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Relationality, entangled practices, and psychosocial exploration of intergenerational dynamics in sustainable energy studies

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Abstract

Extensive knowledge exists regarding how to comprehend the embeddedness of everyday energy usage and resultant demand trajectories within wider social and material contexts. Researchers have explored how people find themselves locked into everyday ways of using energy, and how energy systems have evolved to entangle together practices and socio-technological infrastructures. There is widespread acceptance that the challenges of transforming inconspicuous habitual ways of using energy require research attention. What is less clear is how to approach the study of everyday energy use to reflect the ways in which people make their daily lives meaningful. This article draws upon sociological studies of family life and psychosocial research to thicken existing research on material infrastructures and social practices in energy use and demand reduction studies. Findings concern how relational entanglements have a bearing on everyday practices involving energy, and have significant potential to deepen understanding of historically embedded change in people's everyday energy dependencies.

Introduction

In sustainable energy studies, it is important to explore the dynamics of everyday energy use, in considering how it may be possible to reduce energy demand and to live in more environmentally sustainable ways. Building on pre-existing work in this vein, we pay attention here to issues of relationality as elucidated in sociological studies of family life (for which we use the acronym SFL), and to the emergence of the concepts of embedded and entangled practices in studies of socio-technical systems (known as STS), sustainable

transitions, and social scientific energy demand research. A more integrated approach is proposed, crossing more diverse fields of research than is commonly found in practice theory led inquiries. As part of this, we introduce a perspective motivated by an interest in drawing upon psychosocial research to thicken existing analyses of everyday practices that use energy and complicate understanding of the dynamics of social practice change. In common with work in SFL (such as Morgan's (2011) family practices approach, which emphasises the links between history and biography), psychosocial research is interested in analyses of how –in this instance energy and environment related –identities and practices can be held together by cultural and historical concerns that come with experiences of living through a particular age.

Making transitions in energy use dynamics and everyday living

A key problem facing academics, policy makers and members of the public is how to make the transition to a more environmentally and socially sustainable society, which raises questions about how best to reduce the energy intensity of our lives. Social science has played an important role in developing approaches to understanding (un)sustainable societal and lifestyle transitions involving both consumption and demand, and socio-technical aspects of energy transitions. Its contribution lies in bringing into view issues that are not necessarily at the forefront of natural scientific and policy work (Jackson, 2009). Some of this work has advanced understanding of how members of the public can have a more immediate sense of why and how environmental externalities are likely to affect them, if and when they should be considered as social and material necessities, and a critical understanding of their relations with wider governance regimes (Henwood and Pidgeon, 2015). Further insights have been developed by adopting a wider social science lens involving different ways of understanding both the socio-structural relations and everyday dynamics of resource usage and change. With important exceptions (that we subsequently turn to) these demonstrate more adequate means of bringing the fine grain of daily life into focus as it is configured within complex arrangements involving a coming-together of material infrastructures, social relations and contemporary practices.

For social practice theorists, how energy is used is contingent upon the existence of shared practices (Bourdieu, 1990), rather than dependent on individual intentions or choices (Shove and Walker, 2014). Individuals may perform practices, but performances are conditioned, constrained and enabled by the elements of practices themselves – devices and

infrastructures, competences, and the shared interpretations that give meaning to practices and to individual performances. Rather than issuing from individual choices which are subject to remodelling, then, energy use is an effect of how practices are socially organised and reproduced through performances. Everyday life is thus of central interest to such perspectives, which strive to highlight elements of the ‘background’ of individual actions which may be largely invisible or intangible, yet which can explain how people can become, over time, ‘locked into’ patterns of energy use. Such patterns can be difficult to reverse, because they often embody the result of a long co-revolution and entangling of different practices and their elements (e.g. the use of freezers and microwaves) (Shove, 2003).

The shared meanings through which people make sense of practices have led some practice theorists to focus on the normative assumptions that people use to justify how they perform practices in different social situations (at work, at home, while travelling). But such norms are just one part of understanding the complex interdependencies between people, their material, technical and social environments (Shove, 2004). Practice theorists affirm that norms evolve as part of complex and dynamic relationships between different practices over time (Shove, et al., 2012). Focusing on wider social and temporal realities, rather than on isolated sets of beliefs about how energy is or should be used, also helps elucidate some of the long-term implications of locked-in ways of using energy that are germane to understanding the making of sustainability and environmental transitions, including their unpredictable and unintended consequences (Adam, 1998).

Drawing on practice theory, in particular its emphasis on how practices and technological infrastructures become entangled over time, (Maller and Strengers, 2013), some investigations have highlighted how the contemporary socio-cultural conditions of people’s daily lives can themselves create tensions between and within energy-consuming practices (Ozaki and Shaw, 2014). Ozaki and Shaw’s empirical study builds on practice theory’s focus on entanglements between “ways of doing things”. Findings reveal everyday practical tensions between culturally variable normative ideals (about styles of cooking) and technological interventions in the form of sustainable technologies (i.e. energy efficient buildings or microgeneration devices). However, the authors argue, there is more to fully understanding what is influencing energy consumption in this situation, making it equally important to “broaden the theoretical contention” (p603). Ozaki and Shaw indicate the

importance of attending to the socio-cultural conditions affecting entanglements between practices of family living and sets of relations and practices conditioning technological and practical consumption.

In sum, important advances have been made in the established STS and related fields to help understand the difficulties involved in transforming routine uses of energy. Such difficulties have to do, first, with the invisibility of our everyday dependencies on energy. This invisibility is due to how everyday life is *embedded* in social practices that are themselves components of wider high intensity resource-using systems. Second, they also result from hard-to-discern *entanglements* between everyday social practices and wider socio-cultural norms. Nonetheless, other important work remains to be done given the ways in which practice-based perspectives can deny any role to the core concerns people have about how to live well in shaping how social reality is reproduced (Sayer, 2013), but also in opening up opportunities for social change. It remains particularly unclear how to approach the study of everyday energy use in ways sensitised to how people make their daily lives meaningful and liveable. The question of how psychosocial and family relationships research perspectives can help us understand how everyday practices, and the mundane technologies which support them, matter to people in *non-instrumental* ways is particularly important here. Such approaches can help us understand people as relational subjects rather than thoroughly embedded resource users or “carriers of practices”. The purpose of this article, therefore, is to consider how it is possible to investigate the kinds of dynamics that give rise to relational entanglements of a different kind to those between material infrastructures, social practices and cultural norms.

Studies of family life and the psychosocial

To conceive of what people are doing when they are ‘doing family’ (Morgan, 2011:6), relationality needs to be brought into view. We draw on Smart’s (2007) conception of relationality, which highlights how individuals are constituted by their relationships to others, taking as a starting point what matters to people and how their lives unfold in specific contexts and places. Paying attention to relationality has been advocated as a means of capturing the ways in which family life is both personally felt and socially embedded (Smart, 2007). A relational approach to the study of everyday practices starts by showing due regard for family members’ personal and social experiences alongside shared values and

connectivity in their ways of life. But it also involves re-visioning the focal object of study so it is neither exclusively social nor individual. This makes a compelling case in the SFL field for pursuing a more psychosocial perspective on relational dynamics, and for opening up a cross disciplinary space capable of drawing in and deepening existing scholarship on matters of emotion, affect and the cultural and temporal subject of late modernity (Thomson, 2010). But this work is in its infancy, and more needs to be done to connect with fields of inquiry where social welfare concerns are extended so that they involve the study of human engagements with the environment, technological developments and climate change, and sustainable transitions in resource usage, including energy consumption/demand (Henwood and Pidgeon, 2013). Until recently, environmental and sustainability research agendas have not figured strongly within the SFL field. Effort, application and original analysis are required, therefore, to work out how SFL research might be able to contribute, as this special issue foregrounds.

Our published work from Energy Biographies has already opened up new opportunities for using psychosocial approaches to linked lives to shed new light on issues relating to environmentally and socially sustainable energy transitions. This derives from a core observation that everyday energy dependencies matter to people because they can foster or detract from citizens' efforts to strive for a life worth living, especially when set against a background of uncertainty about energy futures (Henwood et al., 2015). In this context, the relational subject of psychosocial research comes centre stage. This subject attunes to the material, cultural and embodied ways in which their own and others' life experiences and futures emerge and change, to help make sense of historical shifts in technological, environmental and societal relations. A variety of biographical and cultural sense-making resources provide the practical means of navigating how to make use of technology given its environmental and social impacts, by positioning oneself vis-à-vis others, and by making evaluations of one's own and others' current circumstances and anticipated or imagined futures. Our own research has highlighted how people can face everyday moral and ethical conflicts surrounding energy use as they undergo lifecourse transitions, and as they try to maintain or establish desirable (if sometimes non-normative) energy-using practices (see e.g. Shirani et al, 2015a).

But, while addressing these issues in and of themselves has been important in taking forward our own interests in questions of relationality, we have also drawn on conceptual arguments within the field of psychosocial studies to extend the existing horizons of energy use and practice change research discussed thus far. Entangled practices are a medium where it is possible for those involved in the activities of everyday life to satisfy their relational (as well as material) needs and wants, along with their identity concerns. Psychosocial literature (see eg Andrews et al., 2000) can help us understand more about some of the ways in which the relationally embedded, identity-forming functions of practices are fulfilled. Participation in reliable mundane practices shapes identity, helping to create expectations about the future, and enabling us to trust ourselves, others, and indeed the world as such. A wide literature, deriving from developmental psychology and object relations theory, details how emotional attachment is central to the development of individual identity and agency (e.g. Antonucci and Akiyama, 1994; Young, 1989). Attachments to a variety of different kinds of objects have been shown to be essential to identity. Place attachment and attachments to significant cultural objects in particular develop alongside participation in mundane practices. Attachments to such practices themselves are also part of everyday life (with individuals viewing themselves as, at least in part, gardeners, cyclists and so on). Collections of attachments constitute what developmental psychology identifies as a ‘holding’ environment or transitional space (Winnicott, 2005) within which individual identity is shaped. Identity is therefore inherently relational and dynamic, and bound up with the stories of the objects to which one is attached, and therefore with concern for their futures.

As we have argued elsewhere (Groves et al., 2016a) attachment to practices, and how it changes, is important for understanding whether (for example) giving up old practices and participating in new ones becomes probable or unlikely. In particular, attachments to some practices (such as ones associated with hospitality or care) may create tensions between these and other practices (such as ones associated with saving money). From such tensions conflicts can arise between different moral commitments that exist, especially within family contexts (Groves et al, 2016a). Our investigations have shown how attachments to practices may be particularly strong where performing them brings significant physical, emotional and imaginative engagement (Groves et al, 2016b). Such engagement can be enhanced if practices are part of particular relational contexts that mean they can be considered as ‘focal’ (Borgmann, 1993). Such practices are often part of caring for others. They can involve a high

degree of attentiveness to others, or provide context for staging intersubjective relationships (e.g. eating or watching television together). Energy Biographies research has thus demonstrated that practices are not only entangled with other practices (as practice theory argues) but are also implicated in other relational entanglements. These include attachment relationships, within which subjectivity is sustained and transformed.

Our aim in this article is to further elucidate people's sense-making about how they live their lives in relationships with others in an uncertain and changing world and, in so doing, flesh out our argument that practices are not simply a self-sufficient 'ecology' constraining the choices people make about their everyday energy usage. Practices are also remade, reproduced and sometimes transformed in ways that involve relationally embedded, identity-forming dynamics (sometimes revolving around acts of consumption) and can include deliberate interventions. We have found fertile, common ground between psychosocial and SFL research around their commitment to a more relational ontological perspective (the contention that the relations between entities are ontologically more fundamental than the entities themselves), and in pursuit of the novel idea of relational entanglements. By moving away from seeing subjects as embedded in practices to seeing practices as embedded in relationships, we wish to explore this as a possibly useful reference point for new thinking, and as a means of opening up more extensive and inclusive interdisciplinary dialogue about what needs to be put in place in order to better understand the dynamics of change in everyday energy use, especially as part of efforts to provide now and in the future for the energy needs of families, communities, and societies.

The Energy Biographies Study

This paper draws on data from *Energy Biographies*, a qualitative longitudinal study which considered everyday demand for, and people's consumption of, energy as embedded in personal and family biographies, unfolding in and through space and time. The study involved qualitative longitudinal interviews and multimodal activities with participants from four distinct case sites in England and Wales, all of which involved some sort of community intervention to reduce energy usage. Our Cardiff case sites; Ely and Caerau (a socially deprived, inner city ward) and Peterston-Super-Ely (an affluent commuter village on the city's outskirts) both had active community groups concerned with issues related to energy and the environment, in particular the installation of solar PV panels. Our third case site, the

Lammas/Tir-y-Gafel ecovillage is a low-impact development of nine households in West Wales, where residents are living off-grid and have land-based livelihoods. The Royal Free Hospital is our final, work-based, case site; a large teaching hospital in North London with a number of carbon reduction and energy saving initiatives. Taken together, these four case sites offer insights into a diverse range of lifestyles and perspectives on everyday energy use. 74 participants took part in an initial interview and a sub-sample of 36, from across the case sites, took part in two further interviews and multimodal activities across the course of one year. For this paper, we draw on data from the first wave of interviews, which provided a variety of stories of change, where reflections on past energy transitions and family histories were discussed most extensively¹.

Data Analysis

Drawing inspiration from SFL and psychosocial studies, and by building on sociological theorising about embedded and entangled practices, our analytical approach addresses how the meanings attributed to practices are shaped by the way relationships are conducted and evaluated. Participants' accounts of a major shift in technological infrastructure prompted us to engage with intergenerational relationships and cultural patterns, and to consider possible socio-cultural interpretations of these wider trends. We seek to develop an understanding of how relational meaning-making and entanglements can promote high-intensity energy usage, while also sometimes offering opportunities for changing practices. We purposively utilise selected data where the energy usage of family members is discussed in relation to the interconnected lives of interviewees. Our analysis is presented in three sections, each bringing two case biographical narratives into dialogue.

Ronald and Gwen – historical step change

In the UK a major energy transition occurred in the early-mid twentieth century from gas lighting and coal-fired heating to electrification and gas-fired central heating. As a culturally available, common-sense way of acknowledging major changes in large scale infrastructure in energy systems, the electrification of homes provides a highly memorable backcloth to discussions of energy usage as part of family and wider socio-cultural histories. *Energy Biographies* participants drew on this idea of a major moment of historical infrastructural change in energy provision when discussing vivid details of lives and times that existed before such significant socio-technical changes happened. As one would expect, discussions

were especially energised among participants who remembered living through it, exemplified by Ronald, in his 70s, retired and living with his wife in the village of Peterston-Super-Ely:

I was born in 1940 so until the early fifties we lived with a range, coal-fired, a coal house at the back of a terraced house and with gas, no electricity. So I can remember that very vividly. So all the lighting was gas and the heating was from a range, coal-fired. No electric fires ... So that was very much the character of it and I do remember the electricity going into my house at eleven and in a sense that transformed everything. Suddenly you didn't have all this stuff to do that you had before. You didn't have coal everywhere although we kept the range but we didn't have a coalhouse. We didn't use the range after that, we had an electric cooker. So we didn't have a gas cooker, which we'd had throughout that but we had electric fires and stuff like that, that would get used. Only on a limited basis because we had no money, only a bit of a time, a bit of a time. But it transformed everything like a switch [makes click noise] done! So that was a very vivid shift in energy in my lifetime. (Ronald).

Ronald describes this transition as the only occasion where he experienced a big step change in awareness around energy use, recognising the new system as 'different and decidedly more desirable'. Bundles and aggregations of infrastructure and its social uses appeared as centrally important components of Ronald's family's and the wider community's various energy-using social practices (Shove, 2003). A particular assemblage of materials (i.e. energy sources, household devices), albeit with financial restraints on their operation, contributed to how he and his family experienced historical step-change, leading to a trajectory of increasing everyday energy usage. In this extract Ronald describes moving from coal to electricity as making possible simultaneous use of several heat sources rather than a single fire for heating, and emphasises the relative ease of using it. This is one of the dynamics widely invoked in energy research to explain the character of intensification of ways of consuming resources in the home and other spaces for living and working.

Arguably as important though, is how Ronald's way of characterising the everyday dynamics of social practices shows an understanding of the ways in which energy usages are stitched into the fabric of family practices and, in this way, entangled with relationally meaningful practices that are both practically and emotionally significant: here how younger family members assisted in keeping fires for sick and elderly relatives.

We managed to get one of these roll-around gas canisters because my grandmother was then in her late-eighties, so she needed some secondary form of, there were fires around the house and if anybody was ill a fire would be lit in the particular bedroom. My grandmother was ill for probably three or four months and in some of that it was during the winter. So one of my jobs was to light a fire in her bedroom; you had a fire in her room and it kept her warm but it was Dickensian in its, yeah, so I do remember that. (Ronald)

Associations of warmth and care for family members were evident in stories across the *Energy Biographies* sample; as in the wider research literature, comfortable and temperate conditions are seen as essential to avoiding ill-health (Thompson et al., 2011). Ronald reflectively paints what he calls a “Dickensian” picture of the context that he grew up in in South Wales, thereby elucidating the particular cultural resonances and historical legacies of his experiences. Socio-economic constraints and financial limits were clearly evident and thoroughly woven into his and others’ accounts.

Gwen, a widow in her 80s also living in Peterston, described a similar upbringing in a house with no electricity or indoor bathroom. She recalled the demanding process of clothes washing undertaken by her mother:

My mother would have washed, she had a big sink bath and she’d put it on two old chairs, she’d have to heat the water on the coal fire and pour it into the bath and then she had a scrubbing brush ... And she would soak and then have to pour it out into a little sink. We didn’t have water in the house, there was one cold tap outside and there was a little yard, there was a garden there but there was a little yard and there was a cold tap and a sink so she’d pour the things down the sink and then some pour some cold water through to the bucket, carry the bucket into the coal fire to boil it up.
(Gwen)

Later in the interview, when discussing appliances she considered essential, Gwen recounted getting her first washing machine in her late twenties:

I mean I grew up without a fridge and in fact a lot of the time when the children were young we didn’t have fridges you know. But all of these things now just seem to be more essential don’t they? They go from being an innovation, something that neighbours come and look at and say ‘goodness, dear me’ you know? I can remember my aunts coming and looking at my washing machine; I had a Bendex with the little window you know? And my two aunts had never seen a washing machine [laughs] ... I

remember particularly the washing machine, yes especially with my aunts watching the washing in the machine going round and round you'd think they were watching television! (Gwen)

Both Ronald and Gwen's accounts show how participants narrated the meanings of these significant transitions in energy use through their relationships with other family members, highlighting the relevance of relationality in this context. Like Ronald, Gwen depicts the introduction of domestic technologies and conveniences as an overwhelmingly positive transition, which could alleviate the physically demanding work previously associated with everyday practices of keeping warm and clean. In different ways, their narratives also conveyed a sense of something more material, embodied and affective about their involvement in domestic chores and care relationships, to convey what else mattered to them about transitions as experienced in a specific socio-cultural context. For example, in discussing the transition from outdoor to indoor toilets, Ronald reports how "it didn't bother me as a child. Nonetheless, he had noticed how basic tasks could be differentially demanding for older generations of family members and why this was important ("it did bother them because that's what they did"). Reflecting on what mattered to him as a young man, he was affected in an embodied way by how older relatives needed help and the added convenience brought about by domestic infrastructure changes. He did not bemoan the past, or begrudge his specific experiences of others needing assistance in intergenerational relationships given the labour intensity associated with forms of energy usage and home life before electrification.

For some of the participants who had lived through these periods of technological change, younger generations having grown up with technologies such as central heating, now considered 'essential', could 'take all sorts for granted' (Ronald). Ronald's remarks suggest that, given the meaning the changes he has witnessed have for him, he regrets that younger generations of his family do not appreciate their historical and biographical significance in the same way. In the following section, we turn to interviews with participants from the Lammas ecovillage. These participants have engaged in remodelling wholesale their everyday energy using practices. As a result, their narratives challenge this view that generations who have lived lives embedded within more intensive energy-using practices tend to be unreflective about them.

Rachel and Emmanuelle – intergenerational shifts in comfort

When first interviewed, Rachel was in her 30s and living with her partner and children at the ecovillage. Like several of our Lammas participants, she described how older generations of her family could not understand their choice to live in a low-impact way, as this was seen as a return to hardship (even though the ecovillage did adopt modern technology in many respects), when they could have the conveniences afforded by technology, such as central heating.

[w]e had a key message for a while, it was [chuckles] 'Combining the best of traditional smallholding with the best of 21st Century technology' ... That was the 'attempt' to recognise that there are many good things in the past, we are not going for the drudgery or the scarcity but to combine it with innovations that were appropriate ... [partner's] parents, for ages, I could see it wasn't so much what we were planning to do but their own memories of fear of the past and of the hardships they had as kids, so I think that's key, if the people who are fifty, sixty and perhaps even seventy years old ... they were instantly thrown back to those times of having one potato between nine children and having to poo outside in a pit with no toilet paper and all that really and that was not nice for them. So however much we said, 'No, No, we are going for super insulated homes and bla,bla,bla' it was as if the two things didn't connect quite a lot. So maybe now that it happens less, cos his parents now say 'Now we can see what you meant, it's easier!' (Rachel)

Some family members appeared to change their minds when they saw the reality of ecovillage life as perhaps more comfortable than initially anticipated, yet for others, the choice to live in the ecovillage remained difficult to comprehend.

Emmanuelle was also in her 30s and living with her partner and children at the Lammas ecovillage. While undertaking building work on what would be their permanent home, the family were living in a caravan and largely relied on solar panels and wood burners for their domestic energy needs. Similarly to Ronald and Gwen, Emmanuelle reflects on how older generations in her own family reacted positively to the introduction of central heating as an alleviation of domestic labour:

I think my grandmother had years of lighting fires and the drama of trying to heat up the house in the morning. I think it's left her with a love of central heating, I don't think it's left her thinking 'oh that was good', she's very happy just to push the button and it comes on. I think my mother's

probably the same really you know; quite keen to enjoy the comforts that are available. (Emmanuelle)

She remembers how her mother also appreciated the 'general warmth' provided by domestic central heating, and that her father (who had an 'environmental awareness' that she feels influenced her) taught her to close doors and 'keep the warmth in each room'. Emmanuelle describes her own appreciation of home heating as quite different.

I think actually my body's adjusted to different temperatures and I find different things acceptable now. I've got used to the heat of a fire, I find when I go into a centrally heated house it's lovely and warm but then it's kind of stuffy and it's quite a different kind of warmth. I mean with a wood burner you sit there and it's hot, it's hot in front of the wood burner but you don't get that central heating, it's more of a general warmth. So I s'pose I've kind of, I think I've adjusted to those different kinds of, you know it's hot when the wood burner's going and then it's cold. Yeah so I think my mother and grandmother, I guess we just adapt don't we; they're used to that more general warmth ... but I don't like [being able to heat the house at the push of a button]. I look back and I think actually I see for me how I had no connection with it, no connection you know, whereas when the wood's there and you see the fire going you think maybe I'll just turn the fire down cos the pile of wood is shrinking. (Emmanuelle)

She depicts her grandmother as liberated from the work of lighting and tending fires by a more comfortable and convenient central heating system, and her mother as wedded to this way of heating her home. Emmanuelle recounts how a long period of growing independence led her to ask questions of the way of life she had grown up with. She actively contrasts her own attitudes towards practices familiar to her from her childhood to those of her grandmother, mother and also to those of her father, with whom she nonetheless shares environmental awareness. She represents this awareness as 'coming naturally', whereas her mother's participation in practices like recycling is 'learnt' and still sits alongside other, less sustainable practices, like heavy use of central heating. She states that, while her father's concern for the natural world had an impact on her, her own awareness goes deeper than his interest in 'conservation'. It is this deeper and broader awareness, she suggests, that has influenced how she views the practices in which her parents and grandparents participated, and what she has adopted from them for her own family.

In these extracts, Rachel and Emmanuelle draw on the experiences of older generations of their own families to demonstrate how they are revisiting but also rewriting these practices as part of actively creating contemporary ways of life. Emmanuelle describes generational shifts in dispositions, habits and values associated with particular heating practices. Burning fuel for heating is transformed, across time. It begins by being a kind of drudgery, one among other forms of domestic labour associated with material hardship from which it was good to escape. But the convenience and comfort which succeeds it appears to jar with Emmanuelle's environmental values and her own, independently developed, sense of what comfort might mean. Using fires for domestic heating is not, then, a return to an outmoded practice, but an effort to adopt practices which will help to create modes of living that mediate between different values – the value of comfort and its positive association with family life, and an orientation towards sustainability. Rachel's account sets out how older family members, in turn, are experiencing seeing these practices rewritten, moving from associating practices at Lammas with 'drudgery' to seeing them as ways of making life 'easier', and in the process coming to understand the motivations and identities of the younger generation in a new way.

In these accounts, entanglements between practices, identities and familial relationships emerge, allowing us to see how these have implications for patterns of energy use. In the process, differences between intergenerational cultural patterns are noted and described by interviewees, interpreted through the lens of everyday practice, in the service of narrating contemporary individual identity. The relational entanglements we bring into view are implicated in the historically embedded shaping of everyday dependencies on energy use in ways that are significant for people's ways of conceiving their senses of themselves in relationships with others because they engage the dynamics of connectivity and desire and the wider cultural patterning of these intergenerational dynamics. In the next extract, we see how the shift from resource-constrained to comfortable living is influenced by conditions of a psychosocial nature involving shifts in meanings, practices and values relating to the use of resources.

Pat and Sally – from frugality to waste

Pat, in her 60s, retired and living with her husband in Ely, described her upbringing in London's East End without heating, hot water or indoor bathroom:

I think my mum didn't have a Hoover until she was in her late forties and something like that and just brushed the mats, so they never had a car. Pretty well walked everywhere. They done everything different then. ... Oh everything is so, so different. My dad, going back, his dad and his family, they had a coal round but with the old 'orse, They had an outside loo but the bloody horse was outside there as well, grazing and that was for the coal lorry... [b]ut environmentally friendly because the horse mess used to go on the garden; none of your fertilizers and all that. (Pat)

Pat describes the 'environmentally friendly' practices experienced during her childhood when income and energy were restricted, but she is not arguing definitively in favour of continuing with these past practices. Rather, she has adopted a different way of dealing with matters of material resource constraints and scarcity by identifying as someone who refuses to 'scrimp' in the same ways as previous generations of her own family did.

I'm wasteful especially with food, I am wasteful and I wouldn't dream of turkey going from Boxing Day to 'soup' day to 'mince' day, no. But that was what happened in their days because if you had it and you had the family and they normally had big families anyway, things were passed down because they had to be. (Pat)

Pat stresses her own propensity is towards being largely unconcerned about wasting food, tracing this back to her memories of holiday celebrations and what they brought to mind about past generations (more sustainable) reuse practices. This narrative marks a point of contrast with Rachel and Emmanuelle for whom it was both possible and desirable to bring together environmental awareness and values with family practices that limit resource conservation and who identify themselves as living sustainably. Pat does not express such a desire to practice or identify with sustainability. Pat went on to elaborate further on the historical and cultural resonances lying behind her own refusal to scrimp when answering a direct question about why she considered herself wasteful in relation to food, and in a way that depicts a changing family and cultural logic promoting a socially acceptable shift from practices of frugality to waste.

Cos I think we didn't have it. If you go out there [kitchen] now you always see a bowl of fruit, there's always crisps and whatever and I'm sure that's because we didn't have, although saying that, my dad of a Sunday used to let us have a bar of chocolate and a bottle of pop and that was our Sunday afternoon treat. Now I like it out there all the time; I don't know if I'm going to eat it but because we didn't have that fruit bowl. Now my boys have

always seen it and they don't take no notice but I think to myself, 'No I don't want that now'. But because you had to either share or you didn't have it. So now you think 'Oh I had to scrimp before, I'm not skimping now'. But only on food, I am wasteful on food and I tend to buy the same things, whether I need them or not. (Pat)

Relationally entangled practices matter, then, as they can hold the potential to create culturally embedded, affectively charged, normative change. Pat's embodied memories as a young girl were about a life of generalised constraint interspersed by occasional treats. She speaks half a century later about a transformation that has occurred in her own subjectivity (and by extension that of others of her generation) as, in contrast to her parents' generation, she and her own children can have what they like when they want it. In contrast with sharing with others in a situation of want ("you had to either share or you didn't have it"), the position she takes displays a more individualised sense of self based around notions of choice, freedom, and a personal responsibility to enjoy oneself. However, this is not a form of individualism that exists apart from relational considerations. It is a form of relational individualism (Nielsen, 2004), as shown by the way Pat is also affectively attuned to how subsequent generations benefit too from experiencing everyday freedoms from externally imposed needs and wants. For Pat, it is important that the freely available food she values is also freely available to her children. The abundance she provides may not be noticed by her children, and she does not feel obliged to take advantage of it, but both generations are able to enjoy themselves, being free of want. Out of this position, which reflects a culture of consumption shared across generations, Pat and her children's' everyday habits, and identities as consumers of resources, are formed.

These relationally constituted memories are embodied, affectively far-reaching and articulate material aspects of everyday meaning making which hold implications for how resources are used, and for attempts to change patterns of use. Sally, in her 40s and living with her husband in Ely, like Pat, describes experiencing constraints on energy use during her upbringing. Unlike other participants whose accounts we have considered here, her family did have central heating, but there were financial restrictions on its use:

They did [have central heating], when my father was not tight enough to put it on, we had these radiators ... but he was very tight and it would only go on couple of hours every evening, you couldn't have it on in the morning, so he was very bill conscious (Sally)

Sally described the importance of heating in her own home. In addition to the central heating, she talks of using a fan heater for additional warmth in the bedroom, or turning on all the gas hobs for further heat in the kitchen. Her husband chastised her for profligate use of heating and having ‘no idea of cost’. Yet Sally described the importance of a warm home, particularly when caring for her grandchildren, who visited regularly:

[i]f we have the kids over, we have the children here so we tend to keep the heating on a lot in this weather for the kids. I can go without it in the daytime generally but when you’ve got the young children here that has to go on. (Sally)

Similarly to Pat, Sally’s account shows a generational move away from restriction experienced during her own childhood. This results in adoption of practices that may be considered wasteful, but which are partly justified by Pat and Sally in terms of caring for younger generations. The object of care here is the creation of home environments that embody abundance and comfort to replace experiences of constrained resource use. Pat’s children ‘take no notice’ of the fruit bowl because it has always been available to them, while for Pat fruit would have been a rare treat. Similarly, Sally ensures her grandchildren have a constantly warm home, where the heating was only on for what she regarded as brief periods in her childhood home. These experiences link back to Ronald’s point discussed earlier about younger generations taking things for granted. However, unlike Ronald, Pat and Sally are far more positive in associating ‘waste’ with a ‘baseline’ of welcome comfort and abundance. They thus adopt a position on identity and morality – on who they are and what they should do – that, while reflecting a modernised cultural formation of consumption, also reflects generational differences between experiences of home and homeliness. “Waste” is something to be chosen when it represents a better option to depriving oneself and one’s children, and it does not take on its meaning exclusively from living in situations of resource scarcity.

The links made in these interviews between biographical experiences and widely-shared cultural positions are done through narrative. In Pat’s case in particular, singular experiences of the difference between everyday constraints and treats are taken up within canonical family stories, interpretive tools that can be drawn upon in everyday sense-making relating to how ideas about restraint and abundance are transmitted and transformed between generations. Popular or canonical narratives (Emerson and Frosh, 2004) turn what is

historically produced into something that can be taken for granted about everyday life, and that is considered to be common-sense, while smaller, improvised, bottom-up narrative and effortful attempts at sense-making provide less well rehearsed, sedimented, and more contradictory resources for arguing and thinking (Billig, 1996).

Pat's family story of intergenerational transmission in her own socio-economically deprived family features a canonical response to resource shortages that involves the practice of passing on hand-me-downs. In response to this kind of widely shared, canonical family story, for Pat, being unconcerned about being 'wasteful' is something she asserts as important. Her narrative of how she came to identify with this attitude is itself canonical, insofar as it reflects a broader culture of individualism, which is apparent in Pat's account when she describes how she sees it as important and valuable that she no longer wants instant gratification, and her needs can be met freely met through acts of personal choice to indulge or show self-restraint. At the same time, she sees the requirements of care for a new generation as being met in a different way. Her own personal experiences mean that she is more unequivocally happy (in contrast to Ronald) that her children should not be as heedful either of abundance or of the fact that previous generations did not enjoy it. Whereas she sees her own freedom as consisting in her acquired capacity to choose to consume or not, she sees the freedom of her children as lying in this capacity simply being part of their inherited culture. Her individualistic view of consumption, and her individualistic view of her children's consumption, represent distinct kinds of relational individualism. In this way, while she uses canonical narratives of 'handing down' and so on to make sense of generational differences in practices, she also uses her own personal experiences to understand the personal significance of these shared narratives.

The dynamics of identity formation here relating to shared cultural narratives open up a psychosocial window on the meaning of practice. They also suggest how such psychosocial dimensions of practice can play a role in sustaining high intensity resource use in everyday family life. This potential is relationally embedded, and associated with pleasurable experiences. A lack of concern for wastefulness makes sense as part of Pat's biography because it carries affective potentials, which are seemingly left unaccounted for by policy arguments for changing to more sustainable energy practices and socio-cultural narratives relating environmental and economic concerns with inefficiency of resource use,

consumptive excess, or damaging environmental exploitation (Thomas et al, forthcoming). Associations between waste and pleasure, but also between waste, care and well-being are rooted in the family context of a biographical past in which particular practices are entangled with significant relationships, and translated into a present where former restrictions on enjoyment have been lifted.

The psychosocial picture emerging here can be contrasted with another pattern relating to socially non-normative practices within *Energy Biographies* interviews we have described elsewhere (Groves et al., 2016a). This concerns how some practices, acknowledged to be wasteful, created moral tensions for interviewees between distinct commitments (e.g. to identities experienced as constitutive of a life worth living, on the one hand, and to energy efficiency on the other). Such moral tensions can arise from within lifecourse transitions, as identities connected to particular practices are rendered unstable by practice change (Groves et al, 2016c). In such circumstances, entanglements of identities, practices and cultural norms may either become still more tangled, or unravel normative injunctions against wastefulness. But as Pat's interview demonstrates, the meaning of practices culturally defined as wasteful can be re-evaluated through biographical experiences of family relationships and of practices entangled with them. In these circumstances, the tensions which may arise out of clashes between individual experiences and cultural norms can sometimes be eased. In Pat's case, wastefulness, construed as a biographically and relationally embedded preference for comfort over frugality, was in alignment with her later life identity as someone who – as long as she and others for whom she has everyday responsibilities are comfortable – does not worry over mundane things. In this way, her attachment to particular practices of consumption, entangled with caring relationships, stands out as consciously non-normative but also as unproblematic.

Discussion and Concluding remarks

We have made efforts to show how combining elements of STS, SFL and psychosocial work can deepen our understanding of historically-embedded change in relation to energy. We show how our own – and SFL studies more broadly – have something further to offer sustainable energy research, via the concept of relational entanglements between practices and familial relationships. Entanglements of a material kind between devices, infrastructures and practices have taken central stage in practice theory. Here, however, we have explored how issues defining SFL research that concern relationality, can help us understand everyday

energy usage by illuminating how practices matter to people within the context of familial relationships.

Our analysis has benefitted from the SFL strategy of focusing in on intergenerational issues through a temporal lens where family dynamics are studied as historically embedded. This strategy allowed us to discern ways in which norms related to practices evolve and change within families over time in complex ways that are shaped by familial relations themselves. Rather than simply being carriers of practices, then, relational individuals are depicted within our analysis as interpreting the meaning of practices through the meaning they derive from their relationships with close relatives. As Pat's narrative demonstrates, this can mean that non-normative practices can be affirmed, and the meaning of concepts such as waste adapted. In Ronald, Gwen, Rachel and Emmanuelle's narratives, wider cultural shifts in practices that are usually seen as representing the overcoming of hardship are reinterpreted, and the meaning of ideas of comfort and convenience recast through interpreting what these ideas have meant for their families. One result is a deeper understanding of the meanings that practices have for their participants – connected to processes within families out of which individual identities are produced. Another is that, by understanding how familial relationships influence how people adjust their perspectives on what constitutes a 'life worth living' to an environment composed of shared practices, we can appreciate how people come to understand in different ways what constitutes, for example, environmentally harmful behaviour. The meaning of waste, for example, can be clearly seen in Pat's narrative as shaped by ideas about abundance, which themselves reflect her feelings about her family.

Commentators on psychosocial analysis have discussed how challenging it can be to link depictions of cultural formations to their supporting structures of feeling (Wetherell, and Beer 2015)². Unsurprisingly, there is a dearth of such work on contemporary energy transitions in national contexts. Discussions have faltered on questions about how such theorising can influence policy thinking and the difficult politics of research. Yet, cultural formations and their influence on bodily sensations, affects, imaginings, consciousness and identity formations have become the primary focus of psychosocial research. For example, Hoggett (2013) has produced an account of UK wide institutional reactions to neoliberal forms of governance, characterising them as complexes of anxiety, perversity and cultures of disbelief, and focussing on their disabling effects on public reactions to climate related risk and

environmental damage. Our own analysis, however, suggests that how familial relationships are experienced may introduce another level of dynamics to the analysis of how such reactions emerge. The ways in which our interviewees talk about energy use have, threaded through them, accounts of how they see themselves, and also what matters to them, within their familial contexts. Identity here is bound up with care, relational individualism, and ideas about generosity, in contrast to the aforementioned dominant themes of psychosocial research. SFL is a fertile space where many points of synergy with psychosocial research can be mined. In this space it is likely that the role played by the kinds of relationally mediated dynamics explored in this article will take centre stage in efforts to understand the reproduction of patterns of energy usage as part of cultural and psychosocial forms of life. The kinds of dynamics we have pointed to in this article represent points where policy discourse around how to reshape unsustainable trajectories of domestic resource use can reconnect with how people assess what matters to them.

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Footnotes

¹For more detail about sampling and the design of the interviews see <http://energybiographies.org/our-work/our-findings/reports/>. For further discussion of the multimodal activities see Shirani et al., 2015b. For more discussion of stories of change see <http://energybiographies.org/wp-content/uploads/2012/09/Energy-Stories-re-thinking-moments-of-change.pdf>

²<http://energybiographies.org/our-work/think-pieces/>

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