Integr Psych Behav (2015) 49:239–252
DOI 10.1007/s12124-014-9292-0

REGULAR ARTICLE

Going Forward Through the World: Thinking Theoretically About First Person Perspective Digital Ethnography

Sarah Pink

Published online: 16 January 2015

Abstract Engaging first person perspective recording as a type of digital ethnography invites the question of how we might understand the status of the knowledge it produces. To examine this question I will focus on how first person perspective camera recordings might be engaged and made analytically meaningful in disciplines where naturalistic and observational visual recording is uncommon and where the idea of producing naturalistic or optimally objective visual recordings of people's lives is problematized. In doing so I explore the wider possibilities of these technologies for ethnographic research both beyond their existing uses *and* for interdisciplinary research where the images they produce might be analysed from more than one perspective.

Keywords Digital ethnography · Visual ethnography · First person perspective · Interdisciplinary research · Video · Photography

Introduction

In this article I consider the practice of first person perspective digital ethnography theoretically and methodologically through an analytical framework based on the concepts of place, movement and perception. I reflect on the implications this approach to understanding the human-technological and research relationships for understanding for the types of knowledge first person perspective recording might produce. This, I propose is an important starting point for considering the possibilities opened up by the increasing availability of such technologies for research for two reasons. First, it enables us to generate a productive dialogue between applied research and/or intervention projects and the highest quality theoretical work. Second it means that the kinds of experimentation and innovation that are the outputs of working with new technologies can contribute to the advancement of theoretical debates. I believe that it is

S. Pink (✉)
School of Media and Communication/Design Research Institute, RMIT University, GPO Box 2476, Melbourne, VIC 3001, Australia
e-mail: sarah.pink@rmit.edu.au

fundamentally important that applied and intervention work developed in the social sciences should involve a dialogue between theory and practice. When doing ethnographic research of any kind, this means putting a theoretical-ethnographic dialogue at the centre of the research process. Therefore seeing first person perspective recording as a type of digital ethnography invites the question of how we might understand the status of the knowledge it produces.

First person perspective digital ethnography as it has been described in the existing literature involves 'passive capture' of images (Lee et al. 2008) through the attachment of a small digital video or stills camera to either clothing or eyewear or hung around the neck of the research participant. It is set to then either photograph at intervals or in response to sensors, or to video record, the activity of the participant, supposedly from her or his perspective. That is, from where on her or his body or clothing the camera is placed. Some recent publications (e.g. Hodges et al. 2006; Byrne et al. 2007; Cordelois 2010; Lahlou 2011) describe how these technologies have been used in existing research and intervention projects across different contexts, and I draw on these as examples in the following discussion.

While anthropology is not the only discipline to use ethnography, or to claim it as one of its unique capacities to produce ways of knowing about the world, ethnographic practice has been historically been rooted in anthropology, and it is arguably the discipline in which the largest theoretical and methodological literature produced about and through ethnographic practice exists. This includes past debates around reflexivity and responsibility (e.g. Clifford and Marcus 1986; James et al. 1997), and recent discussions of ways of knowing (Harris 2007; Halstead et al. 2008; others), along with visual anthropology (Pink 2004, 2006), digital anthropology (Miller and Horst 2012) and anthropologically informed discussions of the digital, visual and sensory dimensions of ethnographic practice (Pink 2013, 2015). Discussions emerging from or inspired by debates in anthropology, and particularly in anthropologically informed visual and digital ethnography, therefore provide a relevant resource for understanding the implications of the use of first person camera recording. Yet the anthropological literature offers us more than just a particular take on the ethnographic method: because anthropologists have examined ethnographic practice and ways of knowing in such detail, the discipline also offers us an anthropology of knowledge which has implications for how we as ethnographers, learn and arrive at ways of knowing, imagining and understanding the experience of the other people whose lives we seek to know (about). It offers, through the subdiscipline of visual anthropology a series of reflections on how we see, experience, know and learn in relation to audiovisual media (see for example contributions to Banks and Ruby 2011). It also invites the question of if visual ethnographers have in fact for a long time been practicing a kind of first person perspective video and photographic recording in making recordings of their own experiences of doing research. If this is the case, given the high level of reflexivity and discussion of the situatedness of the ethnographer in digital visual ethnography literatures (Ardévol 2012; Pink 2013) then this provides a rich body of literature and practice from which to draw to understand the potential of and the ways of knowing produced by first person perspective video and photography in qualitative research.

In this article I draw on these debates to explore how first person perspective camera recordings might be engaged and made analytically meaningful in disciplines where naturalistic and observational visual recording is uncommon and where the idea of

producing naturalistic or optimally objective visual recordings of people's lives is problematized. This, I would stress is not intended to raise a debate about what is the *right* way to do research, or as a critique of those approaches that are rooted in the need for naturalistic recording. Instead it is intended to explore the wider possibilities of these technologies for ethnographic research both beyond their existing uses *and* for interdisciplinary research where the images they produce might be analysed from more than one perspective.

Digital-Visual-Sensory Ethnography: An Outline of the Approach

The approach I take draws on the work of the anthropologist Tim Ingold (2000, 2010) as well as having some resonance with the non-representational or more-than-representational approaches developed in human geography (e.g. Thrift 2008; Lorimer 2005). Such approaches offer us ways about thinking about both the status of images as representations and the flow of everyday life. These are indeed issues that are central to a number of disciplines (see Pink 2012a) for which the idea of researching everyday life in its ongoingness and unstoppable flow presents a methodological conundrum in that we need to be both inside and seek to step out of everyday life in order to understand it and abstract it. When considered as a practical issue in ethnography this would make first person perspective image making seem an exciting prospect for digital visual ethnographers. However, on the other hand, for a discipline like anthropology where the ethnographic approach is based on the reflexive role of the engaged ethnographer as *part of* the research environment (see Clifford and Marcus 1986; Pink 2015) and the notion of doing ethnography *with* others (Ingold 2008a), visual recording using a camera fixed to the spectacles or hung around the neck of the participant, so as to separate the researcher from the experiential context of the fieldwork, might not seem an obvious choice. Visual anthropologists in particular have for a long time been using visual methods and media as ways to approach the question of human experience and to probe the idea of how we might get near in some ways to understanding other people's experiences through (amongst other things) documentary filmmaking techniques, and methods that rely on the subjectivity of the materials they produce as part of their analytical process. Such approaches are usually subjective, collaborative, participatory (see MacDougall 1998, 2005) or seek to be 'shared' (Rouch 2003 [1973], and see Flores 2007). This approach therefore is broadly distinguished from those that seek to produce objective or naturalistic recordings of everyday life and/or to reduce/eliminate researcher intervention.

Digital visual and sensory ethnography, as I have developed it (Pink 2013, 2015) is a field of practice that goes beyond visual anthropology and which also involves developing a theoretical and empirical understanding of not only the research subjects but also engaging reflexively with the visual ethnographic process, the relationships between participants, researchers and the technologies used, and the status of the knowledge that these social and material relationships produce. Here I apply this approach to a discussion of the existing accounts of first person perspective camera research in the existing literature outside anthropology. Moreover, as I have argued (Pink 2013), to understand how digital media are part of ethnography and how they participate in the production of ethnographic knowledge we also need to take a media

studies/media ethnography approach to understanding their status as media and to situate them within existing media ecologies, as those ecologies form part of everyday or research contexts.

I develop the discussion below by focusing on the question of first person perspective cameras from a set of different angles, which broadly follow the theoretical-methodological-ethnographic approach I apply across much of my work. This involves understanding ethnographic situations and research processes through the related concepts of place/environment, movement/practice and perception/the senses. Therefore I will first examine how we might understand uses of and images made by first person cameras as part of and emergent from 'ethnographic places' (Pink 2015). My aim here is to establish how the camera is implicated in a series of entanglements of place and how an understanding of this enables us to understand the status of the images that are made. I next explore the concept of movement, and focus on how acknowledging that we and cameras are part of an ongoing world of movement – itself as something that is constitutive of place – enables us to think through ways to understand the ways of knowing about experience, and place that the first person camera can offer. Finally I focus on the senses, affect and perception as way of discussing how we might, through a focus on place and movement come somehow close to understanding the ways that other people experience. In developing this discussion there are also a series of issues that have been raised by the existing literature in this field that I will keep in mind, not least Lahlou's (2011) discussion of the relationship between the etic/emic or insider/outsider ways of understanding experience, and how we might contend with these in relation to the use of first personal perspective recordings. I concur with Lahlou, that these questions cannot be completely resolved. However I suggest that by looking to how they have been approached in disciplines beyond social psychology, including visual anthropology and feminist art therapy, alternative ways of approaching other people's ways of knowing and experiencing can be explored.

To conclude, I return to my original points, to explore what the discussion in this article can tell us about the nature of the knowledge we can produce from first person camera recordings, and the implications of this knowledge for applied research and interventions: what can we know with it, and where does this take us? How does it challenge or add to other types of research knowledge.

Situating First Person Perspective Cameras in Ethnographic Places

In earlier publications I have framed the ethnographic process through a theory of place, and as such conceptualise the context, practice and outputs of ethnography as part of an 'ethnographic place' (Pink 2015). The notion of the ethnographic place offers a novel way to understand the constructedness of the ethnographic research process, its context and the types of knowledge/ways of knowing it might produce. It offers an alternative way to understand ethnography and its possibilities to that represented in the existing first person perspective digital ethnography literature. For instance, whereas for Cordelois 'an ethnographic approach is by essence holistic' (2010, p. 446), the notion of ethnographic place emphasizes that holism is impossible. In part this is because, while Cordelois suggests that the idea is to 'capture as much of the context as possible'

(2010, p.446), following the notion of an 'ethnographic place' we come to different understandings whereby first person camera recordings would not so much 'capture' a context, but are both part of the ecology of place in which they are made and record a *trace through it*, rather than a view *of* it.

The concept of ethnographic place is discussed in a good number of my publications as it forms the basis for much of my work, but it is developed in more detail in my book *Doing Sensory Ethnography* (Pink 2015) where I use it to focus on the sensory, embodied and emplaced dimensions of ethnography and its practice. There I work with the notions of place developed by the anthropologist Tim Ingold (e.g. 2000, 2008b) and the geographer Doreen Massey (2005) to conceptualise ethnographic places as 'open' and 'unbounded' intensities of things, persons and processes, always in progress. Ethnographic places are not to be confused with the notion of place as locality, or as fixed *in* a locality. They are constituted in part by the practices of the ethnographer, who plays an active role in bringing together the constituents of place (such as the ethnographer, him or herself, research participants, texts and recordings, as well as localities), as well as by the movements of other people, and things. Thus the components of the ethnographic place are directed into what, drawing on Ingold's (2008b) ideas can be called an 'entanglement', whereby there comes about a certain intensity in the relationships between them. Yet like place as theorized, ethnographic places are ongoing and contingent, not fixed entities. They are, as suggested above, open, unbounded, they welcome new constituents and thus continue to be made and re-made as they are joined by readers, viewers, and commentators. They become contexts with an ongoing temporality where the ethnographic past and its presence in the flow of the present lead to new ways of knowing. When using digital technologies as part of the ethnographic process, these are equally part of the ethnographic places that are inhabited, and made through the work of the ethnographer. As I argue in a later work about the 'places' of digital visual ethnography 'The Internet is becoming not something we engage with by doing a special kind of online visual ethnography, but a part of the "ethnographic places" (Pink 2015) in which we become implicated as visual ethnographers' (Pink 2012b, p.114). For the purposes of this article, I suggest that equally the use of first person perspective recording in digital ethnography research plays an interesting role in creating part of an ethnographic place that seeks to draw together persons, feelings and things that range from interior emotions to (potentially) the Internet. Therefore here I use this concept of ethnographic place to situate the first person camera as being implicated in a series of entanglements that participate in specific ecologies of place.

The first person camera might be conceptualized as part of the ecology of the ethnographic place as follows. First we might consider the relationship between the first person camera and other technologies. It is a digital technology that produces digital images, it has an interdependent relationship to computing technologies, projectors (for instance Lahlou (2011) discusses the technologies that might be involved in this work) and in this sense we need to understand the camera and the images recorded through it as part of a wider technological complex. The existing literature describes scenarios of saving, archiving and viewing materials digitally (although future possibilities of online streaming, alongside other materials is also interesting to keep in mind). If we start to look at these practices from an ethnographic angle on media studies, then there are interesting parallels with other fields of study that can offer us

insights. For example, studies of everyday life family, personal or touristic amateur photography, how it is shared, archived and more (e.g. Gomez Cruz 2012) show us how everyday visual practices are shifting in relation to the potentialities or affordances of digital photography. Yet as I have argued (Pink 2011c) these uses of the digital tend also to be connected to and sometimes contingent on analogue or material practices and technologies. We might similarly understand how new technologies enable shifts in the research process, but that uses of new digital technologies tend to be appropriated in research also in relation to existing research practices and needs. Thus I would suggest that to understand the possibilities of first person perspective cameras in the ethnographic place, we need to focus on understanding both the possibilities or affordances of this technology *and* how this might be played out in relation to existing research practices and everyday life practices and the technologies implicated in these. These points are also relevant in a further sense in that they would in some way frame the subjectivity of the wearer of the first person camera – the research participant. As I have stressed elsewhere, people participating in visual ethnography are self-selecting in the sense that we can only ever recruit to such projects participants who are willing to have themselves or their lives recorded visually in a research situation. In this sense, uses of such recording equipment are inevitably embedded in the increasing ubiquity of digital media not only in research practices and processes but also in everyday life.

The ethnographic place encompasses not only the fieldwork context, but also the wider research and dissemination process whereby that ethnographic project is conceived, performed and played out to wider audiences. Therefore first person perspective cameras and recordings also refer to the biography and trajectory of the recording within the ongoing temporality of the ethnographic place, as much as what could be extracted from an analysis of its content. In this sense I mean that by following the trajectory of the recording, how it becomes related to other constituents of the ethnographic place, and what the implications of this are for the ways that it becomes meaningful, we can learn much more from it that we might just by analyzing its content. I explain this point further in the next section where I develop the concept of movement as a way to understand both how ethnographic places are made and the meanings of first person perspective recordings as they move through them.

First Person Movement and the Camera-Trace

In a series of existing and in progress publications I have examined the role of the camera in digital ethnography research in relation to human movement (Pink 2011a, 2011b, 2013; Pink and Leder Mackley 2012). Because first person perspective recording is attached to the research participant, and engages (with) their physical movement in a very direct and obvious way this makes it all the more pertinent to seek to comprehend first person perspective recording through a theory of movement.

Above I have outlined how a theory of place enables us to understand both the contexts in which we do research and how they become drawn into a research process, becoming part of an ethnographic place. Integral to the theoretical understandings of place that I work with are theories of movement, not least the idea that place is constituted through movement. For example, Ingold's focus on the entanglement of lines of movement into what he calls a 'meshwork' (2007, 2008) enable us to think of

the intensity of place in terms of the ways that the lines of movement of people and things become interwoven. I will not repeat the more lengthy discussions I have developed relating to this (see for example Pink 2012a, 2015), however it is important to point out that if we understand place as constituted through movement, the movement of persons, things, the intangible flows of energy, the weather, sunlight, and of emotions, then as researchers we need to be able to find ways to follow these persons, things, sensations and feelings. I have argued that video and photography offer us ways to do this, as we accompany and record research participants as they move through the world. First person perspective recording offers us a way to do this from precisely a new physical perspective, making it particularly interesting to consider how and what we can learn by understanding this technology and the visual content it can produce, through a discussion of movement.

Following this argument then we might therefore suggest that through first person perspective video or photographic recording the lines of human movement (Ingold, 2007) can therefore be recorded as they occur. Thus documenting dimensions of the lines of movement (of humans and the things, ways of knowing and feelings they carry with them) and encounters of those lines of movement with those of others (human and non-human) as they happen. When we record video or digital photographs as we move through the environment with other people, we do not record simply what is 'in' the viewfinder. Rather we record the trace of the route that was taken through the world, by the person/camera moving together. Therefore the meaning of such images lies partly in that they record the embodied and emplaced experience of the camera person/photographer (Pink 2013, 2015). They are on the one hand what the anthropological filmmaker David MacDougall calls 'corporeal' images (2005). However to take the argument further than that, a focus on movement and the relationship between the body and environment means that they can be conceptualized as produced through the relationship in which the moving body is part of the environment from which the images are produced. When we understand first person perspective video or photography from this perspective, it offers us a rather different way to think about what is recorded, to the suggestions made in the existing literature.

This interpretation therefore understands the kinds of images produced by such technologies differently to existing evaluations, which place an emphasis on observation, and as such imply a separateness between the camera/image, the environment and the person. For example writing about the Microsoft SenseCam (Byrne et al. 2007) focuses on its possibilities in that it is 'wearable, and both intelligently and passively capturing a visual record from the perspective of the user' and that it 'may offer a novel approach to observing users in context without intrusion' (2007). They also argue that 'The SenseCam in its current form can only offer a supplementary source of data within the observation process and not a full replacement of shadowing techniques' (Byrne et al. 2007). The difference between shadowing and recording video with a researcher held camera while moving through, and the use of first person perspective cameras can therefore in this sense be understood as representing two different configurations of the relationship between the ethnographer, participant, environment and the camera. Seeing it this way, questions relating to holism, objectivity, intrusion and the recording of naturalistic behavior are not concerns for the researcher. Instead the issue becomes focused on the question of *what* is recorded and how to interpret this. Following a digital visual sensory ethnography interpretation I would argue that, the use of first

person image recording technologies does not eliminate or limit 'intrusion' but rather implicates the role of the researcher/research technologies in a rather different way, which means that the site, nature and quality of researcher-camera-participant intersubjectivity shifts, and this is one of the relationships that needs to be reflexively explored.

First Person Feelings, Second Person Empathy?: The Camera, Perception, the Senses, Affect, and Imagination

Lahlou has raised the question of etic and emic perspectives in relation to the first person perspective camera. From Lahlou's perspective, the researcher is confronted with the problem of: 'first, understanding how the situation is lived from the *perspective of the subject* (catching the fish); then translating this experience into some understandable, transferable and publishable description (canning the fish) while avoiding as much as possible projecting any inadequate preconceptions of the observer onto the phenomenon' (Lahlou 2011, p.609). Therefore, the use of first person perspective recording is party engaged to avoid both what is called researcher 'bias' in qualitative research as well as to create naturalistic data that is not effected by the self-reflexivity of the research participant, since as Lahlou puts it, because: 'Reflexivity indeed takes time and attention, which would disturb the subject in the flow of action' (2011, p.611). Instead arguing that 'after the fact, provided with the relevant cues, the subject can clinically provide a detailed and grounded-in-evidence comment on her mental processes, without disturbing these since the action already has taken place' (Lahlou 2011, p.611). To achieve this Lahlou argues that 'experience should be recorded as it emerges on the fly, in the flow of actual activity, and from the very perspective of the actor' but he acknowledges that 'This is easier said than done' (2011, p.615). To make this viable, he goes on that 'Therefore the capture device must be as close as possible to the human sensors: camera at eye-level, and microphones at the ear. This is precisely what the *subcam* technique was designed for' (Lahlou 2011, p.616).

Following this approach, which recognizes that it is actually impossible to know how and what others know and feel, it nevertheless remains important to create a route to knowing about other people's experiences that is as unbiased and naturalistic as possible. It would be difficult to argue with the idea that we might achieve varying grades of closeness to other people's experience. Yet it is difficult, if impossible, to determine how we might actually measure these forms of closeness. Although we might try to control the conditions through which the data is produced, this would not necessarily guarantee the *quality* of the closeness or of the interpretation of the experience it brings the researcher close to. Recording (audio)visually in ways that situate the researcher more directly in the line of vision and sound of the participant certainly bring a new form of closeness into the research process. However, from my perspective this would not bring the researcher closer to being able to achieve a view that is less biased. Instead it would simply introduce a new form of subjectivity and situatedness that needs to be explored. Such visual materials can offer us ways of (more literally) reflecting on the situatedness of other people in specific environments/ecologies of place. As I have argued above, the camera records in part a trace through the world that is made not simply of what is in front of the camera but that is forged as the holder of that camera makes their way *through* and *in* the world. If researchers-as-

viewers understand this as what they are viewing then they can be invited to imagine this experience. Yet, I would not suggest that this is an easy analytical route to follow since there are several issues that complicate this when we are asked to account for what it is that is viewed or experienced when researchers view a first person perspective recording.

For instance, the question of how we can see and know in ways sufficiently similar to they ways others do in order to understand their situatedness is a perennial problem for social scientists. If a camera is recording from a pair of spectacles worn by the participant, it is recording what is 'nearly' in her or his line of vision. But what kind of perspective does it offer the researcher on vision? The anthropologist Cristina Grasseni discusses what she calls 'skilled vision', whereby she considers vision as a situated practice (2011). Grasseni proposes that 'vision pervades our cultural forms of life in skilled ways that depend both on the way sight is physically trained and on social positioning' she goes on to argue that 'Because skilled visions combine aspects of embodiment (as an educated capacity for selective perception) and apprenticeship they are both ecological and ideological, in the sense that they inform worldviews and practice' (2011, p.29). First person perspective cameras thus tell us something about the direction and range of participant vision, they might therefore add ways to better situate and understand what Grasseni calls 'skilled vision'. However they will not tell us about the incrementally learned embodied experience and knowledge that is part of vision. One solution is to seek to see and know in the same way as research participants through forms of apprenticeship (e.g. Grasseni, 2004; Pink 2015). Another method draws on techniques used in art therapy to explore with participants verbally what it is *they* see in drawings that they have made themselves (Edgar 2004; Hogan and Pink 2012). This as I have argued elsewhere with Susan Hogan offers ways in which to research people's interior thoughts and emotions (Hogan and Pink 2012), and produce a perspective that comes from their own visual framing of the world. These theoretical and methodological techniques both imply the limits of first person perspective camera, and highlight some of their possibilities. While such recordings cannot provide us with access to the skilled embodied and learnt elements of vision (Grasseni 2011) or the interior thoughts and emotions that we connect to what we see (Hogan and Pink 2012), they do offer materials that could, if combined with other methods help us to create very interesting new routes to situating vision and researching questions relating to how we look and see, and make meanings.

Researching Through the Home: Different Ways of Knowing

To illustrate some of the differences between a digital visual ethnography approach (Pink 2013) rooted in the anthropological notion of doing ethnography *with* (Ingold 2008a) and the social psychological approach to the use of first person perspective recording I compare some elements of two studies that focus on similar subject matter: Cordelois's discussion of first person perspective video recording of the everyday arriving home routines of research participants living in France using the Subcam which is attached to the spectacles or a band of fabric of the wearer (Cordelois 2010); and my own work with Kerstin Leder Mackley on everyday routines of UK house-holders participating in a project about energy demand reduction (e.g. Pink and Leder

Mackley 2013). The projects also have some similarity in that in both cases there is a concern with what it means to feel 'at home' (Cordelois 2010, p.461) and how participants make the home 'feel right'. My aim in developing the comparison, as stressed above is not to suggest that there is a right or wrong approach, but to illustrate what comes to the fore through an alternative emphasis.

For Cordelois (like other writers from this field) the focus on the task is on observation yet the problem lies in the difficulty of observing cognition, which distributed, situated and embodied and where 'the complexity of a task resides mainly in the environment' (Cordelois 2010, p.446). Therefore the issue to be addressed becomes rooted in 'the idea that the most attentive observer will miss much information, because qualitative studies based on activity rely mostly on "on the fly" data collection during field observation,' such as 'shadowing someone' and taking notes (Cordelois 2010, p.446). While I would agree that Cordelois's description corresponds with much conventional qualitative research practice, there is also an increasing use of creative, 'inventive' (Lury and Wakeford 2012) and other improvisory forms of qualitative methods in the social sciences, which tend to go beyond observation to produce alternative ways of knowing about human activity and experience. These approaches do to some extent develop a critical relationship to observational approaches, yet in my view, rather than being antagonistic such a relationship ought to be able to offer new forms of interdisciplinary thinking. If the approach of the social psychologist is to understand human subjectivity through methods that aim to record what would be unrecordable should the researcher be participating in the activity concerned then the data recorded enables a way of knowing about what people do and experience that should complement that of other methods. That is, as discussed above a differently situated (both socially and technologically) perspective on moving through the world. For instance, Cordelois notes how 73 % of research participants in his study made a 'back-home sigh … when the subject was going through the door, or during the first 30 s of being inside his home' (2010, p.458); something which may not have been evident had they been interacting with or conscious of a researcher's presence.

In my own work I am concerned with similar issues, in that I am seeking to understand how participants in research live out everyday ways of knowing in their domestic environments. Such ways of knowing are indeed embodied, part of the relationship between the human and non-human, and embedded in the ways that people move through their environments. Yet through visual and sensory ethnography I approach the question rather differently – I am not seeking to observe cognition, but rather to understand the unspoken, tacit ways of knowing that are part of the routine everyday ways that people navigate their homes. The question of where these ways of knowing 'actually' reside, psychologically, physiologically, sociologically or neurologically is not a question that can be answered in any definitive way (see Pink and Leder Mackley 2014). Although of course different theorists and scholars would variously attribute such ways of knowing to specific societal and/or biological units. For example, at one extreme, social practice theorists would locate knowing in 'practices'. These debates of course come to bear on the ways we understand the production of ethnographic knowledge. Not least, because they are theories of knowledge and knowing, but also because we need to understand the ways in which we as researchers come to know and understand along the same theoretical lines as the ways we understand the ways of knowing and being of our research participants.

My approach involves engaging with people as they enact what they do in their environments or as they engage with the materiality of these environments in situ. This is one of the aspects of research that first person perspective naturalistic recording – or any kind of naturalistic recording in research – does not attempt. I do not report on our empirical findings in this article, but rather draw on existing publications to briefly offer a comparison to Cordelois's study of arriving home narratives. Our study included a series of participant-led reenactments of getting up and going to bed, going out and arriving home narratives. Using the researcher-held camera we worked with our participants to reconstruct these routes, the activities that 'normally' happened along them, the feelings that they involved (embodied and affective) and other participant reflections. We elsewhere reflect in more depth on the bedtime and morning routines of our participants (Pink and Leder Mackley 2013). These analyses show that participants tended to follow similar bed time routines, with clusters of participants engaging in activities that could be ranked as being of the same type – for example, bedtime routines that began with switching off the living room TV, and going (usually upstairs) up to bed while engaging in a series of checking activities en route, listening to the radio or watching TV on a timer while drifting off to sleep at bed time. We involved participants in a reflexive, explanatory narrative while actually enacting the tasks that occurred along these routes of everyday movement. This meant they engaged their bodies in the task of reenactment in their actual environments. In doing so we were able to develop an understanding of how they made the home 'feel right' through their uses of media, lighting and energy consumption (Pink and Leder Mackley 2014). In developing this work we began with the assumption that we would not be able to reproduce unfettered accounts of their everyday routine activities. Therefore we used the activities themselves and the environments/places of which they were part and which they contributed to the making of, as prompts for reflection, discussion, and to seek to draw out accounts of the affective and sensory embodied elements of the process of making the home 'feel right' at pivotal moments in the day.

My description of this method, and the types of knowledge that it can produce is not intended as a claim that this is a better or more informative way to do research about everyday life routines and routes to that developed with the Subcam. Instead my point is that once we dispel with the idea that that we can 'capture' naturalistic recordings of what other people actually see when we are not there, or when we are there with them, then this opens up new routes to analysis and to understanding how others experience the everyday *as* they experience it. This point however is not intended to devalue studies such as that of Cordelois (2010) – indeed when one starts to imagine what both studies might add to each other in terms of empirical knowledge about what people do, experience and know, then bringing together two such approaches is clearly an advantage. The challenge is not so much a question of how to mutually appreciate the value of the data that is produced across disciplines but to find ways of bringing together different theoretical perspectives on understanding the meaning of this data.

Conclusions: Different Perspectives and Different Ways of Knowing

My aim in this article was to explore the nature and status of the knowledge that might be produced through first person camera recordings. Following the types of reported

findings that we see in existing studies, that chart using video or photography the routes through which people go about their everyday lives, the narratives followed by their line of vision and how, when and in what order they perform some everyday activities, in situ and in real time. These recordings can be understood as being produced at the intersection between a new configuration of the researcher-participant-camera relationship. While the researcher is never entirely absent as she/he is represented in the participant's world by the camera, she or he does not interrupt verbally or through her or his own physical presence. The recordings thus are created as part of the ethnographic place. It is important to remember that the notion of ethnographic place does not refer to place as simply locality – therefore if one is doing visual ethnography in the home then the ethnographic place itself would extend outside the home, to include other localities that the researcher and project were linked to. The idea of first person perspective recording does however have a specific relationship to the material locality of the research. It becomes part of this locality and the images it records are created up to a point between the person wearing the camera and the material and sensory environment of the locality.

By creating new viewing positions to occupy as we move with the recording, first person perspective cameras also, like the researcher-perspective video recordings discussed above, record a trace as a person moves through the world, a body/mind moving forward, knowing, acting and perceiving as she or he goes. What, therefore do we see when we are 'looking' at the first person perspective of a research participant. We are not looking through their eyes or feeling through their bodies, but, we are however moving with the recordings by following a trace through the world that has been created with a particular positioning that we are made aware of when being invited to imagine with it. This offers visual ethnographers a new perspective from which to engage with other people's worlds, and a new way of being situated in the 'ethnographic place'. This I think is the key point to take forward which could interestingly be developed through actual use of first person perspective cameras in the context of digital visual ethnography research.

By way of comparison it is helpful to ask what first person perspective recording can tell us that video tours such as our reenactments cannot? In terms of process, we learned similar things from our reenactments of going to bed and getting up in the morning to those that the study of arriving home reported. But we also used the reenactment as a probe seeking to understand ways of knowing and looking that are integral to what people usually do in their everyday routines, and that are *part of them* physiologically and psychologically (see Pink and Leder Mackley 2014). This raises the question of the extent to which it matters when and where these actions are discussed with participants - when they are actually enacting them in situ or when they are reviewing their own recordings and imagining themselves back into that situatedness. The question of if it matters will depend on what theoretical or practical position you take on what it means to be a viewer. If, as I have argued, we cannot 'go back' when viewing, but are always going forward and learning, then we always add something as we 'view'. Commenting on a recording does not only entail commenting on what is 'in' it, but where the viewer is moving on with it now, and the implications of this. From this perspective we cannot 'capture' something in a recording to bring it into a research scenario, simply because nothing has been 'captured', rather what any camera that moves through the world with a person records is the outcome of the trace of the route that the participant took. To

end, I would propose that first person perspective digital ethnography offers us new possibilities to develop digital visual ethnography in ways that add new audiovisual perspectives and traces through ethnographic places. This is an exciting prospect in that coupled with theories of vision, movement, place and perception it invites us to consider how the types of knowledge we might be able to produce change and shift in relation to where we are positioned as researchers/viewers in the ethnographic place/world. This would be of benefit not only for the generation of deeper research knowledge but also to generate new interdisciplinary dialogues between anthropological and psychological approaches.

Acknowledgments In this article I refer to and specifically cite existing work that has been published with Kerstin Leder Mackley as part of the interdisciplinary LEEDR (Lower Effort Energy Demand Reduction) project, based at Loughborough University. LEEDR is jointly funded by the UK Research Councils' Digital Economy and Energy programmes (grant number EP/I000267/1). For further information about the project, collaborating research groups and industrial partners, please visit www.leedr-project.co.uk. I would like to thank all the households who have generously participated in this project. The ideas discussed in this article are my own. The article was made possible through a project supported by the Economic and Social Research Council [grant number ES/JO21350/1].

References

Ardévol, E. (2012). Virtual/Visual Ethnography: Methodological Crossroads at the Intersection of Visual and Internet Research. In S. Pink (Ed.), *Advances in Visual Methodology*. London: Sage.

Banks, M., & Ruby, J. (Eds.). (2011). *Made to be Seen: Perspectives on the History of Visual Anthropology*. Chicago: University of Chicago Press.

Byrne, D., A. R. Doherty, G.J.F. Jones, A.F. Smeaton, S. Kumpulainen and K. Järvelin, (2007). The SenseCam as a Tool for Task Observation. Online at daragh.byrne@computing.dcu.ie.

Byrne, D., A. Doherty, and C. Gurrin, (2008). Constructing a SenseCam Visual Diary as a Media Process. Centre for Digital Video Processing & Adaptive Information Cluster, Dublin City University, Ireland. Alan.Smeatong@dcu.ie. Online at http://doras.dcu.ie/523/1/sensecam_canonical_multimedia_systems_2008.pdf.

Clifford, J., & Marcus, G. (1986). *Writing Culture: the Poetics and Politics of Ethnography*. Berkeley: University of California Press.

Cordelois, A. (2010). Using digital technology for collective ethnographic observation: an experiment on 'coming home. *Social Science Information, 49*, 445–463.

Edgar, I. (2004). *Guide to Imagework: Imagination-Based Research Methods*. London: Routledge.

Flores, C. (2007). Sharing Anthropology: Collaborative Video Experiences among Maya Film-makers in Post-war Guatemala. In P. Sarah (Ed.), *Visual Interventions* (pp. 209–224). Oxford: Berghahn.

Gomez Cruz, E. (2012). *De la cultura Kodak a la imagen en red. Una etnografía sobre fotografía digital*. Barcelona: Editorial UOC.

Grasseni, C. (2011). Skilled Visions: Toward an Ecology of Visual Inscriptions. In M. Banks & J. Ruby (Eds.), *Made to be Seen: Perspectives on the History of Visual Anthropology*. Chicago: University of Chicago Press.

Halstead, N., Hirsch, E., & Okely, J. (Eds.). (2008). *Knowing how to know. Fieldwork and the ethnographic present*. Oxford: Berghahn.

Harris, M. (2007). (ed). *Ways of Knowing:* New Approaches in the Anthropology of Knowledge and Learning.

Hodges, S., Williams, L., Berry, E., Izadi, S., Srinivasan, J., Butler, A., Smyth, G., Kapur, N., & Wood, K. (2006). *SenseCam: A Retrospective Memory Aid*. Cambridge: Microsoft Research, 7 JJ Thomson Avenue. CB3 0FB.

Hogan, S., & Pink, S. (2012). Visualising Interior Worlds: interdisciplinary routes to knowing. In S. Pink (Ed.), *Advances in Visual Methodology*. London: Sage.

Ingold, T. (2000). *The Perception of the Environment*. London: Routledge.

Ingold, T. (2008a). Anthropology is *not* Ethnography. *Proceedings of the British Academy,* volume 154.

Ingold, T. (2008b). Bindings against boundaries: entanglements of life in an open world. *Environment and Planning A, 40*, 1796–1810.
Ingold, T. (2010). Ways of mind-walking: reading, writing, painting. *Visual Studies, 25*(1), 15–23.
James, A., Hockey, J., & Dawson, A. (1997). *After Writing Culture: Epistemology and Praxis in Contemporary Anthropology*. London: Routledge.
Lahlou, S. (2011). How can we capture the subject's perspective? An evidence-based approach for the social scientist. *Social Science Information, 50*(34), 607–655.
Lee, H., Smeaton, A. F., O'Connor, N., Jones, G., Blighe, M., Byrne, D., Doherty, A. R., & Gurrin, C. (2008). Constructing a SenseCam visual diary as a media process. *Multimedia Systems Journal, 14*(6), 341–349.
Lorimer, H. (2005). Cultural geography: the busyness of being "more than representational. *Progress in Human Geography, 29*(1), 83–94.
Lury, C., & Wakeford, N. (2012). *Inventive Methods: The Happening of the Social*. Oxford: Routledge.
MacDougall, D. (1998). *Transcultural Cinema*. Princeton: Princeton University Press.
MacDougall, D. (2005). *The Corporeal Image*. Princeton: Princeton University Press.
Massey, D. (2005). *For Space*. London: Sage.
Miller, D., & Horst, H. (Eds.). (2012). *Digital Anthropology*. Oxford: Berg.
Pink, S. (2004). *Home Truths: gender, domestic objects and everyday life*. Oxford: Berg.
Pink, S. (2006). *The Future of Visual Anthropology: engaging the senses*. London: Routledge.
Pink, S. (2011a). Drawing with our feet (and trampling the maps): walking with video as a graphic anthropology. In T. Ingold (ed). *Redrawing Anthropology*, Ashgate.
Pink, S. (2011b). Sensory digital photography: re-thinking 'moving' and the image. *Visual Studies.26(1): 4-13*
Pink, S. (2012a). *Situating Everyday Life: practices and places*. London: Sage.
Pink, S. (2012b). Visuality, Virtuality and the Spatial Turn. In S. Pink (Ed.), *Advances in Visual Methodology* (pp. 113–130). London: Sage.
Pink, S. (2013). *Doing Visual Ethnography, 3rd edition, expanded and revised*. London: Sage.
Pink, S. (2015). *Doing Sensory Ethnography* (2nd ed.). London: Sage.
Pink, S. and K. Leder Mackley (2012). Video as a Route to Sensing Invisible Energy' *Sociological Research Online*. February 2012. Online at http://www.socresonline.org.uk/17/1/3.html.
Pink, S., & Leder Mackley, K. (2013). Saturated and Situated: rethinking media in everyday life. *Media, Culture and Society, 35*(6), 677–691. doi:10.1177/0163443713491298.
Pink, S., & Leder Mackley, K. (2014). Reenactment Methodologies for Everyday Life Research: Art Therapy Insights for Video Ethnography. *Visual Studies, 29*(2), 146–154.
Rouch, J. (2003[1973]).The Camera and Man. In *Cine-Ethnography Jean Rouch*. Steven Feld ed. Pp 29–46. London: University of Minnesota Press.
Thrift, N. (2008). *Non-Representational Theory: Space, Politics, Affect*. London: Routledge.

Sarah Pink is Professor of Design and Media Ethnography at RMIT University, Australia. Her other roles include Vistiting Professorships in Social Sciences in the Schools of Civil and Building Engineering and Design at Loughborough University, UK, and in Applied Cultural Analysis at Halmstad University, Sweden, and an Honorary Professorship at Griffith University, Australia. Her recent and forthcoming books include *Doing Sensory Ethnography*, 2nd edition (2015), *Media, Anthropology and Public Engagement* (co edited.) (2015) *Doing Visual Ethnography*, 3rd edition (2013), *Situating Everyday Life* (2012) and *Advances in Visual Methodology* (ed) (2012).