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Energy storytelling through annotating everyday life

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People do not set out to ‘use energy’. Its use is a consequence of humanity, in all its diversity, dealing with the needs of everyday life—comfort, light, sustenance, sanitation, entertainment, social activity, and so on (Wilhite, 2013). Energy use is thus always going to be situated socially and culturally within contexts that affect people’s understanding, decision-making and priorities. However, many interventions (political and technological) effectively lump ‘energy demand’ together as something homogeneous, addressable through one ‘solution’, across multiple contexts, embodying assumptions about how ‘the public’ thinks and decides, cultural and social norms, and time availability (Hazas et al, 2012). Interventions respond to a particular way of framing the ‘problem’ of energy use—often “seeing users as the problem” (DiSalvo et al, 2010)—and inevitably encode particular models of human behaviour (Dubberly & Pangaro, 2007; Greenfield, 2013). As Argyris and Schön (1974) put it, “An interventionist is a man struggling to make his model of man come true”.

As designers—in the broadest sense of people devising “courses of action aimed at changing existing situations into preferred ones” (Simon, 1969)—we cannot avoid having models of human behaviour. However, we can make an effort to challenge our own assumptions, ensuring that our research process attempts to uncover and apply more nuanced models. We should do research *with* people, in context, to understand why they use energy as they do, in different circumstances, and hence design interventions taking account of these deeper insights.

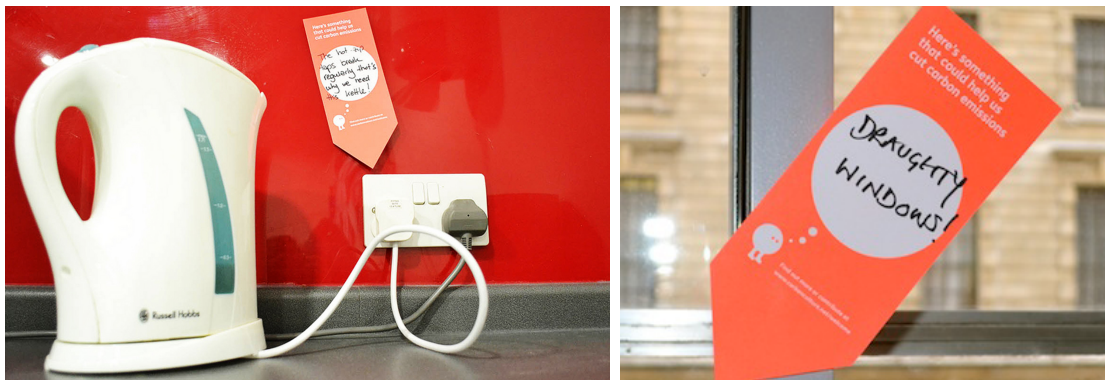


Figure 1: Arrow comment labels at Department of Energy & Climate Change, London. The comment on the right is self-explanatory, while the left-hand one refers to electric ‘Zip’ hot water taps, and how they “always break”, meaning staff bring in electric kettles instead.

Annotation: a simple method for storytelling in context

In this context, methods based around storytelling can fulfil two roles, in research and in communication. Prompting people to tell their stories about their everyday relationship with the otherwise invisible concept of energy—through exploring everyday activities—can provide rich qualitative insights, particularly when carried out in conjunction with ethnographic research. Stories can illuminate complexity and cut through disciplinary jargon by bridging concerns from everyday life with bigger issues around energy and society—e.g. giving policy makers a perspective on the challenges faced by ‘real people’ (and *vice versa*, perhaps). As Mourik & Rotmann (2013) note, energy-related stories could be “one language tool that surpass[e] all the interdisciplinary bickering and infighting”.

So how can researchers facilitate storytelling around energy? A method the authors have developed in the context of design research is the use of ‘annotation of everyday life’ to enable people to tell stories and voice their opinions. We give participants labels or stickers and ask them to annotate things—buildings, objects, appliances—with comments, questions or ideas relating to energy themes, especially where the things play roles in their everyday routines or practices. Inspired by the use of defect tags in industry, Post-It notes, and digital equivalents in online urban planning (e.g. *StickyWorld*), the labels have evolved depending on the context and the research questions being addressed. Three brief case studies covering energy topics will illustrate how the annotations have been used.

CarbonCulture at DECC

This project (Lockton et al, 2014) centred on staff engagement around workplace sustainability in a UK government department in London. We asked staff to annotate their working environment (Figure 1) to tell stories about how appliances were used, to raise issues around perceived waste, to suggest improvements and to ask questions about the relative CO₂ impact of different systems. Comments (including some where multiple people added to each other’s stories) highlighted details of everyday interactions: for example, that the building’s lifts are controlled by two separate circuits with two buttons on each floor; people habitually press both to try to get a lift quickly, meaning that both lifts

respond each time. Or that one person comes to work early each day in order to get a seat near a draughty window because it is the only fresh air he gets all day (staff cannot open the windows themselves). The prevalence of staff interest in (and confusion over) the energy use of the heating and air conditioning systems, revealed through the annotations, led to exploring behavioural heuristics around heating and cooling.

Personal thermal comfort systems

This study (Renström & Rahe, 2013), of 35 participants across 30 households in Sweden, explored what people use to stay warm or to get hot water, i.e. what they include in their ‘personal thermal comfort systems’. Householders received ten arrow-shaped notes (Figure 2) with statements regarding energy and one regarding ‘cosiness’, and were asked to label artefacts in their homes. A few days later, the interviewer visited and asked participants to show where they put the notes and to explain why they had put them there, telling stories of how the artefacts fitted into daily life.



Figure 2: Arrows sent to householders with statements regarding energy, cosiness, heat and hot water (English translations shown).

People included a variety of elements in their personal thermal comfort systems, related to both physical and emotional pleasures. The annotations created a story of how warmth and energy consumption is embedded in people’s everyday life, e.g. the central role a long hot shower has in some people’s morning routines. People told stories of different types of pleasure given by artefacts: from warmth to emotional pleasures. Some participants said that they use artefacts that give only emotional pleasure to achieve thermal comfort, such as candles lit “for the feeling of it” or computers that give them ‘warmth’ as they allow contact with others. Some thermal comfort artefacts were used both for warmth and emotional pleasure, yet did not use energy at all. These experiences could be further explored.

People interpreted the assignment freely—they annotated not only artefacts but also family members, the Sun, and activities (such as cycling). Thus, they were able to tell the whole story of how they achieve thermal comfort beyond the use of the heating system. Statements regarding energy enabled a better understanding of how householders interpret energy in everyday life. For example, energy was often only understood as electricity and some did not think of district heating or candles as energy. The interviewer also got a glimpse of more parts of the people’s homes than would be usual on such visits—on the participants’ terms, since they chose what to annotate and thus what parts of the home to show. Furthermore, the exercise was a way of sensitising the participants, i.e. to encourage them to reflect over heating and hot water in their own time and context prior to the interviews (Sleeswijk Visser et al, 2005).



Figure 3: On the computer, the label reads “to keep in touch with others gives me warmth”. With the candle, the householder recognises that it does not ‘use’ energy, but it still gives her warmth. On the radiator, the householder wonders how much energy it uses.

Steps in an everyday activity

In this study, we developed the ‘arrows’ to enable representing sequential elements—thus directly allowing participants to tell us stories with multiple touchpoints. As part of a ‘design probe’ study following home visits, for the *SusLabNWE* project on household energy use (Lockton et al, 2013), we asked nine householders to tell us the story of an everyday activity which involved energy in some way, from their own point of view. Redesigned arrows made from Post-It notes

were used, with householders asked to attach them to artefacts (or building elements, or even people or pets), comment on them, and then photograph the sequence using either a disposable camera provided, or their own camera. Examples around vacuuming a bedroom and making a hot drink were given. Householders chose diverse activities including making tea and composting the bags (Figure 4), watering a vegetable garden and making soup. The insights provided fed into the next stage of the project—co-design of briefs around better energy visualisation and management, with the same householders, taking account of the models of behaviour and emotional values elicited through the storytelling.



Figure 4: One householder used the arrows to tell the story of an 'energy cycle', from boiling the kettle to make tea, collecting tea bag with food waste, worms helping turn this into compost, and growing courgettes with the compost.

Insights and conclusions

So, what have we learned? The point of the exercises was to gain specific insights for the projects concerned—the annotations and stories developed were done so as part of research on creating better models of human behaviour, to reflect better the diversity and complexity of people's everyday lives in the particular settings we were addressing. The comments people made were not always 'stories' in themselves, but formed parts of stories, or the kernels of anecdotes which would then be explored and elaborated further through interviews and in co-design work with householders, drawing on their stories and ways of framing and modelling the issues.

With the SusLabNWE project, our next steps include matching elements of stories and annotations to quantitative energy data for the households involved, to help illuminate the effects that different behaviours have on resource use in the particular contexts examined. We are also aiming to implement similar annotation labels in a university building with a 'two-way' communication option, where students and staff can comment on aspects of the building infrastructure and facilities staff can reply. This is more focused on building management than energy directly, but with particular prompts, there is potential to engender discussion around sustainability as well.

Overall, while this is an exceptionally 'low-tech' approach to storytelling around energy, we believe it also offers low barriers to entry for participants, and a range of benefits as part of the research process for developing more nuanced models of energy-related behaviour.

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