From emplaced knowing to interdisciplinary knowledge: sensory ethnography in energy research

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From Emplaced Knowing to Interdisciplinary Knowledge: Sensory Ethnography in Energy Research

Kerstin Leder Mackley
School of Social, Political and Geographical Sciences
Loughborough University
Room A.107 Schofield Building
Loughborough, LE11 3TU
United Kingdom
k.leder@lboro.ac.uk

Sarah Pink
School of Media and Communication/Design Research Institute
RMIT University
Building 36 Level 4 Room 9 City Campus
GPO Box 2476 Melbourne
VIC 3001 Australia
sarah.pink@rmit.edu.au
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ABSTRACT
In this article, we discuss how experiential and unspoken ways of knowing produced through a video-based approach to sensory ethnography can be made meaningful and relevant to the applied practice of design and engineering scholars. We advance discussions of sensory ethnography by interrogating and making explicit the analytical processes that turn the sensory knowing of the ethnographic encounter into convincing accounts of everyday realities whilst engaging new sensitivities and ways of seeing that in themselves contribute to cross-disciplinary knowledge. We argue that through a more self-conscious appreciation of how and where experiential categories become applied knowledge the value of a sensory ethnography approach in design-centered energy research can be realized.

KEYWORDS
Sensory ethnography, analysis, applied knowledge, interdisciplinary energy research

Introduction
In this article, we advance discussions of sensory ethnography in an area which ethnographers often find difficult to document, that of analytic processes. To do this, we reflect on the example of an interdisciplinary energy research project which has demanded an increased sense of reflexivity about the kinds of knowledge that video-based sensory ethnography can produce. This has meant not only bringing our own self-awareness about methodological process to the fore, as media and social science scholars, but thinking about
this in terms of our relationships and collaborations with scholars from other disciplines and orientations. In contrast to stand-alone ethnographic projects by single researchers, the study discussed in this article has involved sharing and providing entry points into research materials (cf. Pink 2009: 121), both between the authors and with an interdisciplinary team of colleagues in engineering and design. As such, the analytical process and production of (routes to) knowledge entail related questions of modes of representation. This article therefore addresses two issues: one explores how we have engaged analytically with verbal and non-verbal forms of knowing and representation in the context of a video ethnography that attends to the senses; the other considers the role sensory-ethnographic knowledge can play in relation to applied and interdisciplinary energy research. Such contexts for interdisciplinarity are often characterized as difficult. In their report on one recent interdisciplinary energy project, Transition Pathways, Hargreaves and Burgess conclude that ‘A major unresolved question is … how far does willingness to do interdisciplinary work extend before real conceptual limits are reached?’ (2009: 37). In this article, we argue that, to some extent, this question can be addressed through a focus on the analytical process.

In the case of sensory-ethnographic practice, Pink has previously reflected that ‘the analysis of experiential, imaginative, sensorial and emotional dimensions of ethnography is itself often an intuitive, messy and sometimes serendipitous task’ (Pink 2009: 119). The analytical processes of ethnography are indeed notoriously difficult to document, in contrast to for instance those of conversation analysis or social semiotics. As is commonly stressed in ethnographic methods textbooks, analysis is an ongoing part of the ethnographic process rather than a stage in its own right. As soon as we engage with participants and their life worlds, from recruitment to in-depth research encounters, we begin to analyze. As we follow research participants during our fieldwork, we (con)test existing knowledges and expectations and reframe what we think we know, in light of the often unexpected (cf. Slater
and Miller 2007). Sensory ethnography provides important room for such serendipity, which means that analytical thought can be difficult to track and isolate as separate from the ongoingness of the research process. At the same time, we often produce research materials – in the form of field notes, photographs, audio or video recordings – which can themselves be analyzed both as evocations of the research encounter (Pink 2009; Pink and Leder Mackley 2012a) and as representations of knowledge that, depending on the analytic lenses we apply, may elucidate important idiosyncrasies and complexities or direct us towards wider themes and patterns. Our responsibilities as ethnographers require us to be accountable to each other, to scholars outside our discipline, to participants and, increasingly, to industry stakeholders and the wider public, to be able to demonstrate how we know. Furthermore, we argue that it is precisely through our engagement with how we arrive at ways of knowing that we can also hope to communicate these to others.

This article responds to the above context by examining how the issues it raises are actually played out in practice. Rather than proposing specific tools or strategies for sensory-ethnographic analysis, which themselves depend on research modes and questions, we reflect on the role of analysis and representation in the applied context of our research into everyday consumption of energy and digital media use in the home. The focus of the article is thus methodological, rather than empirical, as we contemplate both the challenges and opportunities that come with video ethnographies and related methods in this study.

There is moreover a certain politics to this context. Our research is not immune from wider issues of the role of anthropology and the social sciences in energy research (see, for example, Henning 2005; Wilhite et al. 2000; Wilhite 2005). As will become clear in the course of this article, it is partly our sensitivity towards these wider debates that often causes us to pause and reflect on the nature and status of our knowledge. In particular, it reminds us to strike a balance between producing ethnographic work in its own right and serving the needs of other
disciplines. In our experience, some of the most important research developments have occurred at moments when the two intertwine.

We begin by introducing the theoretical sensitivities that underpin our sensory-ethnographic approach before contextualizing these in relation to our project, LEEDR (Low Effort Energy Demand Reduction, 2010-2014).

**Attending to the senses**

Sensory ethnography, as we understand and practice it, is a theoretically informed ‘critical methodology’ (Pink 2009: 8), which puts the sensory, experiential and affective elements of lived reality to the forefront of research design, conduct, analysis and representation. It is not, however, intended as a method that can be implanted from a textbook or from one project to another, but one that evolves in use. In the context of the research project discussed here, we developed elements of Pink’s sensory ethnography approach to focus on everyday life through three prisms: place/environment; movement/practice; and the senses/perception. Because our research was centered in the homes of our participants, we articulated this through a focus on different elements of the relationships between people, what they do, feel and say, and the material and sensory environment of home. In this context, the three prisms shaped the way we did the ethnography and served as analytical entry points.

Video-based sensory ethnography requires a mode of investigation that allows us to directly engage and familiarize ourselves with participants’ experiences, actions and environments during the ethnographic encounter. It also enables us to continue to imagine these lived realities through analytical re-viewing of the materials and seeking to communicate these to others by inviting them to equally imagine participants’ experiential realities – albeit in guided ways (see Pink and Leder Mackley 2012a to experience this). As researchers, we make sense of participants’ lives and contexts through our own sensing bodies in ways that
are intuitively empathetic whilst, at the same time, attending to how people’s lived experiences are culturally represented and constructed through language. Analysis is thus always multi-layered, allowing us to find different entry points into materials. More broadly, through its attention to the ongoingness of lived reality, of processes, change and interrelations, our ethnography also provides a specific mode of research that scrutinizes seemingly given concepts, categories and ways of seeing. As we show below, this has been one of our key contributions within the interdisciplinary exchange.

**Applied sensory ethnography: energy research**

The examples discussed here are based on our work on the interdisciplinary LEEDR project at Loughborough University, UK. LEEDR combines longitudinal energy monitoring with in-depth qualitative research to explore in detail how and why families use energy in their homes, and identify how digital interventions can help reduce domestic energy consumption. Twenty UK family households have volunteered for their homes’ electricity, gas and hot water flows to be measured for up to three years. Due to technical requirements, all families are home owners but differ in family size, age, ethnicity, income and education. Energy is monitored at meter level as well as on individual appliances, such as washing machines, toasters and media sets. Homes also contain sensors to detect temperatures, movement, and the opening of doors and windows.

LEEDR is funded through a UK Research Council grant which fosters interdisciplinary research into digital solutions for a more sustainable future. An initial focus of the team was to make visible and meaningful, in a number of discipline-specific ways, the use of energy in the contexts of participants’ everyday lives. The systems/building engineers and energy modelers/data analysts on the project use monitoring data to explore where, when and how much energy is consumed, in order to identify potential energy savings but also to generate
compact representations of consumption patterns that can be used as inputs to larger building simulation tools. Data modeling sets out to predict expected consumption to identify ‘abnormal’ behavior, and to create baselines from which the effect of interventions can be measured. To our engineering colleagues, energy use is initially made ‘visible’ and digestible by plotting time series data and calculating specific metrics (e.g. kWh of electricity used per day) on graphs and in spreadsheets. Occupancy data provides a loose understanding of people’s movements and activity levels around the home. The analytic lens can be adjusted to studying overall energy use patterns or individual appliances (or appliance groups) in relation to other factors, such as time of day, day of week, season, weather, construction type, heating system, and so on.

The design team initially sought an understanding of families’ histories, values and activities through semi-structured interviewing and interactive tasks which invited participants to map everyday movements and activities per family member on a floor plan of their house, thus tracing these according to times of the day and week. Consequently, the design data firstly existed in the form of mapped floor plans, along with audio recordings and transcripts. The team’s attempt to understand families’ views, hopes and motivations, through thematic analysis and attitudinal mapping, began to identify the kinds and contexts of interventions that would make sense in people’s lives. Subsequent analysis will include the development of family ‘personas’ for use in future-gazing scenarios.

Our ethnographic fieldwork was designed to feed both into the engineering context and further inform the design of bespoke digital interventions. It initially comprised of two stages over one year (a third stage will follow during the intervention phase). First, we explored each home with video, asking participant to guide us through their house and describe and show to us what they commonly do to make their home ‘feel right’. This form of collaborative home video tour is firmly rooted in the sensory-ethnographic endeavor of
investigating participants’ everyday activities through the interaction between people and the sensory and material contexts of their homes. As such, we were interested in how participants maintain the ‘sensory aesthetics’ (Pink 2004; Pink and Leder Mackley 2012a) of their home, through conscious and active negotiation but also, inevitably, through their everyday movements and practices. Learning about floor surfaces, decorative choices, cleaning, heating and lighting preferences, and about the management of sounds and smells, gave us an insight into how energy use was implicated in the creation of the sensory home. It also revealed how different everyday practices were entangled in the wider project of making home. Although energy use was on participants’ minds during the tour, we purposefully shifted emphasis away from direct questions of energy consumption and towards mundane domestic tasks. As part of the tour, we asked participants to reenact everyday routines around bedtime and getting up in the morning, as well as leaving and returning home. Here, we were particularly interested in whether participants followed specific routes and patterns in preparing the home for the night or day. Often they did, and the reenactments tapped into embodied and habitual ways of maintaining the home that participants followed but would not usually talk about.

The home video tours, which preceded the engineers’ monitoring installation, produced videos of around 40 to 100 minutes each. They were complemented by written field notes about our own experiences of homes and research encounters, especially regarding sensory reflections, conversations and other observations that were not ‘caught’ on camera. These have helped situate and contextualize our video materials. Video tours were followed by a second visit to families’ homes to discuss with participants the experience of the tour, invite comments from other family members, ensure participants had a chance to edit materials (following our ethics procedure), and discuss any changes since the tour. The latter
underlined an observation from the video tours themselves, that homes are always places in transition.

The second ethnographic stage, post installation and partly informed by themes emerging from the tours, explored everyday domestic practices through which energy is consumed, with a focus on laundry activities, cooking, bathroom practices and digital media use in eleven households. We used video to record participants in their homes (where individuals felt uncomfortable with video, we combined audio recordings with still photography). On the request of our engineering colleagues, we also photographed activities across the home at the beginning of each visit. This was designed to provide the visual context of what was necessarily going on ‘off-camera’ and, simultaneously, to validate energy monitoring data. Depending on participants’ preferences, we aimed to spend most of up to two days with them, attending to practices as and when they occurred, or visited families when they engaged with specific activities. Our questions attended to the often tacit and embodied knowledges that participants drew on in going about their everyday activities, for instance how they knew an item needed washing or a saucepan had reached the right temperature. We explored how practices were situated in and interconnected with people’s wider sensory environments and paid careful attention to how practices were interwoven with each other, and the contexts in which they became entangled, for instance by focusing on how heating and media practices related to bathroom or kitchen activities.

We have outlined our research processes in some depth as they form an important backdrop to the kinds of materials we produced with participants, and how these related to research activities across the team. To us, our video ethnographies sought to provide phenomenological detail and emplaced knowledge that would be difficult to tap into through interviewing or observation alone. However, in communicating our experiences and findings
to our engineering and design colleagues, we were faced with a number of challenges that impacted on how we analyzed, and how we represented our knowledge.

This partly concerned the nature and status of our videos as ‘data’, and the questions the wider team sought to answer through our videos. Drawing out analytic insights and framing the viewing of our videos seemed crucial. In the next section, we examine the status of the knowledge produced through sensory ethnography in relation to knowledge/data expectations that exist in other disciplines.

**Sharing sensory ethnography**

While visual materials have much potential to communicate across disciplines in their capacity to invite viewers to empathetically engage with the experience of both filmmaker and participant (see MacDougall 1998, 2006, Pink 2009), this is sometimes difficult to achieve. For instance, in *Doing Anthropology for Consumer Research*, Sunderland and Denny comment on some of the challenges of making ethnographic videos meaningful to clients, pointing out an assumed ‘transparency of meaning’, as though ethnography was just a matter of observation (2007: 251). Citing an *Adweek* article, they take issue with the notion that “With a video camera you can see the difference between what people say they do and what they actually do” (ibid). Their attempt to use video to gain additional non-verbal knowledges and make visible the ‘sociocultural texture’ of people’s lives is rooted in visual anthropology and closely linked to our approach. To understand, then, how our materials and analysis might become meaningful to colleagues from other disciplines, we have focused on the assumptions that these have brought to our research. We are interested here in the question of how the ‘strangeness’ of other disciplinary approaches has enabled us to mutually achieve further understanding by working *with* our colleagues: it is not just a matter of
seeking to persuade colleagues from other discipline to attend to our sensory approach but also of us needing to understand their work practices and meanings.

In the early days of the project, one engineering colleague mapped out a possible relationship between our video materials and energy monitoring data, seeking to foster interdisciplinary debate and form the groundwork for a project database (Figure 1). This was an important part of the learning process as it clarified how, from an engineering perspective, our ‘social data’ would help illuminate the meanings behind the energy monitoring. As we explain below, we do not see our videos as ‘data’ in this way. Yet the diagram enabled us to rethink the kinds of ‘ways of knowing’ that we could actually offer our colleagues concerning the relationship between monitoring data and human experience, and how to best present these.

![Discussion tool: social and monitoring data combined. © LEEDR, Loughborough University, 2011](image)

Figure 1. Discussion tool: social and monitoring data combined. © LEEDR, Loughborough University, 2011

The use of the video camera indeed means that participants can show us what they do, in embodied action and in the contexts of their homes, sometimes but not exclusively at times
that coincide with their usual activities. Care has been taken to time-stamp all audiovisual recordings and photographs, so as to make ‘real-time’ data links between videos and energy measurements. In the case of the practice videos, this has played an important role in validating and interpreting some of the monitoring data, and we will build on these findings. However, what the above (purposefully simple) graphic implies is a treatment of the footage as self-explanatory and an understanding of the video materials as linear and simultaneous recordings, as though we were working with CCTV (cf. Martens 2012). While these analytical uses of the materials enable connections between disciplines, it is important for us to ensure that they can then be developed in relation to our perspectives on what the monitoring data will tell us about the technological, sensory and material environments that our participants are sensing and perceiving.

To us, the video materials are not objective and transparent records of what people do but audio-visual manifestations of co-constructed ethnographic encounters. As such, they cannot be seen as monitoring tools in the same way as the households’ energy use sensors but as entry points into people’s lifeworlds and experiential realities, which can be interrogated from a number of angles. They document and evoke the ethnographic encounter and thus serve as aide-memoires for the emplaced sensory and social experience of the researcher that allow us to revisit and reconnect with the event (Pink 2009). They also represent parts of the ethnographer’s gaze which, through video, is always split between the flip-out screen of the digital camera and the wider environment. Further, depending on analytic priorities, the videos help construct empirically grounded stories of life in the home. These stories are informed by the researcher’s attention to the sensory, social and material environment and by understandings gained from engaging participants in conversation.

Energy monitoring data often tends to be explained through psychological models of behaviors and motivations, leading to arguments for behavior change campaigns (see our
A sensory ethnography approach instead considers how energy monitoring data emerges from the sensory, affective, routine and contingent aspects that are part of the ongoingness of everyday life. With regard to our materials, the empathetic element of video viewing is important in how we aim to communicate experiences across and beyond our team. Indeed, as a design colleague who only recently joined the team put it,

As a researcher who probably won’t get an opportunity to meet the … households prior to designing for them, such source material affords a level of empathic understanding and realistic contextual texture that is otherwise missing from thematic analysis and other written reports. (personal correspondence, our emphasis.)

For us, this goes beyond providing the kind of context that shows what is happening when energy is consumed. Instead, we turn around the research question by seeking to understand how and why our participants need to consume energy in the process of creating a specific sensory aesthetic of home. Therefore, here it is not the measurement that defines the story about energy consumption but the ongoing sensory and emplaced process of making the home ‘feel right’ that may implicate different energy uses.

At the same time, whereas to us as sensory ethnographers video recordings stand for our own and the participants’ sensory and embodied experiences of place and movement, we need to acknowledge that in other contexts they might be understood as realist data. One option is to seek to educate audiences to our viewing position. Another is to seek other culturally appropriate methods through which to make the elements of the research experience that we wish to communicate accessible. Responding to this context, to share sensory-ethnographic insights from the home video tours with the wider team, Kerstin began writing out narrative portraits of homes and tours. This involved turning the video into words in a way that would continue to evoke the place-event of home (Pink and Leder Mackley 2012a) by attending to
experiential, social and material detail, all the while drawing out how energy use was implicated in the creation of the sensory home. The narrative portraits were successful in that one design colleague commented:

The narrative gives a very rich account of the [video tour] experience and the households … While reading each of them I really felt like I was walking through the house with ‘them’. I know some of our families … better because I was [there] during their [first meeting] … But I have to say that [for] the ones in which I wasn’t present, the [video tour] portrait has given me a very ‘vivid’ experience of [what] they are like as a family (I got to know them better!) and [what] their household might look like. I also find that this ‘vivid experience’ certainly contributes – as designers – to understanding how our potential design interventions would fit into their lifestyles… (personal correspondence)

From a critical visual anthropology perspective, the translation of images to words would be framed as an objectification of the visual (nonverbal) to the verbal. However, we would distance our work from the notion that ‘for the interpretation of [visual data] “it is the act of describing that enables the act of seeing”’ (Price (1994: 5) in Ball and Smith 2001: 308), as this would imply a question of semiotics. Rather, our use of written narratives is a choice of genre for telling research stories that fit the context and engage our audiences in the most appropriate way by evoking and helping to imagine a form of reality while distancing the audience from the (apparent) realism of the videos. The narratives thus invited alternative understandings of the situatedness of people’s everyday experiences and practices, enabling design and engineering colleagues to develop new appreciations of the lived realities we described, through detailed insights into otherwise inaccessible idiosyncrasies, interrelations and contradictions that make up domestic life.
Rather than as outputs of thematic analysis, then, we see these as analytically informed texts. By ‘analytically informed’ we mean they were informed by the ongoingness of the analysis, which was continuous throughout our video tour stage. In a foreword to Clifford and Marcus’ *Writing Culture*, Kim Fortun argues that ‘Texts need to be imagined as we move through the field, directing our attention to the kinds of material we will need to perform an analysis. This means that we must also imagine narration and argument as we go, even while remaining open to the field’s beckoning… The prospect of writing can orient without determining our inquiries’ (2010: xii). We would add two points. First, it is not only texts that need to be imagined during fieldwork but also viewing contexts and audiences. Thus, we have developed additional sensitivities to how we frame participants and contexts, and how to make interconnections between different elements of the ethnographic encounter, to ensure viewers have appropriate entry points into materials. Second, part of the fieldwork process entails a theoretical-ethnographic dialogue, whereby our ongoing practice as scholars, which involves reading, writing and engaging with theoretical literatures and concepts, is not separate from our similarly ongoing thinking during the fieldwork.

A series of theoretical-ethnographic relationships began to emerge as our video tours progressed, and continued through our practice studies. These included notions of flow, movement, invisible architectures, material agency, and everyday change, some of which we discuss below. Yet our research was also structured rather differently to that of the traditional ethnographic participant observation variety that tends to be the subject matter of the *Writing Culture* scholars. Thus we also needed to develop a thematic analysis of what we could call the findings of video tours across all twenty households. This process drew on the processual analysis that had emerged during the research process, in that concepts and ideas had arisen through our experiences of particular tours (where they were heightened or more obvious) and were then tracked through other households. However, this analysis was more formal and
involved working through the materials to respond to our core research questions concerning how people ‘needed’ to use energy to create and maintain a particular sensory aesthetic of home, to make their homes ‘feel right’.

Two themes that emerged from the more formal analysis, but which had already become relevant through the theoretical-ethnographic fieldwork dialogue, were movement and flow. We have introduced both concepts to design and engineering colleagues in discussions and internal reports, and through sharing writing-in-progress that employed them as categories through which to research domestic consumption. In doing so, we have sought to advance them as new ways of thinking about what people do in their homes and, subsequently, as ways of conceptualizing the kinds of activities that are being designed for.

**Movement** was a leading concept in our research design, emerging from Pink’s earlier work on the senses (Pink 2009) and on everyday life practices and places (Pink 2012). In the LEEDR research we have suggested that one way to understand energy consumption is as something that happens as we move along the pathways of everyday life, that is, along the habitual (and sometimes less habitual) routes that our participants take through their homes. This has for instance led us to the routes people follow when going to bed, getting up in the morning and doing their laundry. We are interested in how, as they follow these routes, people are both sensing their environments as they move, but also maintaining these environments through the making of a sensory aesthetic of home. This might involve the sensory/material organization of the home through the distribution of laundry through it, or the use of media through the home when getting up in the morning. If, as we argue (Pink and Leder Mackley, under review), consumption happens in movement, as we sense the environments of which we are both part and contribute to the making of, then movement through the home might likewise be considered as a route through which to develop design intervention concepts.
Flow emerged as a concept during our fieldwork (developed in Pink and Leder Mackley, 2012b). Because we were interested in the question of how the sensory home was made, we developed an interest in what we call the ‘invisible architectures of home’. We do not see these as static but rather as sensory and experiential elements of the texture of home that are made through the flows of sound, smell, warmth and other elements. In relation to this, we have proposed to the LEEDR team that if we conceptualize people as the directors of such flows in their homes, this offers a new way of considering what it is that people do in their homes that goes beyond conventional divisions of domestic activity into practices of, for example, doing the laundry, cooking, or showering.

These concepts and categories that initially emerged from the video tours, narratives and the more formal thematic analysis across households have in turn continued to inform our fieldwork and analytical processes during the study of everyday practices. Again, rather than just focusing on what happens in a household at specific instances of energy use, we have attended to how energy use is implicated in wider processes of how participants experience, understand and negotiate their sensory environment, and the material and immaterial elements that are part of it. This part of the fieldwork and analysis has put renewed focus on the often unspoken embodied and emplaced knowledges that participants draw on in performing everyday tasks.

Communicating findings from this second stage of our work to colleagues in engineering and design involves a combination of ethnographic narrative detail and the illumination of conceptual entry points across households, along with sharing visual materials. Simultaneously, being conscious of the categories and practices that are meaningful to other disciplines, we have responded to these by attending to details that would aid their approaches. This has included practical information (about washing machine settings, domestic roles and routines), which has informed some of the monitoring data analysis.
Moreover, we are able to revisit materials in light of particular design prototypes to consider how our analytic concepts and processes might interpret the implications of possible interventions. In the next section, we reflect on how we have come to consider sensory ethnography’s positions in the wider interdisciplinary project.

**Sensory ethnography as route to interdisciplinarity**

As noted above, in the field of energy research, qualitative social research has historically been situated as providing mere context or a route to understanding human behavior with a view to ultimately changing it. Within this framework, human behavior has tended to be seen as a ‘barrier’ to the success of technological innovations (see, for example, Darnton 2008, Lilley 2009, Guy and Shove 2000, Nader 2002), and social scientists have been drawn on as ‘people experts’ (Henning 2005) to help overcome such barriers. As Wilhite put it,

> The main role of the few anthropologists and sociologists who have entered the energy arena has been reactive, mostly confined to investigating why the policies or predictions associated with economic and attitudinal approaches fail to accomplish what they set out to do. The subject of energy use is in dire need of theoretical innovation, and is going nowhere as long as economic and attitude models serve as the centrepiece of research, while other social scientific approaches peck away at the periphery. (Wilhite 2005: 2)

Accordingly, social scientists are increasingly critical of the notion that they should serve the agendas of technologically-driven disciplines, as indeed they have become of the interdisciplinary project itself (Shove and Wouters 2005). A growing literature about what is variously called inter/trans-supra-disciplinarity (see Everett 2009) points towards the institutionally driven top-down agenda of interdisciplinarity, but also to ‘bottom up’
interdisciplinarity, by which groups of researchers focus on their shared interests across their disciplines. The revisionary argument that ‘interdisciplinarity may not be so much a desired state of being projected into the future, as a process that generates variation in the evolution of disciplinary research programmes’ suggests that it may simply ‘be seen as a property of disciplines rather than as their negation’ (Shove and Wouters 2005: 6). As we have shown in this article, interdisciplinarity can be considered not as a concrete model to be aspired to (see also Pink et al. forthcoming 2013; Leder Mackley et al. 2013) but as a process and negotiation that evolves. It can go beyond simply bringing together two or more disciplines but can develop critical frames on existing interdisciplinary pacts, to lead to new perspectives.

Therefore, interdisciplinary engagement can create routes to theoretical innovation. Working with other disciplines not only helps us challenge the categories that are imposed externally, it also makes us reflect on our own. As we have suggested above, it moreover inspires us to develop concepts and categories in new ways as shared spaces where we can ‘talk to’ colleagues across disciplines. This is precisely what we have tried to achieve in our development of concepts of movement and flow. Neither of these concepts is original to us, both are part of key theoretical debates and turns in phenomenological anthropology and processual geography (Pink and Leder Mackey 2012b). Yet both of these concepts have emerged in our work through the theoretical-ethnographic dialogue that was part of the ongoing analytical process during fieldwork, and have been relevant to the interdisciplinary dialogue.

While existing research has shown how many of the assumptions and practices that behavior change paradigms engage are problematic (see Shove 2009, Strengers 2011), approaches rooted in psychological models are often fused with design research agendas, and indeed sit neatly with the project of design as instigating change. We have elsewhere addressed this issue in the context of a discussion that suggests that a sensory ethnography approach can
enable the development of a sensitivity that recognizes the difficulties in producing behavior change, while offering insights into how design interventions might be developed to appeal to the existing everyday life issues faced by our participants (Pink et al. forthcoming 2013).

Here, we have taken this point in a different direction and demonstrated how a sensory ethnography approach helps us to reframe questions of what people achieve in their everyday domestic tasks, offering a critical perspective to the idea of social research as providing mere behavioral ‘context’. This helps us reflect differently on how we conceive of behavior and how we might imagine ‘change’.

By creating a critical approach that is made accessible to design and engineering colleagues through our analytical process, we have thus evaded complying with what has been called the ‘subordination-service mode’ of interdisciplinary collaboration between the social and technological sciences. As described by Barry et al:

In this mode the service discipline(s) is commonly understood to be making up for or filling in for an absence or lack in the other, (master) discipline(s). In some accounts the social sciences are understood precisely in these terms. They appear to make it possible for the natural sciences and engineering to engage with ‘social factors’ which had hitherto been excluded from analysis or consideration. Social scientists are expected to ‘adopt the “correct” natural science definition of an environmental problem “and devise relevant solution strategies”’ (Leroy, 1995, quoted in Owens, 2000, p. 1143, n. 3); or they may be called upon to assess and help to correct a lack of public understanding of science (Irwin & Wynne, 1996). (Barry et al. 2008: 29)

The relationships between disciplines that have emerged from our sensory ethnography research were partly influenced by our determination that they would not follow a ‘subordination-service’ mode. Yet they were not modelled on the aim of achieving a
particular place in the range of typologies that tend to be used for retrospectively defining interdisciplinarity. We would instead see interdisciplinarity as an emergent process, a way of working that explores the inbetweens of disciplinary practices, the gaps, and that invites the introduction of alternative concepts to ‘bridge’ disciplinary differences in ways that surpass existing debates. These bridging concepts, we argue, need to emerge from the analytical process. In order to achieve this, we need to recognize the ongoingness of analysis and the importance of rooting dialogue within it. The emphasis is on those places where relations between disciplines become productive of ways of knowing about consumption that enable us to move forward in our scholarship and practice. It is about focusing not on the different disciplines and how they do or do not comprehend each other, and instead on the inbetweens where they meld or spark.

Conclusion

In this article, we have used our own work and experiences to deconstruct and make explicit the often implicit process of analysis to show how this can become shaped in the context of applied and interdisciplinary energy research. This is important because, as Henning has pointed out, ‘In order for us to make a serious contribution to mitigating climate change, we must also be prepared, and equipped, to collaborate and communicate with other than our own charmed circle of social scientists’ (Henning 2005: 12). A sensory ethnography approach and the analytical possibilities a focus on sensory experience enables play a specific role in this. We argue, however, that such interdisciplinarity does not happen simply when we bring the findings of different disciplines together into critical relief, but that it also becomes embedded in the ongoingness of analytical process.

The sensory video ethnography approach enables us to explore the environments we are part of, to follow consumers, the things that they consume and to consider the experiential and the
particular. It attends to the material, sensory, tacit and verbalised elements of home as well as to how these are experienced. It enables us to situate consumption as part of place, movement/practice and perception, and explore how the contingencies of these come together to define how people actually consume: it thus takes more than one entry point into considering where and how consumption happens. It is in itself an inherently interdisciplinary approach, in terms of its development through an interface between visual anthropology, applied consumer research, philosophy, anthropology, geography and sociology. It is also related to applied visual anthropology (Pink 2007, 2011), which offers examples of how video and photography practice can serve as what Chalfen and Rich (2007) call ‘cultural brokerage’, enabling communication between different groups of people. This notion of cultural brokerage can likewise be applied to where video enables us to work at in the inbetween of ‘different’ disciplines. As we have seen above, our video tours, and the written summaries thereof, enable different routes of communication and to interdisciplinary knowledge.

A focus on how the relationalities and inbetweens of disciplines become woven through the ongoing analytical process of sensory ethnography can enable us to produce applied knowledge that ‘matters’. The unpicking and deconstructing of research in ways that acknowledge how analytical process is shaped in relation to such interdisciplinarity, through ongoing theoretical-ethnographic dialogue, enables us to better understand and situate both the nature of the knowledge we are producing and its applied potential. A sensory video ethnography approach offers one way through which to achieve this that is theoretically and methodologically informed in ways that can build bridges between disciplines and their concerns. Such sensory ethnography analysis might be understood as ongoing and situated at the intersection of theoretical, ethnographic, applied and interdisciplinary conversations.
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AUTHORS

Kerstin Leder Mackley is a Research Associate at the School of Social, Political and Geographical Sciences, Loughborough University, UK. She studies the role of the media in people’s lives, with a current focus on sustainable consumption.

Sarah Pink is Professor of Design (Media Ethnography) at RMIT University, Australia, and Professor of Social Sciences at Loughborough University, UK. Her work crosses academic and applied disciplines, through sensory and digital visual methodologies.

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Summer Study on Energy Efficiency in Buildings, available online:


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1 The figure derives from the perspective of having energy consumption quantified and set along a time line (Richardson et al. 2010).