of 'radical doubt' is an indispensable component of social analysis. He argues that there remain strong tendencies for the 'thought categories of common sense inculcated by the action of the state' to be uncritically implemented reproducing the same thinking (Bourdieu, 1998: 72). To challenge this Bourdieu proposes the notion of 'radical doubt' as a means for retrieving 'the possibility that things could have been (and still could be) otherwise' (ibid: 40). Building

from this concept we propose that the adoption of ‘radical doubt’ within the state itself could provide a means for the development of new approaches to change.

One way in which this could be made manifest is through a process whereby policy makers engage reflexively in reviewing policies and approaches across government (from health to education, to transport, to treasury and so forth) to better understand both where there are inconsistencies in aims or goals, and where the possibilities for change might be that would have an impact on energy demand. This would examine the role of government in the constitution of both social and material structures, asking questions about what might need to be changed to deliver forms of practice consistent with sustainability. These assertions set out a far more significant role for the state in formulating and reformulating practice than is implied through interpretations of the state and the wider public sphere as distinct from the private. They further imply a different way for the state to conceive of itself – i.e. as already always deeply implicated in the configuration of daily life, rather than as distant and intervening only through the likes of formal information campaigns and nudging or through regulation (see also Strengers, 2011).

The state, however, represents only one site from which challenges might arise and history teaches that often states are prone to ensuring continuities, rather than radical transformations of the kinds implied by energy demand reduction imperatives. Indeed, many of the more radical and significant changes in social history have come from bottom-up campaigning not from top-down initiatives. The significance of the state in constituting objective social categories and in processes of social reproduction means that it is very likely to be necessary to the widespread embedding of change. It may not necessarily, however, be a catalyst for change in terms of developing the kinds of reflexivity required for a questioning of objective

social categories and the values embedded within them. Challenges are perhaps more likely to arise from the bottom-up and so it is to a focus on what have been termed ‘grassroots innovations’ that we turn for one final point of reflection.

Seyfang and Smith (2007) identify grassroots innovations as involving the generation of novel bottom-up solutions for sustainability; solutions that they argue respond to local situations and to the interests and values of local communities. As ‘spaces in which things are done differently’ and ‘where the rules are different from the mainstream’ (Hielscher et al. 2011: 4; Hargreaves et al. 2013: 869) they may represent places from which the kinds of radical doubt and reflexivity highlighted here are not only more likely to arise but where they are also embedded through alternative forms of practice. Common to debates about these kinds of locally situated actions is the extent to which they can be scaled up (Smith and Seyfang, 2013; Butler et al. 2013). Considered in light of the discussion here, however, we might view them as important not simply for their direct impacts, and therefore as only significant to the extent that they can be scaled up, but as spaces from which challenges to existing social categories and habitus can originate. In this sense such bottom-up action could be crucial to impacting the arguably more pervasive state and operating as catalysts for challenges to objectified social categories that shape action in currently unsustainable ways.

Through the analysis presented here we have re-examined questions about choice, values and agency, engaging critically with the ways that they are conceptualised in policy and wider socio-political action related to energy demand reduction. Centrally we have argued that a practice theoretical orientation does not preclude these concepts - agency is central to practice theory, people can and do make choices, and normative values can be seen to form part of social and material structures. Rather, practice theory, and Bourdieu’s and Wilk’s concepts in

particular, can be used to situate them in a radically different way to theories which offer less dynamic, individually located concepts of social action. In undertaking this analysis we have opened up possibilities for reconsidering the place of these concepts in debates about energy demand reduction and set out key implications for how we might use them to think about social change.

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