Investigating risk – Methodological insights from interpretive social science and sustainable energy transitions research

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Abstract

This chapter's methodological reflections concern how researchers addressing questions of environmental risk, socio-technical change and (un)sustainable resource usage have developed and refined the investigative potentials of their interpretive, real world inquiry methods. Such researchers have developed approaches and methods for studying everyday, potentially risk-full and risk-related practices against the backdrop of lifecourse/biographical transitions as one means of promoting more dynamic understandings of (un)sustainable resource usage in everyday life. The worked example draws from a demonstrator project "Energy Biographies" (2011-2016) which utilised a qualitative longitudinal design, semi-structured biographical-narrative interviews, and multimodal methods to study problems of energy demand, (un)sustainable energy transitions, and potentials for change. The demonstrator project identified possibilities and challenges arising when efforts are made to foster psychosocial awareness and understanding in risk research.

Introduction

Risk research engages with some of the most intractable problems of our time – including those associated with climate change, environmental pollution and degradation, and natural resource depletion - where local and global environmental issues are bound up together. Such intractable problems can be difficult to elucidate using single disciplinary frameworks and, for this reason, risk occupies a multi-disciplinary problem space. In this way risk research is capable of addressing challenging cross cutting questions about its various dimensions: subjective, interpretive, contextual, social, cultural and ethical - as well as natural, scientific, material and technical.

One currently high profile arena where particular methodological opportunities and challenges have come to the fore - and towards which concerted cross-disciplinary, scientific

and policy efforts are being directed – is understanding problems arising from all these environmental problems for providing energy sustainably. As well as already having effects in the present (eg in the way energy systems are under scrutiny as never before, the price of energy services is increasing, and smart living initiatives are becoming implemented as promises to deliver improvements to the energy system of the future (see e.g. Flexis website[1]), there are more temporally extended risk and uncertainty issues at play (Henwood and Pidgeon, 2013, 2015). Ramifications of globally and locally entwined changes may multiply or diminish in the future, depending on responses that are made to them in societies at large and in people's personal lives –including in the "in between spaces and places" where it is important that researchers encounter their "psychosocial effects" (Groves et al, 2016a&b; Henwood et al, 2016). Such entwined problems have become drivers of social science research on energy use and demand, and closely interlinked questions about policy initiatives arising from this (Pidgeon and Butler, 2009).

Social scientific investigations into risk are characterised by a sustained and rigorous approach to empirical inquiry, often involving the use of objective/quantitative assessment methods to calculate the probability and severity of risk outcomes that often lie at the heart of technical risk management practices and discourses. Such quantitative methods produce knowledge claims that are generalisable, in ways that are statistically robust, based on the analysis of representative data samples collected via epidemiological studies and national or international social surveys. This chapter, however, is concerned with elucidating more in depth, qualitative investigations recognising that they have been conducted for many years now, initially as a means of generating more nuanced, contextual, interpretive understandings of risk problems. Such investigations underpin a strong tradition of interpretive and socio-cultural risk research and policy-relevant work (Pidgeon, Simmons and Henwood, 2006), although the forms of evidence these approaches and traditions provide, and how supportable they are considered to be, still demands attention (Henwood and Pidgeon, 2015, 2016).

A number of excellent accounts already exist highlighting the role played by qualitative strategies and methods in risk research; they are accessible and deserve to be widely read. Gustafson (1998) provides a useful early generic treatment of issues arising from the quantity-quality debate in scientific work. Pidgeon (1992) gives a clear, concise explanation

of why taking an interpretive, qualitative approach can be so important in problem focussed inquiry in the risk field. Boholm (2015), in her book Anthropology and Risk, offers an expansive account of the interpretive approach to risk showing both how it takes shape in qualitative analytic terms, and how the qualitative methods used (case studies using participant observation and stakeholder interviews) are designed to "situate" risk analyses. This situating is done by initially studying risk perceptions close up as part of proximate social interactions and social contexts, and then relating them to wider social values within larger frameworks of socio-political change. Boholm's proposal to study risk problems by taking up a "relational' risk" approach (by which she means consistently analysing meaning relations between risk objects and objects of value) is extensively supported through her use of illustrative case study work (both her own and others), but the relational approach itself is quite specific in its aims and so does not capture all that is to be encompassed in this chapter. Yet it does draw attention to the kinds of interpretive practices[2] that have wider resonance beyond anthropological research, conveying important means of studying risk qualitatively, and providing an essential backdrop to careful design decisions and choices of data collection and analysis methods.

Taylor-Gooby and Zinn's (2006) editorial overviews and commentaries to their volume *Risk in Social Science* also elucidate how it is possible to approach the subject matter of risk research from an interpretive perspective, as part of their efforts to characterise the wider risk and social research agenda. They point to a range of major methods spanning the qualitative and quantitative methods space (surveys, qualitative interviews) arguing that risk can be considered not as something to be removed from its social context, but as integral to personal, social and institutional life. It is worthwhile highlighting here Taylor-Gooby and Zinn's explicit realisation that there is an important role for discussing what methods advances are for, not only to address the variable ways in which members of the public, scientists and other stakeholders perceive and respond to risk, but to assist in the cultural risk analysis programme in aiming to resolve "the problem of relating the 'grand narrative' to the everyday" (Taylor Gooby and Zinn, chapter 1, p14). This chapter is concerned with cross-cutting contextually embedded approaches and methods advances in ways that seek to build on Taylor-Gooby and Zinn's work, while their contribution is more specifically embedded in the cultural turn and biographical approach in qualitative risk studies.

The academic context for Taylor Gooby and Zinn's account, and particular source of its multidisciplinary discussion, is the Social Contexts and Responses to Risk initiative (SCARR, 2003-8). This brought interpretive social scientific work on risk centre stage, and gave a platform to arguments in favour of taking up the latest developments in the "cultural turn" within cultural and risk studies (Tulloch and Lupton, 2003). The cultural turn is one among a range of critical or reflexive social scientific turns that have been highly influential in qualitative social scientific work generally, including within risk research. It gives access to ways of studying risk as a socio-culturally embedded phenomenon, pointing out "how cultural shifts influence how people think about risks at a personal level" (chapter 1, p8). The current chapter has a more sustained focus on the study of everyday (energy use/risk) phenomena along with a particular interest in the methodological contributions of qualitative longitudinal (QLL) and multimodal methods – as well as biographical/ psychosocial approaches. Distinct from Taylor-Gooby and Zinn's social science of risk agenda-setting and interest in methods advance attributing particular value to the cultural turn in methods, the particular arguments and insights in this chapter are bound up with developments in interpretive social science and risk research more broadly, expanding what is at stake when exploring the dynamics of everyday life and systems change in sustainability/energy transitions research. Similarly to those authors though, this chapter recognises that there remains widespread reluctance – or at least perceived ambiguity - over the promising role clearly identified for use of biographical methods in risk research (Zinn and Taylor Gooby, chapter 2). It is equally the case that similar reservations can surface about the use made of contextually embedded, cross-cutting psychosocial methods (see e.g. Groves et al, 2016a&b; Henwood et al, 2016) that feature in the worked example in this chapter.

The chapter starts by further discussing methodological reflections that are part of specific trajectories of work in interpretive/qualitative social science. This is necessary to understand the ways in which researchers investigating questions of environmental risk, socio-technical change and (un)sustainable resource usage have developed their approaches and refined the investigative potentials of their real world inquiry methods. Of particular methodological interest in the chapter is how it has been possible to develop ways of studying everyday, potentially risk-full and risk related practices, to foster

understanding of the complexities and dynamics of (un)sustainable resource usage within everyday life. This is an important topic within efforts to explain wider trajectories (of intensification) of energy demand by researchers working on sustainable energy. The chapter's worked example draws from a recently completed demonstrator project "Energy Biographies" which was methodologically informative, breaking new ground in the study of sustainable energy transitions, including ways of working that foster psychosocial awareness and understanding in risk research (see e.g. Henwood et al, 2010; Henwood and Pidgeon, 2016).

Understanding qualitative risk social science: Developing real world inquiry methods

Why study risks qualitatively? One important purpose of qualitative risk studies is to prime investigative work that is capable of putting aside the pursuit of risk perceptions as psychological or sociological abstractions. For some, this is an "anthropological" imperative (see e.g. Caplan, 2000). But across risk as a multi-disciplinary social science field more widely, qualitative methods provide established means of approaching the study of risk perceptions in ways that foster understanding of the locatedness of such perceptions - both personally and socially, and as a means of generating insights into actors' practical logics and engagements within specific social and cultural settings.

Drawing on a symbolic interactionism as a longstanding theoretical underpinning of interpretivist social science has been enabling in a variety of ways. Boholm explains (and her coverage of empirical work demonstrates) why it is important to investigate the ways in which people's risk experiences, knowledge, expectations or uncertainties regarding real or potential harms become "objectified" or "symbolised" (Boholm, 2015, p162). Highlighting such interactional, socially embedded processes is a means of overcoming widely discussed limitations of making naively realist assumptions about risk that have the effect of dichotomising it as either an objective and subjective phenomenon. Risk may indeed be real in its effects (ie damage or harm can be the unforeseen outcome of actions taken to deal with uncertain situations), yet its meanings are socially constructed because of the ways in which they are contextually framed (Pidgeon, 1992). Moreover, such contextual framings come into play in a range of ways. For example, they can be a means by which government and regulatory agencies exert influence on public citizens as they attempt to implement (environmental and social) policy decisions. Or they can reflect a more general uptake of

science and technological “reality defining” discourses, for example, as circulated in the media (Hughes, Kitzinger and Murdock, 2006). A major point of discussion among interpretive risk researchers is about how to instantiate important commitments to studying risk as *both* situated in social interactions *and* constituted in wider cultural discourse. Here opinions are sometimes forcibly expressed in favour of more radical social constructivist arguments for epistemologically privileging the role of local understandings of risk in shaping its everyday, practical, situated meanings.

Acknowledging such epistemological concerns has led to carefully considered efforts to further nuance, deepen, and create a more dynamic analysis of contextual framing and local risk perceptions by deploying a more phenomenological approach (see e.g. Irwin, Simmons and Walker, 1999). What comes under investigation in such studies are the ways in which inchoate phenomena become “present” (or alternatively absent) within lived experience. In both styles of qualitative risk research (symbolic interactionist and phenomenological) the qualitative meanings of risk are not pre-established (as they might appear to be when presented as part of psychometric measures of the perceptual qualities of risk). Instead, stress is laid on the way grappling with risk problems requires understanding how they are fundamentally constituted by what is happening in local circumstances of everyday experience (Parkhill et al, 2010), in episodes of social interaction (Henwood and Pidgeon, 2015), and by the ways in which risks are framed by expert, public and professional discourse (Crichton, Candlin and Firkins, 2016). From a qualitative research perspective, all three of these important methodologically steers provide ways of investigating risk problems in ways that can be analytically productive, and for explaining how risk problems are or could be acted upon in diverse arenas of life and work.

How to move discussion on to the practical side of qualitative investigations into risk? This is apparent in methodological commentaries and reflections in the risk field of the kind begun by Taylor Gooby and Zinn (2006). Having followed up on much discussion of the contrasting features of realist and constructionist approaches, they settle on the importance of pursuing empirical study of the perceptions of risk in various social and organisational settings and everyday life, including across the lifecourse, to show how empirical methods and data can elucidate societal responses to a range of risk issues. These strategies are said to be a highly significant means of accounting for the “peculiar modern force of the notions of risk” (Taylor

Gooby and Zinn, 2006, p7) and for elucidating how and where culturally shifting ways of regulating or individualising the regulation of risk take effects in people's lives. Here we start to see the beginnings of a useful focus on careful and detailed analysis of settings where the things that happen that could potentially put actors at risk are made sense of by relevant social actors. One issue arising is understanding the circumstances under which personal and institutional life can be disrupted because of the way risks are perceived. Alternatively, ways of responding to perceived risks may make it possible for everyday life and socially organised activities to continue to go on without interruption. Such issues have been addressed frequently in qualitative risk perception studies of personal, biographical and morally ordered responses to health risks over many years, and they have appeared more recently in gender and parenting studies (Henwood and Shirani, 2010; Shirani et al, 2010). However, analyses produced at this level of detail and nuance can be challenging in fields where they are unexpected and unfamiliar, as will be discussed later in the chapter.

There are reasons to persist with the production of such detailed and nuanced understandings of how people experience, perceive, and make sense of risks in their everyday social and personal lives which cultural/anthropological risk work articulates particularly strongly, albeit not in an uncritical or unreflexive way. While the cultural approach to risk in anthropology can, in disciplinary fashion, be separated from qualitative social scientific work more generally, this chapter takes inspiration from culturally embedded, ethnographic work for exemplifying how to bring together focal concerns spanning across levels or layers of interpretation typically considered to be analytically very distanced from one another.

Investigating mundane practices in sustainable energy research: Methods context for the study example

Having distilled risk and methods knowledge from qualitative social science and interpretive risk research, it is important to consider another, more proximal methods context for the study example that follows, by detailing research that is more specifically dedicated to investigating everyday energy use and (un)sustainable energy transitions. Although the concept of risk itself is not greatly stressed in this field; the inquiry problem is clearly a risk issue as discussed in this chapter. Investigations into (un) sustainable energy transitions are

underpinned by concerns about environmental degradation and resource depletion and, as such, necessarily approach the study of a risk problem (unsustainable energy use) in ways that are material and yet layered with issues that are more social and discursive in character, and cannot be reduced to matters of material harm alone. Unsustainable resource usage poses a material risk problem focussed upon the consequences of causing real harm to the climate though the intensity of our current energy use (in western modernised societies and increasingly more globally than this) and high levels of carbon emissions from our ways of producing and using fossil fuels, as well as the depletion of environmental resources. It is also a highly complex social science problem raising questions that, arguably, are best approached by interpretive social science. It has been clearly established in sustainable energy transitions research that questions about energy use and systems change cannot be approached simply through formal and technical knowledge framings involving economics, technology development, and natural/environmental science leading to managed change. Rather, it requires investigating connections between everyday practices (things we do that use energy) and larger systems dynamics (how social organisation makes changing such practices difficult). How to do this is something colleagues in the UK energy biographies team were investigating 2011-2016 (www.energybiographies.org), and it has involved significant methodological inventiveness as well as drawing extensively on interpretive social science research ideas and practices of the kind already discussed.

An overarching body of knowledge has built up in energy social science from a social-materialist perspective (UKERC, 2009) with interests in comprehending the *embeddedness* of everyday energy usage and resultant demand trajectories within wider social and material contexts. One of the key issues under investigation is how mundane patterns of use involving energy routinely lock people into their unsustainable ways of using energy. Inquiry is directed at how energy systems have evolved to entangle together everyday practices and socio-technological infrastructures in ways that, from planetary and social sustainability point of view, is harmful and needs to be changed – but that this will be difficult to do. There is widespread acceptance that 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 issue

was a central concern for the Energy Biographies study, and threads through its methodological work, as will be shown next.

Investigating everyday energy use in nuanced ways: Making our energy dependencies visible biographically and psychosocially

Primed by questions that have been raised about the invisibility or intangibility of our ways of using energy, opportunities have arisen for doing interesting methodological work. A key proposal is that because energy is something we are not aware of, it is difficult to change our ways of using it, leading to inertia and lack of change in our demand for energy. In highly influential sociological work (Shove, 2003), these invisible, intangible ways of using energy in the everyday are captured by focussing conceptually on energy use as something that is thoroughly embedded and entangled in "everyday practices" i.e. the things we routinely do that use energy without us being aware that energy use is involved. Showering, heating our homes, driving a car to travel to work are examples of such social practices. There are considerable strengths to this work: it has illuminated socio-technical pathways through conducting longitudinal studies of energy practices. For example, since the technology became available to install domestic showers widely across society, frequent showering has become established as a norm based on higher standards of cleanliness over time. This is why showering has become a case study in understanding the development and intensification of energy usage, where what we do in everyday life is a key contributor to systems stasis and change. The explanation subsequently offered for the problem of unsustainability in energy usage (here called "energy demand") is that socio-technical transitions (to our dependency on energy intensive uses of technology) become entangled with past transitions. Examples are the widespread, easy availability of showering devices associated with the practice of more frequent showering, and fossil fuel dependency arriving with electrification of homes more generally.

However, what is not brought into view by work within the socio-technical studies approach about the dynamics of everyday energy use is also important, and is a question requiring development of a different kind of methodological work. What is it about goods, services, objects and devices that provides the material basis of our dependency on energy? It is not

axiomatic that we should desire or want to use them; rather this question of the production of desire is something that in itself has to be understood to flesh out the thesis about the ways in which we have become locked into systems of high energy-demand. The question 'what is it about our engagements with energy using devices, infrastructure and technology that has led us to use them – indeed to allow ourselves to become dependent upon them?' is one that requires more qualitative ways of working. These ways of working are ones that often seek to engage more deeply with the everyday sense-making of people in their local communities, in their relations with others, and in terms of how they make connections between their own and others' conduct and wider social systems.

Biographical and narrative methods (Chamberlayne, Bornat and Wengraf, 2000; Rosenthal, 2004; Squire, 2008) can provide assistance, as they have a long and diverse genealogy providing a sophisticated stock of interpretive procedures for relating personal experiences to the wider material and social world. Biographical data provide for dynamic, temporal understandings: "*rooted in an analysis of social history and the wellsprings of individual personality (they) reach forwards & backwards in time, documenting processes & experiences of social change"* (Chamberlayne, Bornat and Wengraf, 2000, p2*).* Squire's (2008) account of narrative methodology clarifies its significance as a form of representation /reconstruction, bringing to the fore how experiences and meanings are not fixed – due to the uncertainties of language. Rather, narrative itself reconstructs stories over time and places, and many levels of context are at play in social reality constructing processes of objectification, symbolisation and translation involving narrative, with implications for interpretive work. Taken together, these authors cover some of the most important intellectual and methodological developments that have led to the development of more psychosocial ways of approaching the study of personal and cultural meaning making (Taylor and McEvoy, 2015). The *psychosocial approach* is a complex tapestry of arguments seeking to build up a framework capable of understanding the relations between reality making discourses and more psychic modalities of meaning making. Methodologically, it involves establishing ways to explore more dynamic, subtle and nuanced ways in which subjectivity and discourses constitute one another, and of interpreting their (material) social and cultural significance and psychosocial effects.

A limitation of biographical-narrative methods in the context of sustainable energy research is that, taken alone, they do not necessarily allow research to focus specifically enough on people's understandings of their everyday practices that are a material part of the dynamic processes creating our dependency on energy. Also needed is a way to enable people to see what is usually invisible to them – to make what is usually ineffable and intangible tangible to them. Enhancing methods so that is possible to investigate everyday energy use has been central to the Energy Biographies project (Henwood et al, 2015) conducted by a multidisciplinary team of social scientists (psychologists, sociologists, geographers) at Cardiff University.

Design, methods and data in the energy biographies study

This project, based at Cardiff University's Understanding Risk Group in the UK, was a large scale, 4 year qualitative longitudinal study (2011-2015). Over the course of a one year empirical programme, it used interviews and multimodal (mainly talk/text and visual) methods to explore how participation in energy demand reduction initiatives is shaped by personal biographies, and how a biographical, narrative approach can enhance existing social science understandings of meanings and competences in practice change. In particular, it focused on a variety of past and present biographical transitions and how they can shape the potential for change in individual lives and communities. Another key conviction was that people can talk about their everyday practices if they are given more reflective opportunities to do this in ways that help them to situate them in their own lives and relationships. We were fully aware in undertaking the study that this position contrasts with some social theoretical arguments to the contrary ie that people cannot reflect on everyday, mundane practices that they do not think about in the course of doing them. As the project grew, it incorporated more psychosocial sensibilities and investigated the affectively engaging attachments people make in their everyday practices (Groves, 2016a&b). The interpretive significance of psychosocial modalities of meaning making is taken up in this chapter's data analysis example.

Design: A published account of the design and methods from this project (Shirani et al, 2016) details the structure and rationale of the phases of qualitative longitudinal interviews

that made up the core of the empirical work[3]. Over a period of one year, study participants were qualitatively interviewed on three occasions, so that they were able to articulate their lived experiences and everyday sense-making in depth and detail in and through time. In between each interview wave, participants took part in activities designed to maintain their engagement in the study.

The first (wave 1) interview was semi structured in format (ie questions were posed not "by rote" but in flexible ways; prompts and probes were used; the conversational style had a purpose). The second and third interviews (waves 2 and 3) relied more on visual and narrative elicitation methods that involved stimulating materials (photographs, captions, videoclips) that were either produced by the researcher or by study participants themselves. In between interview activities took the form of solicited responses via timed SMS messages prompting participants to send the research team photographs of their everyday energy use. Video-clips were prepared by the research team for use in the third interviews to explore participants' future imaginaries.

The purpose of adopting this quite intricate combination of QLL/biographical interviews and a multimodal approach was, firstly, to explore what such a qualitative social scientific research strategy can tell us about the connections between people's awareness of energy practices and how individuals interpret key biographical transitions. It was also to examine how these research methods may help produce a different awareness of and relationship to (risky) energy practices, by helping participants draw new connections between past biographical transitions, present practices and future possibilities, and to evaluate the meanings attached to everyday practices that use energy.

In practical terms, setting up the study involved members of the research team first establishing contact with key informants by telephone or email, who had previously provided letters of support for the project at the time when the bid to secure funding had been prepared. Key informants were public figures who were known for their role in connection with one of the four local case study sites, and who were receptive to the idea of assisting with the research project[4].

The purpose of such a large, multi-site qualitative study was to ensure that interviews could be conducted with participants who had direct experiences a range of different kinds of

community level interventions to reduce energy. This was a condition of the funding, and the data collection was not planned to conduct a quantitative style comparative risk perceptions study between case sites. However, it did prove useful to be able to harness responses for specific questions across different sites as this produced data on more heterogeneous energy use practices, and also enabled the researchers to have better awareness of the kinds of local issues that matter to recipients of such interventions.

Methods. The first interview was taken up entirely with talk and text based activities i.e. discussion was structured around topics and questions verbally introduced by the interviewer and supported by prompts to maintain the interviewees' interest and keep them broadly on track with the research task. The interviewer asked about participants' everyday routines, communities and their energy interventions, significant life transitions, and use of energy in the future. The second and third interviews were far less influenced (staged, choreographed; Lucy and Wakeford, 2014) by the usual interview format. Here interviewees were asked to talk about anything that had changed since the previous interview and about the photographic materials they had sent to the researcher in the meantime (a technique used in interviews 2 and 3) or video-clips supplied by the researcher (a technique used in interview 3). In the second interview, discussion was facilitated by using photographs taken by interviewees of their everyday activities in four life domains - the home, travel, work and leisure chosen to span what practically matters to people as they organise their own lives in locally embedded and socially relevant ways. Each domain was photographed during a two-week period following a request, backed up by some reminders, by the research team. This photo-elicitation activity produced over 2000 images, and so researchers were pressed in terms of asking about them in the interviews (not all could be given focussed attention) and challenged analytically. This was dealt with by helping participants to make selections of most important photos in the interviews. Interview 3 was based around two activities and was again more multimodal in character than interview 1. Photos taken in response to the SMS message to photograph what you are doing at the time of receiving the message were subsequently arranged and presented by the researcher as a photo-narrative, with pictures and captions following the time sequence when they were taken. Much of the time in interview 3 was taken up with talking about

participants' responses to two films about homes of the future, one made in the 1950s and one in the 1990s.

Data. Data produced were thus a combination of text based interview responses and reflections on photographs of everyday energy use. An example is given in figure 1 to show how the project's methods did indeed enable the material world of energy use (here energy using devices) to be brought out of the background of everyday life which is potentially visible to the viewer but usually unseen. Jeremy comments on how taking the photograph brought to mind for him the way multitasking in the home has increased the intensity of energy use in his household. This photograph, along with the words Jeremy used to explore its possible meanings in his own life narratives, has been used to elucidate a range of points of interpretation in published work by the project team about the challenges posed by changing energy systems to people in their everyday lives. Nonetheless, more still could be written about how these analyses to bring to light entanglements within meaning making about various, coexisting psychosocial concerns and socio-cultural contexts.

Figure 1. Jeremy's Photo: Enhancing reflections on everyday energy use practices in the energy biographies study]

[INSERT PHOTO ABOUT HERE}

In writing about using photographs in interviews, and the mixed visual and textual qualities of Energy Biographies data (Henwood, Shirani and Groves, 2018), we have argued that this technique has been particularly effective for achieving its methodological aims of eliciting rich, experiential data relevant for use in inquiries seeking to understand embedded phenomena. In this way, our work contributes to a wider body of methodological writings that have similarly pointed to the need for carefully crafted approach to multimodal design where verbal questioning is used along with photographic images (and other creative materials) to meet specific challenges posed by one's research topic in qualitative interviews (see e.g. Edwards and Holland, 2015; Reavey, 2011). Our work also speaks to the use of both implicit and explicit conversational techniques, which is a notable issue for others using images in talk and text interviews and investigating contentious topics (Croghan et al, 2008).

We set out to develop our methods against the backdrop of studies of everyday energy use and sustainable practice in ways that would make what is usually intangible visible by harnessing the potential of visual methods to elicit talk about practices that otherwise would not be spoken about. Images have become a popular approach in qualitative social science practice for eliciting talk data, even though some have pointed to the paradox of advocating the unique ability of visual methods to convey information in ways not possible through words, yet written context is required to make the effects of the visual approaches evident (Rose, 2007). In fact, this quandary worked well by posing an issue that became worthy of serious consideration given that, in our research aims, we started from the position that our participants would often lack the words to say what practice means (Henwood, Shirani and Groves, 2018). However, as yet, it is not fully worked through just how far barriers to producing insightful data about practices and other matters that are not routinely spoken about can be overcome by building data sets using multimodal methods.

In terms of the qualitative longitudinal feature of the design of the Energy Biographies study, we produced our data so that it had potential to be analysed using qualitative longitudinal and a range of other analytic techniques. Qualitative longitudinal research (QLL) (Heinz and Krugar, 2011; Holland, 2011) as a research approach analyses continuities and changes in lived experiences in and though time by accumulating and using qualitative data that provides depth and detail. It can foster explorations of how past experiences and anticipated futures enable and constrain people's present routines and habits. It enables working analytically with individual biographical accounts in ways that can shed light on broader patterns of social change (see e.g. Shirani and Henwood, 2010), albeit that this claim is debatable when considering the reticence expressed by some about the limitations of such nuanced biographical data and analytical work. Energy Biographies published work draws extensively on these potentials of QLL data, and working in this way has enabled us to produce insights about perceptions of how wider societal norms (if not practices) are changing in favour of environmentally sustainable practices. From here, we arrived at the argument that personal changes in energy usage are more likely to be espoused and sustained as part of efforts to retain lifelong pro-environmental identities (Shirani et al, 2015). Potentially, it may also be possible to open up questions about the place of desire in

energy transitions but, as yet, the complex “longitudinal” dynamics are not well understood. More work is needed to establish a footing to address such questions, which could involve bringing out the affordances of psychosocial data and methodology and associated theory for expanding the study of everyday risk perceptions. To develop this idea - and indeed test it out - the worked data analysis example that is taken from other published work by the Energy Biographies team (Groves, 2016a&b) is presented to elucidate further how it is possible to use rich, experiential, reflective data in ways that promote psychosocial understanding.

Data Analysis A Worked Example from the Energy Biographies Project

Figure 2. Lucy’s Narrative: Heating the outdoors using Energy Biographies’ practices and identities data

[INSERT PHOTO ABOUT HERE}

This worked example concerns psycho-biographical connections to practice and involves a renewal of identity tied to family connections and the ideal home centring on surroundings and possibilities afforded for hosting family and friends. Lucy is talking about her own, her family’s and her friends’ love of her patio heater. Although she sees it as bad or wrong, it brings into focus how people make sense of tensions associated with use of materials and energy as part of lifecourse transitions in ways that implicate questions about their identities or subjectivities. Lucy speaks, in this extract, to her longstanding commitment to household efficiency as an important part of her identity, but also about how this has to coexist with wanting to maintain connections with her friends following a move back home to Wales from London (something she did to provide a better, more family-oriented lifestyle for her children). Contradictions experienced at the heart of her efforts to live in ways that made sense of her identity commitments and desires suggest that there are psychosocial depths to her experiences of normative expectations about domestic energy usage and its everyday dynamics, shaping how she conducts herself in relation to (potentially questionable) social practices. She does not simply conform to (changing) norms of good conduct as perceived and valued in (environmental concerned parts of) wider society; rather her perceptions of

what constitutes a good life, and her own desires, complicate her social positioning as a resource efficient homemaker.

Lucy's comments also feature a related psychosocial issue: how to deal with the personal ramifications of wider environmental discourses and narratives about the need to reduce energy demand and promote more sustainable energy use. Here Lucy's lived experiences are at odds with narratives of opportunity and self-reflexively taking responsibility for lifecourse risk. The kind of sense making she espouses is self-reflexive about risk, but not in ways proposed by reflexive theories of modernity. Regarding late modern society, a much-discussed theoretical proposition concerns how questions of risk work through into people's everyday lives in ways that require the formation of individuals who are self-regulating and will, therefore, take on personal responsibility for risk. With respect to Lucy, her the self-reflexivity is of a different kind, in that the politics of energy sustainability is rendered meaningful within a pre-potent life logic – of living a life that is worth living (Henwood et al, 2015). The lack of guilt Lucy espouses about her patio heater effectively disavows that there are personal consequences, although that narrative strategy may not enable her to deal in the longer term with any of the discomforts that disavowal may bring in its wake.

Disavowal of personal feelings is a recalcitrant strategy for regulating discomfort in psychosocial analytical work relating to the contemporary challenges of living in ways that are environmentally damaging (Weintrobe, 2013). The Energy Biographies team took this insight further as part of the psychosocial analytical work produced by the project. When tensions emerge in life narratives, and attempts are made to achieve reintegration of identities in wake of transitions, it is important to address how persistent contingency and negativity and their affective complements alter identity making. Downplaying or silencing also has the potential to make such matters particularly difficult to deal with. Becoming reflexive about uncomfortable episodes is not always possible due to lack of resources to sustain support for identity in ways that deals with troubling affects.

Conclusions and Future Research

The worked example is the product of a carefully designed data collection approach for encouraging reflections about everyday energy use among study participants by framing discussions around lifecourse changes and biographical accounting. This methodological approach certainly helped the research team reveal more about the ways in which people engage with energy use and demand. The development of lines of analysis concerning how perceived normative context (ie a cultural shift to more pro-environmental values and ways of living; Shirani et al, 2015) is an important influence on meaning making have proved valuable as a first step towards thickening understanding of problems relating energy use to issues of unsustainability. However, following on from this, we have turned our attention to studying the psychosocial issues involved, and the presented analysis example suggests that there is, indeed, something important to say about the psychosocial meanings of materially embedded and entangled energy use practices.

Nonetheless, psychosocial research falls squarely in the category of analysis that could provoke reticence among some academics and other research stakeholders for being overly nuanced and detailed. A counter-argument is that this undervalues the importance of analytical work that seeks to interpret data concerning the interweaving of biography and everyday practice. Psychosocial research is distinctive among qualitative approaches given its attentiveness to when, where and how lived experiences carry affective weight and significance. The focus of attention is on dynamic arenas of meaning making where identities and subjectivities form, and their ramifications on everyday conduct play out. These arenas are located betwixt and between personal lives, variously socially relevant knowledges (e.g. interactional, situated, localised, community or placed based), and culture-wide discourses such as ones promoting and/or displacing normative practices or pro-environmental values and subjectivities. In psychosocial research, society-wide, epoch configuring identity formations (e.g. reflexive selfhood within late modernity) are of analytical interest. Methodological discussions of psychosocial research are often interventions in disciplinary discourses on analytic approaches and research methods. But they also address how to conduct analysis of biographical and cultural narratives and discourses in ways that make reference to psychosocial modalities of meaning making (Clarke and Hoggett, 2009). For this reason, they provide a useful methodological backdrop for understanding worked examples of data and analysis in research of the kind reported on here.

For interpretive risk researchers, it may be timely to consider these observations as interesting provocations for ways of taking forward work on “how to deal with the problem of relating grand narratives to everyday life?” Perhaps reticence is misplaced about conducting more nuanced biographical forms of analysis of culturally influenced personal life. The answer to this question is not available right now, but requires further investigation to map out likely points where different communities of scholarship and practice might be open to undertaking critical appraisal of the issues and possibilities for changing current discipline-bound research practices. As the field of risk research is open to such disciplinary challenges, there may be grounds for optimism. There are certainly, now, sufficient published resources to facilitate scholarly exchanges, as detailed through this chapter and in recommended readings.

Footnotes

1. http://www.flexis.wales/
2. Boholm’s interpretive practices are not only situated and ethnographic, but provide wider leverage from the research insights she has produced about situated risk perceptions through interpretive analysis of risk objects and values they can put at stake. This is done in ways that are maximally meaningful for professional risk audiences. The latter part of her book draws out their significance for organisational and governance stakeholders’ risk communications.
3. For more information of the structure of the empirical work also see https://energybiographies.org/our-project/project-design/
4. One key informant was a long term resident of the Tir-Y-Gavel ecovillage, Pembrokeshire. He was well known for his knowledge and experience of low impact living, and had been a key player in applying for planning permission for the ecovillage to be built. Another was the estates manager in a large London teaching hospital. He was conveniently known to one of the research team and, out of professional interest in the topic, was keen to facilitate the research team’s entry to that site. Two community group organisers also assisted, so that it was possible for

the research team to approach residents in two areas of Cardiff City. One was an inner city ward where residents were involved in a scheme to install solar photovoltaic cells on the roofs of their homes while the other, more affluent commuter village, had active environmental groups.

Figure 1. Jeremy's Photo: Enhancing reflections on everyday energy use practices in the energy biographies study

Figure 2. Lucy's Narrative: Heating the outdoors using Energy Biographies' practices and identities data

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