Methodological dialogues across multimodality and sensory ethnography: digital touch communication

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Abstract

There is a significant gap between technological advancements of digital touch communication devices and social science methodologies for understanding digital touch communication. In response to that gap this article makes a case for bringing the communicational focus of multimodality into dialogue with the experiential focus of sensory ethnography to explore digital touch communication. To do this, we draw on debates within the literature, and reflect on our experiences in the IN-TOUCH project (2016-2021). While acknowledging the complexities of methodological dialogues across paradigm boundaries, we map and reflect on the methodological synergies and tensions involved in actively working across these two approaches, notably the conceptualization, categorization and representation of touch. We conclude by honing in aspects of research that have served as useful reflective route markers on our dialogic journey to illustrate how these tensions are productive towards generating a multimodal and multisensorial agenda for qualitative research on touch.

Keywords

communication, digital, methodology, multimodal, sensory ethnography, touch

Introduction

This article makes a contribution to an ongoing theoretical and methodological debate within *Qualitative Research* – how the two paradigms of multimodality and sensory ethnography can be usefully brought together (Dicks et al. 2011; Flewitt, 2011; Hurdley and Dicks, 2011; Pink, 2011; Dicks, 2014). Our starting point is that these two approaches can be brought into 'fruitful dialogue', even though their reliance of on 'a distinctive underlying epistemological commitment to the study of communication and experience, respectively' (Dicks, 2014) means that they cannot be integrated. More specifically, this article contributes to this debate through our

reflections on, and exploration of, this dialogue in the context of researching how the digital remediates touch and the tactile communication.

Acknowledging the complexities of methodological dialogues across paradigmatic boundaries (Jewitt, Xambo, and Price, 2017), we first situate multimodality and sensory ethnography within the research terrain of touch, before setting out on our methodological journey. We then focus on the work of a small number of scholars – who are taken as indicative of each paradigm, to sketch these two approaches. We draw out the synergies and differences between these two approaches in the context of digital touch communication, with particular attention to their differences in how touch is conceptualised, categorised and represented – which we see as significant for enabling dialogue across these approaches. We conclude that the tensions that arise from this dialogue are provocative and productive in generating questions, themes and directions for an emergent multimodal and multisensorial agenda for researching touch and qualitative research on digital touch communication more generally.

Why touch?

Touch matters. It is central to human experience, culture, and communication. Touch is the first sense through which humans apprehend their environment and it is central to our development (Field, 2001). Touch may not be much spoken about yet it provides significant information and experience of the world; it is crucial for tool use (Fulkerson, 2014) and is central to communication: 'Just as we 'do things with words' so, too, we act through touches' (Finnegan, 2014: 208). Indeed, knowing how to infer meaning from touch is considered the very basis of social being (Dunbar, 1996). Today touch is at the centre of Human Computer Interaction (HCI) and computer science's imagining of digital sensory communication making the question of how touch is digitally mediated significant for communication. Touch screens, are arguably 'transforming our embodied experience of sociality and material culture' in a variety of contexts, including the home (Richardson and Hjorth, 2017: 12). The emerging arena of what might be classified as 'digital touch' (that is touch that is digitally mediated) also extends to other forms and sites of touch-based interfaces and haptic technologies, both within face-to-face and remote interaction. Given that touch is so fundamental and intimately tied to our existence, human experience and communication, we argue that a social science lens is essential to better understand the societal impacts of emerging touch technologies and 'should not be left to technicians/scientists alone' (Wilson, 2007: 128).

Why a sensory and a multimodal lens?

We situate the new wave of digital sensory communication devices and environments within the broader social science awakening to the sensory. In doing so we relate this technological trend to the social revaluing of people's sensorial experience and re-evaluation of the roles of the senses, changing social configurations that generate a desire and need to achieve digital immersive connection, as well as the

understanding and knowledge made possible by the use of new technologies. The sensory is foregrounded in the development of digital touch devices and environments in ways that point both to the 'shifting, contingent, dynamic and alive' character of the senses, specifically in this case, touch (Jones, 2007: 8), and the ever-closer relationship between the semiotics of touch, technology and sensory communication.

We take this shift as a challenge to consider how we might work at the intersection of the sensory and the semiotic to illuminate touch communication. As the boundaries of technological possibilities extend, however, there is a significant gap opening between technological advancements and social science methodologies and understandings of digital touch communication. Despite the interdisciplinary turn to the sensory, and the increased centrality of embodiment and materiality, social science qualitative research has largely ignored the social aspects of touch (for example, the influence of touch on interactions, touch as emotional and social support) and its extension into the digital realm and qualitative methods are under-developed with respect to researching touch.

In bringing multimodality and sensory ethnography together we are responding to the methodological challenge of how to understand this changing social landscape. A challenge underpinned by a growing 'restlessness or dissatisfaction' amongst qualitative researchers with the failure of dominant social science methods to adequately account for the visual, the sensory and the digital (Mason and Davies, 2009: 588), an increasing awareness that body experiences cannot be reduced to talk (Gunn, 2005), and the need for embodied methods to help gain insight on the social significance of bodily and sensory experience. This article highlights the potential of methodological dialogues to contribute to closing the gap between technological advancements of digital sensory touch communication devices and social science methodologies and understandings of touch.

A brief note on situating this article

This article is situated within the 'IN-TOUCH: Digital Touch Communication' project, which explores the social impacts of the digital remediation of touch for communication and contributes to the development of methodologies for touch research. It draws on our methodological explorations and reflections, including ongoing ethnographic fieldwork with computer scientists, engineers, designers and artists working in touch and the facilitation and analysis of a series of three participatory rapid-prototyping workshops on the topic of personal remote touch communication.

Researching touch

In this section, we briefly situate this article within the methodological landscape of touch: a wide and open, and somewhat sparse terrain.

There are some small islands of activity in this methodological landscape. Linguistics

and sociology have a patchy relationship to the sensory, with a few scattered seminal studies (Goffman, 1979; Streeck, 2009; Goodwin and Cekaite, 2013; Simmel, 1997; and Bourdieu [1979]1986). Cultural and media studies have primarily brought touch into focus through touch metaphors and visuality (Barker, 2009; Marks, 2000; Cranny-Francis, 2013; Parisi et al., 2017). Much of this work provided an early basis for multimodality and differently so the sociology of the body, the interdisciplinary foundation of sensory studies (Bull et al., 2006) and more recently, the sociology of the senses (Vannini, 2015). It has also provided a bridge towards post-humanism, new-materialism, and post-methods more generally.

There are two larger methodological 'masses' visible in this landscape. First is the anthropology of the senses. Second, in the far distance, is work on touch using quantitative and lab-based methods within experimental psychology, psycho-physics and increasingly neuroscience, neuropsychology.

Anthropology of the senses sets out to identify and critically explore the 'cultural models' of specific cultures (for example, the dominant and highly contested western Five sense model of the senses), tracing socio-cultural histories of individual senses and, in the process, draws out cultural and historical variations and developments. Ethnographic fieldwork and historical archives are used to study practices and rituals involving the senses, sensory symbolism, representations, and myths (Howes and Classen, 2014; Finnegan, 2014). This area of study has led discussion of the sensorium as a socio-cultural construct alongside explorations of how the senses are segmented, categorised, and classified differently across cultures and historical periods, as well as the sensory material possibilities and the different sensory expressions and practices of cultures and epochs. This work therefore questions the universality of sensorial experience and its categorisations. (Space does not permit us to elaborate on the Five sense model in this article, see Howes and Classen, 2014.) The changing sensory landscape of touch is the focus of Classen's seminal work (2012) which maps the place of touch across the Middle Ages through to its regulation and removal in the twentieth century from the church, to the museum, to the department store. She associates the changing roles and status of touch communication to changing kin relationships, the rise of individuality, the industrial revolution, the management of health and hygiene, and capitalism; more generally, she points us to the parallels drawn between the removal of touch and notions of civilisation. Anthropology of the senses provides the starting point for sensory ethnography (Pink, 2009) which has been developed explicitly to investigate the place of contemporary sensory knowing within ethnographic practice and in ethnographic studies. Although the relationship between sensory ethnography, classical or traditional ethnography, and anthropology of the senses is a much debated and contested (see Howes, 2010, 2011; Pink, 2010; and Ingold, 2011).

Collectively work on touch within experimental psychology, psycho-physics and increasingly neuroscience, neuropsychology is concerned with mechanisms and processes of perception, the senses as a universal biological-physiological matter of information-processing, physical realizations (the brain and the body systems), and the relationship between stimuli and the sensations and perceptions they affect. The

research focus is on the skin as an organ, its sensory receptors (nerve endings and corpuscles), the somatosensory area of the brain, and the processes through which 'signals' or tactile sensations of pain, temperature, pressure are interpreted in relation to memory or emotion (Spence, 2013) or how other modes (e.g. sound) impact on tactile perception (Berthouze and Tajadura-Jiménez, 2014). A range of methods are generally used to record individual quantitative measures including experiments, observation and increasingly EGC, Galvanic Skin Tests, MRIs, and neuroimaging technologies. This work has genuine power and provides insight on touch perception, however, its methods are designed to produce a psycho-physical, neurological, and physiological account of touch rather than a socially orientated account of touch as an embodied communicative experience. It is pertinent to note, that where HCI engineers and computer scientists have sought to understand the effects of their technologies on touch communication they have traditionally collaborated with the bio-physical sciences rather than the social sciences.

The following sections situate multimodality and sensory ethnography in this methodological landscape.

Multimodality: touch as mode

Multimodality is a social semiotic approach to communication. It draws insights from semiotics, art history and film studies, and cultural studies: a history set out in Jewitt (2014) and Jewitt et al. (2016). A multimodal approach aims to describe, categorise and understand how material and social resources are shaped into semiotic resources. That is, how signifier materials in their social usage (the work of people, communities and societies) are made into sign-systems shared by groups/communities and used to communicate, establish, and maintain social norms and conventions. Multimodality examines processes of meaning making with respect to a multiplicity of modes. While multimodality is perhaps best known for the analysis of texts (Kress and van Leeuwen, 1996), it is also used to analyse texts in action and interaction, often in combination with ethnographic methods (Kress et al., 2005; Flewitt, 2011).

Multimodality, in line with a semiotic concern with social and cultural representation and materiality, collects and records (through the use of photography, video, and/or observational field notes) the situated practices and interactions in the environment being studied and the materials, tools and so on that circulate within it (policy documents, records and other texts, leaflets, advertisements). The multimodal researcher sets out to collect naturalistic materials using video recording and observations to understand how interactions unfold without interfering or participating in this unfolding. Video recordings serve as an accurate (albeit partial) real-time, durable, sharable record of multimodal interaction in a given moment in time and space. Through the multimodal analyst's work (including viewing, sampling and transcribing), these materials become data. Materials are collected at the fine-granularity necessary to explore modes and their relationship to one another and to meaning, making video recordings a primary source of data for multimodality –

usually supplemented by observational field notes and participant interviews. Materials for multimodal analysis, whether recordings of artefacts or interaction, document the socially and culturally situated construction of meaning. Multimodal collection methods are attuned to the environment being researched to ensure that the holistic multimodal character of the artefacts and/or interaction is (as far as is possible) recorded.

Analysis attends to the uses of different modes in everyday interactions between people and/or people and artefacts (an object, a programme, a device) as a way to understand communicative meaning making. For example, a multimodal study might explore what is counted as touch by a social group in a given context and what semiotic meanings appear to be associated with the dimensions of touch (location, duration, or pressure), and how these are used. For instance, to place one's hand on the shoulder of another person, to hold it there for a long time, with pressure, can be used to communicate intimacy and reassurance, or power and control.

A mode is a set of semiotic resources with a regularity of use (i.e. a grammar) that fulfils the communication purposes of a community (Kress, 2010). However, what counts as a mode is dynamic and fluid as the social uses, resources, and needs of communities and societies differ and change. A key way multimodal scholars establish whether or not something is 'fully' a mode is to ask whether it can realise the three Hallidayan semiotic (meta) functions, namely to deal with interpersonal, ideational and textual meanings. Applying Halliday's 'meta-functions test' to establish whether or not a set of resources can be considered a mode, with respect to touch based modes, Bezemer and Kress (2014: 80) suggest that:

We can distinguish between communities in which touch is weakly developed, has limited semiotic reach or 'communication radius' and communities in which touch has been developed into a mode which is highly articulated, with extensive reach.

Multimodal analysis involves micro-observations (often based on video recordings), as a means of documenting and comparing the semiotic and modal features of an artefact or the flow of interaction in a given social (historical and cultural) moment and place. It is concerned with the situated and social-cultural use of modes for meaning making and communication, rather than mapping stable (fixed) and a-historical (universal) systems or meanings. A common analytical starting point for multimodal analysis is to produce a general description of an artefact or sequence of interaction (e.g. its genre, materiality, and general structure – principles rules and norms) to locate it in the wider world of representation and communication. This involves identifying and describing the modes and semiotic resources that are available in a given situation, to ask how people select and use them, the choices they make and what motivates these, and how the in-situ choices that they make are shaped by (and realise) power. Within multimodality, both artefacts and sequences of interaction are understood as signs – the outcome of a person's or people's actions, imbued with the sign maker's interests mediated through the environment in which the sign was produced and newly encountered. Meaning is therefore understood as socially situated choice from a (dynamic) set of available resources;

the affordances of which are shaped through their historical, cultural and social usage and their materiality (including the materiality of the body). This approach is concerned with understanding the social world as it is represented in/through interaction and artefacts. In the case of digital touch communication devices and environments, multimodal analysis is concerned with how the use of technologies re-mediates and re-configures touch-based interactions and representations in relation to social practices, norms, conventions, and relationships.

Multimodality provides a set of tools to explore the kinds of semiotic resources of touch and touch-practices that are drawn into HCI designs for touch-based communication and to explain and map the emerging modes of touch, that is, the shared representational realisations of touch for purposes of communication (Jewitt, 2017). It can be used to describe and document the semiotic resources and affordances of touch and under what social conditions and contexts touch-based resources are shaped through people's use to become semiotic resources or fully articulated modes. The potential of multimodality for investigating digitally mediated touch communication lies in it being an approach to communication that stresses the relationship between semiotic sign (meaning) systems and the social needs they are used to serve. Finally, multimodality is concerned with how technologies re-shape semiotic resources, modes and practices through their digital production, broadcasting/dissemination, and consumption (Jewitt, 2008).

Sensory ethnography: touch as sensory experience and route to knowledge

If multimodality asks how meaning is made and communicated, what meanings are made, and by whom, sensory ethnography sets out to account for the experiential, how meaning is perceived, the sensorial and often unspoken dimensions of everyday life and human activity (Pink 2009). It presents a set of phenomenological approaches that are attuned to people's sensory worlds, and exist in theoretical-methodological dialogue with wider theories and concepts around human perception, place, knowing, memory, imagination, affect, and movement (cf. Leder Mackley and Pink, 2013).

A key methodological feature of sensory ethnography is shorter-focused encounters with participants (Pink and Morgan, 2013). Methods are based on the notion that much of what is important about our feelings and activities is not easily observed or put into language – tacit, embodied, and unspoken knowledge. While the senses are not necessarily an object of investigation in their own right, sensory ethnography is sensitive to the sensory categories participants (and researchers) employ as one route to making the tacit evident or tangible through the research process; continually exploring and redefining sensory categories and, in the process, allowing new sensory categories and concepts to become evident. (This scale of focus – the individual and perception differs from that of sensory anthropology's concern with the societal and the cultural.) This reflects Ingold's view of the world as ongoing and processual (what multimodality would term as continual semiosis), with place-

making, movement and ongoing-ness which translates methodologically into questions of how best to 'proceed along the observational path of being *with*' people (Ingold, 2008: 87, emphasis in original), of doing, being and learning in and as part of the world.

The sensory ethnographer's task is thus to find routes through which to share or imaginatively empathise with the actions of people, collaboratively exploring with participants their ways of knowing, being and doing, whilst drawing on their own embodied and emplaced understandings (Dicks, 2014). Sensory ethnography uses a range of methods attuned to the notion of being in, and engaging with ways of knowing about people's life-worlds and activities, for instance, through sensory apprenticeships (cf. Leder Mackley and Pink, 2014), 'walking with' participants, and the use of video tours and video re-enactments (Pink and Leder Mackley, 2012; 2014).

The use of video (and, to a degree, photography) is discussed in terms of 'ethno notetaking', with the focus being on collaborating with participants to show and discuss sensory environments and practices. It is an experiential method which provides the researcher with a route through which to generate multisensorial traces of a collaborative research encounter and participants and researchers' emplaced bodies within it towards an empathetic encounter with a participant's sensory world. Video thus allows the sensory ethnographer to generate ethnographic encounters in ways that account for their multi-sensoriality and functions, through a 'form of acquaintance rather than description' (Pink, 2009: 2), as a way for the researcher to feel their way back into the research context.

A range of ethnographic studies which align themselves with sensory and phenomenological paradigms have recently brought touch into view by proposing the notion of tactile (Pink et al 2016) or haptic (Richardson and Hjorth, 2017) ethnography. They have explored participants' tactile engagements with digital devices in the home, suggesting that there is much to learn from such close attention to people's knowing and 'telling' hands (Ingold, 2013: 117). Pink et al. (2014: 426) 'focus on the hand and the material culture of safety that is associated with the use of the hands in its tactile, sensory, and affective engagements in health care workers' everyday encounters' to explore how 'human and material elements are interwoven in the making and enactment of safety'. They do so by using the hand 'as an analytical technique' (Pink et al., 2014: 428), in the sense that detailed attention to health workers' 'knowing hands' brings to the fore the complex interrelations between institutionally framed health and safety practices and workers' own, partly intuitive, improvisory and embodied, ways of knowing and handling. The research involved visual ethnographic techniques, for instance inviting practitioners to demonstrate their application of hand gel, in correspondence with the researcher's own sensory-embodied and practical experiences of tactile knowing and the use of specific material objects, such as gloves, in related contexts. This work serves to remind us that 'feeling' is related to the sensual material world of touch that we need to attend to (Highmore, 2016). It also points to the tactile aspects on the touch practices of craft and arts, explored within visual ethnography and the intersection

between ethnography and the arts (Grimshaw and Ravetz, 2015).

In these contexts, touch is not so much conceptualized as haptic sensation, although haptics form part of tactile and embodied knowing. It is, in Ingold's terms, part of the whole organism 'attentively going forth in the world' (2011: 325).

Discussion: feeling our way

In this section, we suggest ways of bringing these two approaches into dialogue, drawing on our own experiences of when methodological tensions have arisen and how they could be resolved. Due to the restriction of space, we focus on these differences rather than the synergies, as we argue, that the tensions that result from these differences provide valuable opportunities for methodological dialogue.

There are significant synergies between multimodality and sensory ethnography, while the former is concerned with communication and the latter with experience, both are interested in meaning beyond language, in tacit and embodied knowledge and knowing. Both acknowledge the social and culturally situated character of meaning, though differently so. Understanding people as agentive and innovative meaning makers whose meanings need to be attended to, is equally central to both approaches, as is the importance of materiality and the environment. In different ways (and perhaps in ways that the other does not always recognize), both these approaches are concerned with the fluidity and ongoing-ness of meaning making. Finally, both would agree that the sensorial and the semiotic are essential aspects of society and culture.

There are also significant differences between multimodality and sensory ethnography, some of which that have been charted in the past decade, often in the form of strong binary oppositions. We do not seek to flatten their differences or to *integrate* the two approaches into a smooth methodological terrain: rather their differences provide the rationale for methodological dialogue, and point to how we can use the 'bi-focal' lens of multimodality and sensory ethnography to explore digital touch (as a sense or suite of senses, a range of sensory experiences, and emergent semiotic modes) in order to bring into focus the near sensory and established social semiotic.

A critical factor in working across different approaches is the need to move beyond rudimentary (mis)understandings. However, such rudimentary understandings *can* be significant for understanding the 'dividing lines' or tensions between approaches. We have found it useful to reflect on how sensory ethnography and multimodality (tend to) view one another. The above descriptions of these two approaches, and their stances are built from our engagement with the literature, our conversations with each other as researchers trained and situated within multimodality and sensory ethnography respectively, and discussions past and present with colleagues within our different methodological networks.

Here we discuss three key (albeit overlapping) tensions in how multimodality and sensory ethnography orient to and conceptualise, categorise and represent touch, and how we might reframe their significance.

Conceptualising touch: Multimodality asks if and when touch can (and cannot) be considered a representational and communicational mode. Sensory ethnography attends to the situated sensorial experiences and perceptions of participants, of which the tactile may be an element, in order to both understand their experiences and activities, and how touch as an experiential category may become relevant in people's actions and reflections.

In making sense of their differing conceptualisations of touch, we return to Pink (2011: 262–263) who notes that 'the senses have never been far from thinking about multimodality'. She associates multimodality to the senses in two ways: the mapping of senses to modes (for example, hearing to speech, sight to visual modes); and use of the western Five sense model. Multimodal theorising has sometimes (not always) acknowledged the senses as having a place in multimodality, but this place has been far away, not well charted, and as yet unnamed. On the one hand the body and senses have provided a fuzzy background with uncharted pathways to the modal, and on the other a too direct short cut (e.g. ear-hearing-speech). Reviewing her own multimodal work, Jewitt can see her lack of analytical interest in the connections between sense and mode, as well as slippages between and conflations of these two analytical categories.

Arguably, for multimodal scholars researching communication in the Western world – with a focus on identifying the social principles, patterns and structures of modes of communication – a critique of its naturalisation of the modern western five sense sensorium and its failure to explicitly acknowledge this model and its associated sensory categories as cultural constructions (Pink, 2011) is largely inconsequential. Despite contemporary consensus that there are between nine and thirty-three senses (Macpherson, 2011), it is the cultural significance of the five-senses model that underpins the multimodal categories and modal units, and multimodal theorists acknowledge the culturally situated character of modes, rather than proposing universal categories of communication.

We interpret this critique as drawing attention to the challenge of articulating the relationship between the senses and semiotic modes (beyond a five sense model), the sensory and the semiotic. As Hurdley and Dicks (2011: 232) have noted, while multimodality is focused on 'the processes of meaning-*making* in the here-and-now, rather than on abstract, stable systems, there is nevertheless in multimodality a recognition that what meaning-makers are using as resources – signifiers – carry with them residual traces or inflections of previous processes of meaning-making. These traces are a means through which power and ideology can impinge on the sensory moment. In this way, signifiers cannot be understood only by reference to the immediate ad-hoc improvizations or accounts of members.'

Further, we argue that a better understanding and reflexive negotiation of the relationship between mode and sense may advance research on digital touch communication given it is situated at the shifting intersection of the social and sensorial. Some multimodal scholars have begun to explore the relationship between categories of sense and mode with respect to touch (Jewitt, 2017). Jewitt has

suggested that to theorise the contingent and fluid boundaries of 'modes of touch' it is necessary to situate the social processes of producing and using semiotic resources and modes within the bodily, material, and the sensory possibilities of touch and its cultural histories. We note that the senses do not map directly in a one-to-one way to mode, that both the senses and modes are analytical categories that are not experienced separately, and some sensory experiences do not fit within a five-senses model or modal categories.

Understanding the relationship between the categories of sense and mode poses an interesting challenge for multimodality as the senses and the sensory are not within its analytical frame. However, given that the sensorial, perception and affect are a part of communication and interpretation, engaging with and reflecting on these experiential aspects of touch can open multimodality to useful conceptualisations of touch that, in turn, may help to theorise its semiotic resources. For instance, Obrador (2016) reflects on how the environment touches the body, and asks if the feel of the sea and wind on the skin can be thought of as touch. This reflection is provoking when mapping new forms of touch to explore the design of digital touch communication devices and environments. Being able to switch lenses between mode and 'sense' (as contested category) and to hold both in play in the analysis of interactional practices also enables reflection on when touch is evoked as mode(s) or as sense(s) (or both). This bi-focal lens provides ways into understanding how different aspects of touch become relevant in a given context, why, and to what end.

Categorising touch: With respect to categorising touch, sensory ethnography tends to view the ways in which multimodality classifies modes and the other analytical tools it uses as too fixed, focused on generating systematic meanings, and too closely aligned with the structured lenses of pre-conceived social-cultural analytical categories and models. In parallel, a multimodal scholar (and differently so, a sensory anthropologist) might view sensory ethnography as lacking a social cultural (political) framework with which to understand or locate the local categories that it generates through a focus on individual perception, with a sense that its lack of analytical attention to orders, mechanisms, and structures is too individualistic an approach that does not give sufficient priority to identifying social dynamics, norms and power relations. These descriptions illustrate how individual sensory experiences (of concern to sensory ethnography) and cultural-social models of communication (of concern to multimodality) have, to a large extent, been positioned in relatively strong opposition to one another; although the door for potential collaboration has usually been left slightly ajar.

We have found it useful to reflect on the roots of this binary opposition, which we locate in a theoretical tension between sensory ethnography and multimodality related to the degree of importance placed on (and the centrality of), on the one hand, experiential individual sensory experience (with perception at its centre) and, on the other, cultural and social (Geertzian) models that attend to the social significance of the sensory or modal features of a society. Sensory ethnography

perceives multimodality as imposing a pre-existing social cultural model and its associated fixed set of categories or units of analysis, too strongly and too quickly, onto the experiences of people. It considers such pre-determined frames as failing to recognise the fluid, dynamic on-goingness of meaning making, and the nuances of (new) phenomena that emerge as a result. Pink has critiqued multimodality (as well as anthropology of the senses and a 'cultural' approach to ethnography) for positioning culture as a 'readable text', 'albeit a complex multimedia/-modal text' (2009: 103). She describes sensory ethnography as 'going a step further than "readings" of the meanings observable in video recordings of human action and interactions' to 'understanding the experiential elements of the environment and aesthetics being researched and the way the sensory and emotional effects of these are given meaning by research participants' (2009: 103). In response, multimodal scholars (in agreement with sensory anthropologists), might ask how sensory perception and experience can be separated from discursive social cultural constructions:

The ways we use our senses, the ways we create and understand the sensory world are shaped by culture. Perception is not informed only by the personal meaning a particular sensation has for us, but also by the social value that it carries. (Howes and Classen, 2014: 1)

Rejecting this false binary, we suggest that both multimodality and sensory ethnography provide methodological paths that we can walk to bring us closer to the edge of this theoretical tension. Multimodality is based on a social semiotic model of communication and theorises all signs as newly made, emphasising the work of the sign maker in a specific social-cultural-historical environment. From this perspective, all signs are theorised as a part of a constant chain of semiosis – an ongoing process of remaking, in which maintaining a convention is viewed as the outcome of constant labour of newly making, for example, rather than as a fixed or static sign-system. Multimodality sees this constant making as happening in the context of existing social norms and conventions that shape (but do not determine) how people make meaning. It sets out to understand and map the myriad ways in which people re-make signs in conventional and new forms – as linked to power. This remaking (or design) is explored in relation to how meanings change, and how people express their power or lack of it, with technologies being a part of that process. The changing relationships between the semiotic, technologies and the sensory make new demands on a social semiotic framing of communication. Digital devices and environments that explicitly draw on the sensory, in response to changing social conditions and technological possibilities, are shifting the import and place of the sensory in ways that raise new questions for multimodality. Researching this landscape requires us to explore and re-articulate the relationship between modes and the senses; the sensorial and the semiotic; the individual and the societal.

Sensory ethnography offers routes into understanding people's sensory experiences and categories, which is especially useful in the context of exploring the emergent and under-researched area of digital touch communication. This enables us to gain access to points of change and new terminologies through an exploration of

established categories of touch, as categories and models in use, without relying on a Five sense model and established cultural norms. We therefore reframe this binary opposition as contrasting orientations to touch that provide a significant opportunity for analytical collaboration. This can help to ameliorate the constraints and 'blind spots' of each to get at the 'multiplicity of meaning-making practices across diverse sites and discursive practices' (Dicks, 2014: 671).

Representing touch: Related to the above discussion is multimodality and sensory ethnography's different positioning to the debates between representational and non-representational theory.

Sensory ethnography is increasingly situated (and situates itself) as an innovative 'non-representational' or, more aptly, 'more-than-representational' approach (Pink, 2011). Within a non-representational orientation to the video, sensory ethnography is conscious of video's (and other forms of notetaking's) representational nature but does not set out to represent life-worlds *per se*:

Data, the Latin word for given, is not so much what interests non-representationalists . . . sceptical toward the world as a given . . . representing an empirical reality that has taken place *before* the act of representation. (Vannini, 2015: 15, emphasis added)

This Non-Representational Theory (NRT) orientation to both data and the 'temporality of knowledge' results in a research interest in 'enacting multiple and diverse potentials of what knowledge can become afterwards' (Vannini, 2015: 15). That is, rather than fixing reality (what Vannini terms an 'embalming obsession' with representation), Vannini suggests non-representational approaches are a kind of 'witnessing', a stance that is orientated towards being 'in tune to the vitality of the world as it unfolds' (Vannini, 2015: 15). However, the false contrast this sets up between a fluid, non-representational sensory ethnographic (as an NRT) approach and what it sees as a 'fixed' representational multimodal approach is too stark and elides the nuances of multimodality in relation to situated meaning, change (constant semiosis) and agency that it can make visible (as discussed in the previous section).

Within its theoretical-methodological origins (i.e. social semiotics and interaction studies), multimodality is positioned as innovative in its 'moves beyond' linguistic forms of expression, use of video, development of multimodal forms of transcription and analysis, and its attention to the body and spatiality. Its analytical categories are often critiqued as too flexible and open when compared to other linguistic approaches (for example, conversation analysis, systemic functional linguistics). Sensory ethnography's characterisation of multimodality as a *traditional* representational approach is at odds with multimodality's identity of methodological rebellion. This (re)positioning of multimodality as 'traditional' creates a tension between researchers situated in the two approaches.

As reflective researchers we re-visit the literature on Non-Representational Theory (NRT an acronym reverberating with an esoteric promise once associated with ANT) to explore this tension. NRT has become 'an umbrella term for diverse work that

seeks to better cope with our self-evidently more-than-human, more-than-textual, multi-sensual worlds' (Lorimer, 2005: 83). As a multimodal scholar reflecting on the work of Thrift, Jewitt recognises much of the essence of multimodal in the seven 'tenets' of the 'non-representational project' he proposed: a concern with capturing the 'ordinary, everyday actions' (Thrift, 1997: 142) and the 'on-flow of everyday life' (Thrift, 2008: 5); a focus on practice, action and performance; an interest in materiality; attention to the importance of 'bodies' in environments; and (as a linguistic rebel) an experimental stance against traditional method and theory. Vannini's (2015: 12) argument that NRT is a matter of style rather than a particular method (arguing against Thrift's dismissal of interviews and ethnography), epitomised by a 'fight against timid and formulaic research' and a call for more creative and imaginative methods that disrupt research habits, also resonates with her experiences of multimodality. Nonetheless, ultimately, multimodality is (unashamedly) a representational approach. It does not share the desire of sensory ethnography (and other approaches under the NRT umbrella) to provide an autobiographical insider account of practices; it is not focused on the affective and sensory capacities of bodies; multimodality is not a response to questioning 'the crisis of authority and representation' in research (Vannini, 2015: 2), and it does not 'seek to become entangled in relations and objects rather than studying their structures and symbolic meanings' (Hinchliffe, 2000 cited in Vannini, 2015: 6). In contrast, sensory ethnography like other approaches situated under the NRT umbrella has a 'suspicion of uncovering symbolic meaning' (Vannini, 2015: 6) and

'wants to make us feel something powerful, to give us a sense of the ephemeral, the fleeting and the not-quite-graspable . . . without necessarily having to resort to spoken commentary, to extended captions, and to research informant's transcribed accounts and illustrating narrations . . . It wants the impossible.' (Vannini, 2015: 6)

It is in this sense sensory ethnography and other NRT approaches are seeking alternative routes to understanding. Bringing multimodality into dialogue with sensory ethnography, thus, involves the researcher in a continued status as methodological rebel learning from, as well as challenging both approaches. Rooting the idealised impossibility of NRT in a landscape of multimodal methodologies, makes clear this potential:

Ultimately [NRT approaches have] led to recognisable methods that 'move beyond' linguistic forms of expression, ethnographic work that offers ways to 'get at' the more intangible aspects of practices, and works that show a 'willingness to experiment with established, indeed quite traditional, methods to create innovative, insightful methodological hybrids' (Latham 2003: 1993), and the extension of methods that generate text and talk 'with experimental practices that amplify other sensory, bodily and affective registers' (Whatmore 2004: 1362). (Vannini, 2015: 12)

We suggest, following on from Hurdley and Dicks (2011: 290), that multisensory and multimodal approaches can 'co-exist as twin methodological strategies, both to reflect on and engage with each other, and to allow for chance new juxtapositions and assemblages'. With this in mind, we work with the tensions discussed above in

the next section to set out an emergent agenda that brings the multimodal and the multisensorial into a reflexive dialogue in order to explore the (relatively) unchartered territory of digital touch communication.

An emerging multimodal and multisensorial agenda for touch

The theoretical tensions between multimodality and sensory ethnography that we have discussed in this article shape how the two approaches boundary touch (what is included and excluded), and how (and why) touch is named/classified, represented and researched. Pink's critique (2011) that multimodality's concern with culture as a readable text that relies too heavily on visual observations and requires an interpretive stance of looking at, rather than being with people, appears in stark contrast to sensory ethnography's interest in multisensory, embodied experiences, perceptions and skills. However, within the social cultural frame of a multimodal perspective concerned with communication it is precisely the *visible* (though not necessarily *visual*) and the shared materiality of communication and interaction that matters. An interest that echoes the insistence of post-humanist and new materialist scholars of the significance of materiality in practices across the boundaries of science and the social, nature and culture, and the need to imagine novel methods that centre on bodily performativity and materiality (Callus and Herbrechter, 2012).

The 'invisible' individual sensory experiential aspects of communication only *become* relevant to a multimodal lens when they are (made) evident – visible/felt – in and through interaction. In the context of the IN-TOUCH project, this notion of visibility has come into focus not only in relation to our use of visual (and other) methods, but also with regard to the involvement of the researchers who themselves come to the project with different disciplinary and methodological backgrounds.

The challenge of researching the social *and* sensory implications of digital touch communication (especially in this moment of technological development in which most touch devices and environments are in labs, rather than 'in the wild') is an opportunity for methodological experimentation. We have identified a number of useful (reflexive) route markers on our dialogic journey across multimodal and multisensorial considerations for touch to illustrate how the tensions (outlined in the previous section) that arose in the process of working across these have been productive for us, notably in generating a multimodal and multisensorial agenda for qualitative research on touch.

Bringing these two approaches together has required the **formulation of research questions** that bridge sensorial and multimodal considerations. Within our work this process has generated new questions for the realm of digital touch communication, such as 'How do the sensory experiences become shaped into communicational resources?' 'How does the embodied knowledge of designers[2] impact on the digital touch communicational opportunities that they create?'. In turn, these have served to expand a multimodal take on **communication** that theorises the relationship of the sensory, the modal and the digital by newly attending to experiential matters in relation to communication. While the ways in

which these interact is a complex question for our ongoing attention, embodiment is a point of connection between the experiential, the sensorial, the modal and communication that multimodality and sensory ethnography can help us to explore. Bringing these two approaches together also brings the environment into the frame of touch in ways that need to be attended to. The bi-focal lens we are developing through our work (and in this article) enables an agenda for touch research that explores the categories, experiences and processes of the designers of touch devices, systems and environments, the devices themselves, and those who use them. This approach holds more opportunities for the **alignment of 'observed' and 'experienced'** themes and concepts of digital touch communication, which we suggest are needed when researching such a new communicational terrain. This methodological dialogue requires researchers to refocus their lens to account for the categories across and between these two approaches and to consider the relationship between the sensory and the semiotic, perception or culture, rather than their opposition.

There is a marked difference between the **researcher stance** within a multimodal and sensory ethnographic approach. This difference is notably in the extent of researcher and participant co-participation in the research process. It is also embedded in the ways in which their bodily and sensorial experiences are drawn into and utilised as an analytical resource as possibilities for producing knowing:

A way of seeing acquired in this way is not simply a semiotic code. It is a perceptive hue that once acquired cannot be bracketed off or exchanged for another (not without further training, at least). However localised and historical, it becomes permanent sediment, an embodied way of accessing the world and of managing it – in other words, an identity. (Grasseni 2004: 45)

These stances are implicated in the type of questioning or conversation we engage in as researchers; the physical and empathetic distances we create between participants supported by our design of research encounters; and the different ways that we use video - for 'data recording' or as participatory method of collaborative enquiry. Sensory ethnography challenges 'researchers to attend to the world-as-sensed rather than as communicated', and uses reflexivity and 'empathetic strategies' to provide a way to 'work within participants' subjective perspectives', in an attempt to avoid 'objectifying these as forms of disembodied "'data"' (Dicks, 2014: 671). This stance has been critiqued, within multimodality and anthropology of the senses for lacking analytical robustness and failing to adequately acknowledge cultural and social forces and difference. We have explored our embodied sedimented research identities through the process of working closely together through data and ideas for over a year. We have stepped-in and-out of our own and each other's research stances, asking 'What would you usually do now?', 'What would you ask/look at?', 'How would you usually do this?', 'What concepts would do you find useful?'. We are in an ongoing process of dialogic mutual apprenticeship to understand and experience the research frames of each other – feeling our way towards points of connection.

The research stances of these two different approaches have significant implications for what each considers data and an appropriate method of collecting it. Bringing multimodality and sensory ethnography together requires the development of reflective ways to keep their methodological dialogue in focus. We have used **collaborative field notes** as a methodological tool in our research encounters, we use them to map the practices and arenas of digital touch communication development, and writing into a shared field note from our different disciplinary perspectives enables us to attend to multimodal and sensory ethnographic concepts and considerations. The field notes sit alongside and in relation to audiovisual data and other sources. Our field notes provide us with a reflexive tool to examine our research stances, experiences, and processes and to inform methodological dialogue and awareness as a team.

A reflexive stance to the use of data collection and analytical processes is necessary to keep the dialogue between multimodality and sensory ethnography in productive tension. For example, our use of ***video recording*** in our work has provided a useful and contentious prompt for dialogue that has centred on differences in our expected levels of participation in the research encounter. Pink (2009: 103) has suggested that sensory ethnography could supplement multimodal analysis of the meanings observable in video recordings of human actions and interactions by seeking to understand 'the experiential elements of the environment and aesthetics being researched and the way the sensory and emotional effects of these are given meaning by research participants'. Layering these approaches to video enables us to pay particular attention to our own sensory-embodied-emplaced perception in relation to that of research participants. We understand the framing of the research encounter as a framing of attention. Through our work we overlay the lenses of multimodality and sensory ethnography to explore the relationship between the sensorial and experiential and the social-cultural modal aspects of digital touch communication. To date, we have used participatory workshops as sites for multimodal data collection as well as sensory ethnographic research encounters, creating opportunities for sensory engagement, researcher immersion, and seeing the workshops as sites of social interaction. Our collaborative analysis of the workshop video recordings has been informed by a multimodal analysis of participants' interactions – when and what they touched, and where they drew on their body to experiment and explore ideas and experiences of touching (hugging, stroking, kissing their hands), as well as the sensory categories participants drew on. Our analytical process combines viewing the fixed video camera, our moving with and being with participants, and our reflecting on (and interacting with) the touch devices made by participants during rapid prototyping sessions as a way to connect with the participants' sensorial processes and experiences of creating. This layering process has enabled us as researchers to work across a sensorial and modal dialogue to find different entry points into the data, and to generate productive research experiences and tensions for understanding, in our case for the complexity of digital touch communication.

Multimodality is concerned with the agency of people and the politics of ***change***,

while sensory ethnography foregrounds notions of emergence, imagination and ongoing-ness. Considering and making more explicit how multimodality and sensory ethnography bring the sequencing of meaning making into view, and how they each in different ways or in combination attend to the visible and the felt aspects of change has been useful in helping us to think about the temporality of digital touch communication. This has been of value for us, notably in our engagement with our video data.

At an analytical level, a dialogue across multimodal and sensory approaches has required us to adopt a reflexive review of the modal and sensory categories that we use, and an open-ness to understanding the sensory as emerging/changing and experiential. Such reflections have been useful in the context of digital touch communication with respect to generating a new ***descriptive research vocabulary***. Throughout our research encounters, we aim to creatively explore how digital touch can *supplement* touch communication (e.g. using digital touch to enable those with no tactile sensation to feel); *heighten* communication using touch (e.g. using the digital to heighten the touch of the visually impaired); *extend* touch for communication; or entirely *reconfigure* touch capacities and practices (e.g. taking touch into new domains of communication). These four working categories (supplement, heighten, extend, reconfigure) derive from existing literature and are explored in relation to digital touch communication that is co-located or remote to account for the dimensions of distance and proximity. Our methodological dialogue, has led us to conceive of these four working ***categories*** of touch as part of a flexible, multimodal and multisensorial frame for exploring participants' emergent digital touch experiences and ideas.

Conclusion

This article has shown the potential of a dialogue between multimodality and sensory ethnography in the context of researching digital touch communication, with attention to three key points of intersection.

First, a dialogue with sensory ethnography can help multimodal scholars to explore and better articulate the relationship between the sensory and the modal aspects of touch communication which is key in the case of emerging modes in the context of digital touch.

Second, a dialogue between these approaches enables a thick textured account of digital touch that can layer and connect different analytical levels of experiences of touch across individual sensory perception to socially-culturally shaped modes and norms of touch (that come about through the repeated social labour of meaning making), bringing both the experiential and the representational world more clearly into view. Currently neither multimodality *nor* sensory ethnography provide a methodological framework flexible enough to stretch across that terrain. While sensory ethnography can sensitise multimodality to the sensorial, multimodality can work to situate those understandings within a larger semiotic and social frame of communication.

Third, this dialogue can foster an explicitly reflexive approach that constantly questions what lens is being applied and what data it generates. Such flexibility is essential when exploring the new terrain of digital touch, as it helps to generate descriptive terms for social touch (that is touch in social interactions, for example touch greetings or social support) and also to make sense of digital touch in its manifold emerging sensory-social-communicative realisations.

Our exploration of the dialogue between multimodality and sensory ethnography has helped to set the ground on which to further develop an agenda for exploring digital touch communication. Our next challenge is to experiment further with the use of the bi-focal methodological lens we have explored in this article to understand both the modal social semiotic and sensory aspects of digital touch with attention to communication. To understand where touch happens, how the sensorial touch experiences of a community are named and categorised, and how these *become* mode (or mode-like). This is particularly useful to understand as features and resources of digital touch enter the repertoire of shared communicational resources, with emergent patters and 'rules' of use. This is significant as it relates to how the sensory and digital are a part of how culture is made and experienced. Such cultural shaping, in turn, feeds back into our sensory and embodied experiences.

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