

# Tug-o-where: Practising mobilities of learning (t)here

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This paper explores 'mobilities' as a research framework for learning not so much in terms of what has to be done to enhance learning using mobile technologies. Instead it focuses on our ways of knowing and learning by 'being mobile'. It suggests a practice perspective for learning by 'setting in motion' not just technologies, but also bodies and spaces. It seeks to understand *what is being done* - the re-configurations of bodies, spaces and technologies through the increasingly dialectic links between absence and presence, proximity and distance, and individualism and community. More importantly, such relations are merged in the consumption of mobile devices, producing ambivalent realities of absent presence, public privacy and isolated connectivity, which would commonly be considered oxymorons. To *move* educational research, this paper turns to the mobilities paradigm for a practice perspective to circulate bodies and spaces in motion and articulate other possible metaphors for framing learning in this mobile age.

Keywords: mobilities, mobile learning, mobile technologies, e-learning, absent presence, public privacy, isolated connectivity, networked individualism

#### Introduction

We have reached a point with mobile technologies where they converge in the same spatial and embodied practice. Strictly segregated spaces and social organisations of everyday life are increasingly undermined and re-ordered by the permeability and fluid modalities of emerging network and mobile technologies. The Internet or cyberspace interacts with urban space and disrupts and collapses conventional boundaries and enclosures (Crang, 2000). Places move to other places (Callon & Law, 2004). Bodies coordinate multiple tasks and conversations, oscillating between highly private and semi-private modes of communication - remaining in one place while connected to the Internet (Geser, 2002). This kind of situation is a fertile ground for the emergence and multiplication of modes of ordering. Physical copresence is no longer the only presence possible. There is presence in absence, privacy in public and connectivity (even intimacy) in isolation (Bull, 2007; Callon & Law, 2004; Geser, 2002; 2004). The concepts of mobility and spatiality are being deconstructed to say the least. Our sense of place, home, self, identity and of our own (skin) bodies are being re-negotiated, shifted and at times suspended. Mobile technologies including the Internet give individuals the 'exit option'. For instance, with a mobile phone one can 'exit' the immediate space and avoid encounters with the 'present others' and be elsewhere with 'absent others'. In the physical world, human actors are true "individuals" by exogenous reasons, because they have one body, which provides as a stabilizing anchor and cannot be separated from their capacity as reflecting subjects or as social actors (Donath, 1999). Online, individuals become dividuals (Strathern, 1991) - in this case, as bits of scattered information distributed across various 'systems'. Several retrievals are possible from various locations (Geser, 2002; Urry, 2007). The individual with a unified sense of identity that is anchored in particular physical location is 'divided' and distributed in hardwares and softwares.

Studies on embodied knowing have been reported (e.g. Barnacle, 2009, Bresler, 2004; Dall'Alba & Barnacle, 2005; Leander & Lovvorn, 2004). However, the relation between body and technology has been given meagre attention in research that has much enthusiasm in investigating e-learning, distance education and all the other variants of learning with technologies mobile or otherwise. This paper provides a possible framework to explore bodily relations with technologies and spaces. After all, the mind is not disassociated from the body and thought is only possible through actual bodily involvement and movements. In terms of mobile learning, there have been research projects, particularly in the UK and

Europe that have studied and designed learning scenarios around the use of mobile devices, such as PDAs (see Kukulska-Hulme, et al., 2009 for a good overview and summary of different European projects). However, there are no considerable efforts to understand the effects and implications of consumption and production of mobile devices on various aspects of everyday life. We need a different way of talking and seeing. Instead of locally bounded practices and scripted design of technology-enhanced pedagogies and an emphasis on human-to-human interactions, this paper considers both human and non-human as "circulating entities" (Latour, 1999) in the flickering and flowing spatial movements (Law & Mol, 2001) of socio-material relations that involve our bodies and the seeming fungible spaces we inhibit. To capture the mobilities of learning, first this paper re-visits the interaction perspective of Kahihara and Sørensen (2002) in extending mobility and the context perspective offered by Kukulska-Hulme, et al. (2009). Then, it re-considers the concept of mobility from a practice perspective based on John Urry and Mimi Sheller's mobilities paradigm (Sheller & Urry, 2006; Urry, 2007), particularly in terms of what Urry (2003) calls 'mobilities/moorings dialectic', and in terms of a more corporeal and spatial determination in engaging the mobile practices of learning with bodies and spaces and places. In so far as doing is the core concern, research design needs to be unshackled (see Crang, 2003) and perhaps new metaphors have to be used (Callon & Law, 2004).

On a theoretical level, we have to first recognise that the practice of social science research has been generally a-mobile through a sedentarist view of place (Cresswell, 2002; 2004). The importance of movement or displacement has been ignored (Sheller & Urry, 2006; Urry, 2007). And somehow this 'snapshot' approach has been widely practised in education and technology research. This is not to belittle or berate the efforts of various projects in distance (e-) learning and mobile learning, but a step to understand the relevance of studying the Internet and mobile devices in mobile and immobile spaces or places. This will be elaborated further in the following sections. In doing so, it is not interested in mobile learning in terms of the use of mobile technologies or the design of learning scenarios that use mobile technologies in the classroom or other educational settings such as museums or playgrounds. It aims to attend to the relational effects of the convergence of communication and spatial mobility of increasingly dialectic links between space and place, absence and presence, proximity and distance, and individualism and community. It presents a practice perspective of mobilities by articulating bodily and spatial movements. It also deliberates on the related implications of the emerging oxymorons: absent presence, public privacy and isolated connectivity to how we might engage in doing mobilities research.

## **Mobility: Interaction perspective**

Kahihara and Sørensen (2002) provide an interaction perspective of mobility in an attempt to extend the notion of 'being mobile' beyond physical movement or travel. They focus their mobility perspective on three interrelated dimensions of human interaction as follows:

- o spatial mobility: refers to the physical movement of people, objects, symbols and space itself;
- o *temporal* mobility: refers to the non-linear coordination that media technologies afford in human activities beyond clock-time slices and allocations;
- contextual mobility: refers to the mediated situation in which individuals are considered to be relatively free of the contextual constraints of computer-mediated interactions in largely different contexts.

They also suggest a fluid metaphor on how to appropriate the social consequences of the mobilisation of human interactions. They borrowed Mol and Law's (1994) ideas of social topology and fluid metaphor: regions as defined boundaries; networks as relationships and fluids as neither of the two. Kahihara and Sørensen (2002) suggested that the pre-ICT era is made up of regions as social interaction at the time was strictly restricted by geographical distance. This may be true, however, it is rather sedentarist, hiding mobilities, even in its limited sense of physical movement (e.g. Cresswell, 2002: Urry, 1995). And the notion of networks defines the ICT era. This dichotomy freezes the fluid and spatial possibilities of interactions, undermining the dialectic between movements and stasis, Besides, Kahihara and Sørensen's (2002) interpretation of the fluidity of human interaction as determined by the diffusion of mobile devices is rather misleading and problematic and presents a rather technologically deterministic view. Human interaction is always ordered and coordinated with other material arrangements even on-the-move. Human interaction does not necessarily become frictionless with mobile technologies ready-at-hand. An example is evident in Axtell, Hislop and Whittaker's (2008) study on mobile work whilst traveling aboard a train. To make the train a place of work, one has to be ready to move seats, allow others to get by, modulate noise perhaps by using an iPod or a MP3 player, use other technologies like pen and paper. Through survey and interview data, several constraints to mobile work on the train were revealed and reported. These include the lack of reliable communications network coverage, lack of privacy, noise and

allocated seat, which together restrict the types of communicative tasks people carry out. An interesting finding is that majority of tasks conducted aboard the train did not require the need to communicate with 'absent others'. They were socially independent in nature. In this case, for mobile work to take place, a seat must be available, the train must not be too noisy or crowded, network coverage is present, etc. In short, a mere focus on certain global properties of mobile technologies (e.g., ubiquitous access, portability) is limited. Local constraints and contingent relations that grind things to a halt or let things slip when moving must also be considered. Contextual mobility is never free of contextual constraints (Axtell et al., 2008). In the same way, students who commute between home and school may easily have access to podcasts of their instructor's lectures. However, it is no guarantee that they could easily be bodily and cognitively disposed to engage in learning while on-the-move. The kinds of interactions that are formed and sustained matter differently, depending on where (and when). On this point, the interaction perspective is moved to practice, where non-humans become involved and where how mobility is done differently depends on other things and orderings, not just based on what mobile technologies are capable of doing technologically. We have to consider them *practically*, too.

# **Mobility: Context perspective**

Kukulska-Hulme, et al. (2009) adapted Kakihara and Sørensen's (2002) interaction perspective in examining an extended notion of mobility. However, the emphasis is shifted from interaction to context. Contextual mobility becomes the overarching construct of mobile learning. In this context perspective, spatial and temporal mobilities are subsumed or framed as aspects of context. Spatial mobility is split into mobility in physical space, referring to people alone and mobility of technology, referring to portable tools and devices. The remaining three aspects of mobility identified in this context perspective of mobility (see Kukulska-Hulme, et al., 2009, pp. 8-9 for details) are: (1) mobility in conceptual space: refers to how attention moves to different topics or concerns based on interest, curiosity and commitment; (2) mobility in social space: refers to learners' roles as they participate or perform within various social groups at home, work and school; and (3) learning dispersed over time: refers to the cumulative process that is involved in learning based on different experiences and settings.

In this perspective, context is created by the interactions of people, tools and surroundings. It recognises the false stability that the current arrangement of the classroom and its resources provide learners and attends to the challenge of extending the learning context outside the classroom into the formal and informal settings (or spaces and places) of everyday life. Mobile learning in the projects described by Kukulska-Hulme, et al. (2009) is framed within a conception of learning that is based on Engeström (1996) activity theory, as a tool-mediated socio-cultural activity (see Sharples, et al., 2005). However, mobile learning seems to be highly scripted. Mobility is designed into learning scenarios and spaces. Engeström (2009) mentions a similar observation in his recent article on mobility and learning. In the article, he argues for a historical perspective of mobility and learning and used what he calls 'wildfire activities' of swarming, sideways transitions and boundary-crossing as metaphors of mobilities. He criticises the rather common top-down scripts of mobility both teachers and designers want learners to engage in (e.g., field trips and museums), which usually neglects the counter-scripts of the mobility patterns of learners (e.g., skateboarding) themselves:

The official script determines a fixed endpoint of the movement – for example, a museum. The route from the school to the museum itself is rather irrelevant; thus, it should be effective and straightforward transport. For the counter-script, there is no endpoint. The terrain opens up to all directions for exploration. While a good skating spot is a delight, the movement between spots is equally if not more important since new spots are discovered only by moving around, by wayfaring with open eyes. The official mobility script resembles a pre-planned straight line from point A to point B, whereas the counter-script resembles a tapestry of criss-crossing and winding lines which gain their shape as the action unfolds (pp. 2-3).

Engeström's own words offer an alternative to mobile learning practices that have been inscribed in classroom and field trips. In the next section, I join in movement-driven theoretical explorations of learning as initiated by Kahihara and Sørensen (2002), Kukulska-Hulme, et al. (2009) and Engeström (2009) in their respective papers. However, instead of a focus on interaction or giving emphasis on context, this paper extends mobility from a practice perspective. I move it further along with the mobilities paradigm, whose articulations are drawn from actor-network theory and science and technology studies (STS), new literacy studies and human geography. The mobility turn for learning is not at all about 'being mobile' at all times. It is about 'being still' too. Also the dimensions of practice it

enacts are situatedness and embodiment. It is interested in talking about bodies (e.g. Ihde, 2002; Troshynski, Lee & Dourish, 2008), spaces/places (e.g. Cresswell, 2002; 2004) and technologies.

We don't need to be told or reminded that learning 'transfers' across situations and that its situatedness could not be bounded within a specific setting or locality. Not only different localities provide different opportunities for learning, but also, activities in different localities are not isolated from other localities. They have a rather cumulative quality in that progress in one setting (e.g. classroom) often makes it possible to 'move' to another place (e.g. Internet) (Tyre & von Hippel, 1997). This is rather familiar. We know this in our heads, but somehow our research and educational practices do not move accordingly. As already explained, social science research has been a-mobile and so do our universities for quite a long time. However, we see the 'cracks' that Internet, network and mobile technologies reveal in more apparent ways. The very notion of lifelong learning is a clear demonstration that knowledge is not placenor time-bound, strengthened further with our engagement with network and mobile technologies. It 'travels' and it does not necessarily keep its form as it 'mingles' with other things and circumstances in other settings. How could local practices and shared meanings transfer to other contexts without espousing ourselves to the notion of abstraction? According to Adey (2006), it is because not everything moves or that mobilities are not about movement. Besides, our mobilities with people and things do not solely depend on what 'others' do to us or what we do to them, but on what these doings mean for us (Cresswell, 2002; Lemke, 1997). It is our construing of a thing, event, process or phenomenon in relation to one or more others that 'binds' and 'moves' our situated relations to different people, places and material and symbolic resources. We move purposely, meaningfully (well, most of the time).

## **Mobility: Practice perspective**

With a theoretical orientation and persuasion different from Kukulska-Hulme, et al. (2009) and perhaps closer to Kakihara and Sørensen (2002), this paper articulates a practice perspective based on the mobilities paradigm For a completed discussion of the mobilities paradigm, see Urry's (2007) book on *Mobilities*. He sets out the main features of mobilities (see pp. 46-54) in terms of how socio-material relations (Latour, 1999) necessitate the intermittent, flickering and intersecting movements as well as fixities of people, objects, information and images across distances. What I describe here is partial, perhaps precarious even as I meddle with bodies and stir away from 'established' perspectives and scholarly work. A few things are held in place here (temporarily) to set the mobilities of learning in motion. Drawing from STS literature, practice is materially heterogeneous. It is performed materially with bodies, talk, text, bytes, machines, architectures, etc. Mobilities are a mixture of human and non-human entities – contingently enabling and disabling people to move and hold their 'infrastructure', such as the spread of the car system (Normark, 2006) or the distribution of the Zimbabwean bush pump from its headquarters in Harare to distant African villages (de Laet & Mol, 2000).

In studies that focus on interaction or context, there is a tendency to emphasise human-to-human relations, silencing relations with the non-human (Latour, 1987). Moreover, there is the privileging of the mind over the body in examining pedagogies and technologies in education. In linking with the mobilities paradigm (Sheller & Urry, 2006; Urry, 2007), this paper seeks to bring into the fold the un-examined, othered and un-attended 'infrastructures' (Star, 1999) of everyday practices, which includes bodily and spatial movements, however, only in a flicker as there are others (not here) who have more expertise and experience – to them the reader must go eventually, *purposely*.

Mobilities/moorings dialectic (Urry, 2003) has two claims: (a) the contingent relations between mobility and immobility make the difference; (b) everything is mobile at various temporal coordinations. Inevitably, this creates ambiguities and ambivalence. In the mobilities/moorings dialectic, there is no structure separate from process or that structures actually move. This relates to Giddens' (1984) structuration theory - structures are maintained and appear to be immobile as they are sustained or kept in place or stable through repeated patternings or movements. Places are constituted by reiterative social practices or repetitive patterns. We understand mobility through its difference or through stability (Adey, 1996; Urry, 2003; 2007). Movement needs context – an immobile to move to and from. To experience movement there has to be constant or stable others (Cresswell, 2002; Urry, 2003, 2007). Adey (2006) argues that everything is mobile, but perhaps not all at once. The immobilities get to move sometimes and the mobilities get to stop at other times in a well-coordinated fashion. For example, how the airport terminal is a fixed entity that presupposes the emergent mobilities of people, planes and places (see Adey, 2006; Sheller & Urry, 2006). Mobilities are enabled and emerged from multiple fixities or moorings often on a substantial physical scale (Sheller & Urry, 2006). 'There is no linear increase of fluidity without extensive systems immobility' (Urry, 2007, p. 54). 'Artful integration' (Suchman, 1999) or 'public choreography' (Katz, 2005) is what matters for a practice perspective. Practices are performed for as long

as they are meaningful and teeming with purpose as they are assembled and re-assembled in the contingent and distant relations of spaces, bodies and technologies.

#### Situatedness: Re-placing pedagogical space

Mobilities entail distinct social spaces that orchestrate new forms of social life. In educational settings, these include classrooms, libraries, cafes, websites, virtual environments, etc. How are these spaces coordinated and re-configured with the mobilities of learners? How do learners appropriate mediated spaces to engage in learning activities? Some spaces have walls, doors, and windows; others have bridges, roads and pavements. We have to negotiate our bodies in these spaces. Places have rules and expectations. We can walk in the park, but there are areas where we have to 'keep off the grass'. We cannot trespass or park wherever we like. Coordinations and regulations of spaces have been shaped and sustained by repeated practice (Cresswell, 2004). However, spaces do not have closures, they are only stable-for-now. A practice space is open, unstable and temporary. It is a particular configuration of 'what is possible' both bodily and technologically and 'what is happening' both here and elsewhere.

The infrastructure of educational institutions is a product of a social system with rather stable sedentary and defined boundaries that are anchored in specific spaces (eg, different disciples housed in different buildings). The lay-out of classrooms or lecture halls dictate the flow of information (Hebdige, 2002). Such anchoring, according to Geser (2004), serves to segregate social and spatial functions and also to provide physical access for members of communities/societies. In both the visual and auditory levels, the space is defined and mapped to appropriate activities and social behaviour as observed and differentiated in the library, inside the theatre, in the playground or inside the classroom.

The premise of a fixed place or dwelling is blurred and made rather unstable with the usage and practices surrounding mobile technologies. "Their use shifts community ties from linking people-in-places to linking people wherever they are" (Wellman, 2001, p. 238). Mobile devices afford a liberation of place as it makes possible the convergence of communication with spatial mobility. For instance, the significance of the mobile phone lies in empowering people to communicate free from the constraints of physical proximity and stable sedentary settings (Geser, 2004). The conventional meaning of a place or locationbased system has been replaced by places not necessarily anchored in spaces, instead they are mediated by spaces and permits places to be person-based systems. In other words, communication is more and more location-independent. The making of spaces into place becomes a personal matter, determined by participating subjects. In short, place is no longer tied to the notion of location or space (Adey, 2006; Wellman, 2001). In this sense, place becomes dynamic and unbounded. A location/space could be many places – how the assembly hall becomes the dining hall at lunchtime and the dance floor for school celebrations or the gym at PE (physical education) time. Here we can see how time changes a space too. In short, a place is not a fixed container, it is a process – it (too) takes place (Adey, 2006; Cresswell, 2004; Harrison & Dourish, 1996). Cresswell (2002) even suggests that we should think of places in more mobile terms as 'events'. If a place is performed, what kind of place is performed by mobile technologies? A mobile place denies the 'presence' of others and allows subjects to privatise the public space and be 'occupied' by absent others. Mobility is not just about displacement. It is less concern with departures and returns. Its politics is in being (t)here – in no particular place. In short, it dissolves the boundary between here and there, departure and return, dwelling and traveling. Consequently, a softer, more fluid and fire definition of spaces, material resources and normative structures have to be recognised.

### Embodiment: Body-ing in places, plac-ing bodies

The human body has for far too long been subordinated to the mind in social science research (Creswell, 2004). If we are going to focus mobilities on the way we do things, then we have to focus on bodies – their positions and positionings. It is rather obvious that we need a body in order to experience places and the world. And its role in learning is rather absolute. To put bodies in place, we have to reconceptualised learning differently. We have to make an 'ontological turn' from an epistemological position - placing and attending to the 'lived body' in the practices of learning, in education (e.g. teacher preparation) and other professions (e.g. medicine) (see Barnett, 2005; Dall'Alba & Barnacle, 2007; Mol, 2002). Human practice does not only involve the spatial body, but it is also constitutive of emotions, narratives, memory/history (see Simonsen, 2008). This paper is limited to the spatial body.

Our bodily positions and movements configure places. Katz (2005) describes the general posture and positioning of people when they are using their mobile phone in public spaces – public pacing, a cricked neck, bent over whilst walking. To make bodies matter and to make mobility be about bodies too, I frame

the body in four ways. This 'procedure' is not intended to quarter the body or divide it into neat sections. Instead it is a strategy, a heuristic device if preferred to initiate a way of seeing the body in educational research partially and temporarily. I draw from Don Ihde's (2002) book, *Bodies in Technology*, to begin to understand the body-technology relations from a phenomenological standpoint. Ihde's (2002) account made a distinction between a 'sensory body' and a 'cultural body'. 'Sensory' body refers to relational abilities such as spatial orientation and movement as well as emotions. 'Cultural' body refers to embodied experiences that are constructed and varies from culture to culture. According to Andrew Feenberg's (2003), Ihde's book has only focused on 'active' bodies. He argued that we have to focus on passive bodies, too. To this end, he added a 'dependent body' and an 'extended body'. These articulate the passive dimension of 'body-ing'. In short, there is a duality of body in practice – that the body acts and is also acted upon by others (Feenberg, 2003). These body types are introduced here not as 'essences' but as effects of body-ing.

The most obvious example of dependent body-ing perhaps would be in places of health services and medicine (e.g. hospitals, clinics). In surgery or inside the operating room, the body becomes the object of technology of another. We do not have to wait for such an occasion or trouble ourselves with a medical visit, how we become objects of the technologies we use can be experienced with our mobile devices, such as the mobile phone. For example, mobile phones are considered as prosthetics of the body (Bull, 2007). To be without it or to forget somewhere can cause so much upset and disability (Bull, 2007; Glotz, et al., 2005).

And from a body that is the object of technology, the extended body uses the technology. The focus is not usage though, but the consequences of use to the body and the awareness of the subject of those consequences (Feenberg, 2003). To explain the fourth body, Feenberg (2003) revisits Merleau Ponty's description of a blind man whose bodily extension is the cane. He agrees that the cane extends the blind man's ability to sense the world. However, he suggest s that this view is rather incomplete as '... the cane does more than sense the world; it also reveals the blind man as blind. His body is extended not only in the active dimension on which Ihde and Merleau-Ponty focus but also in the passive dimension on its own objectivity (p. 105). In short, '[t]he extended body, then, is not only the body that acts through a technical mediation, but also a body that signifies itself through that mediation' (Feenberg, 2003, p. 105).

To illustrate dependent and extended bodies, an alternative narrative, an otherness in text is described based on the ethnographic data reported by Al-Mahmood (2008) at this conference last year. The focus of the paper was spatialities or spatial imaginings. In the light of what Clifford's calls 'ethnographic allegory', this 'other' meaning is not an interpretation layered over the original account or transcribed interview data. Rather, it is a condition of its meaningfulness. 'Ethnographic texts are inescapably allegorical, and a serious acceptance of this fact changes the ways they can be written and read' (Clifford, 1994, p. 206). And with the increasing convergence of spatiality with mobility, I make more present the mobilities behind the spatial imaginings Al-Mahmood (2008) described.

Al-Mahmood's interest at least in the two Ascilite papers (Al-Mahmood, 2006; 2008) lies in the interaction of spatiality, identity and online learning. She cites Paechter, et al (2001) in her introduction in both papers, she captures the significance of looking into 'embodied individuals' - bodies in spaces. Not only do we need to pay attention to the spac-ings and plac-ings of classrooms, labs and lecture halls and how these affect the ways we learn, "... but also how we as *embodied individuals* are changed by our experiences in these spaces' (italics added, pl cited in Al-Mahmood, 2006, p. 43 and in Al-Mahmood, 2008, p. 11). In the more recent paper, Al-Mahmood (2008) described two lecturers, Barrie and Sam, as vibrant and experienced face-to-face lecturers. And yet the affective effect of 'being online' moved both differently. For Barrie, it was *enabling*; for Sam, it was *disabling*.

Barrie has difficulties hearing and wears a hearing aid. However, the chatroom online allowed Barrie to communicate clearly with his students without his hearing aid. The extended body in the physical space was enabled without extensions or hearing aids online.

I have a lot of trouble hearing the students in class and that might be one of the reasons why I am so wildly enthusiastic about the chat room because I can hear them ... and I say to them ... "I can hear what you're saying!" (Al-Mahmood, 2008, p.13).

Or perhaps we can say that Barrie has the option to use his hearing aids or his computer to hear his students depends on where he is, in the classroom or in the chat room. Wherever he goes, the important thing is he could 'hear' his students. However, the mobilities that emerge in the practices of Barrie as a body does not quite end here. There is more difference in mobility that is subtly revealed to us. The

signification of the passive, extended body with a hearing aid, the awareness that the technology signifies to others that Barrie has a hearing difficulty is lost and perhaps rendered insignificant online. In the virtual space, his disability to hear does not matter. In this instance, the passive (disabled) dimension of the body in a physical place is enabled online. Therefore, the trajectories of our mobilities are clearly placed through and with our bodies.

His hearing difficulty became absent, invisible online, and so was the rest of his body. However, his presence could be read by distant and absent others here and whose presence is written here and encountered bodily elsewhere – an absent presence (discussed in the next section). However, his positive experience online was not shared by another lecturer, Sam.

It can't convey me very well! ... Yes well actually I think, online, I'm fairly boring. I respond, I try to raise it a bit, but it's nothing like my face-to-face where you can have a joke and where I do a lot more, you can see I talk a lot but as I don't write a lot, I feel I can't convey me very well, down in writing... (Al-Mahmood, 2008, p. 18).

For Barrie, his disability to hear clearly was made invisible online. He could hear and was more present and augmented by his physical absence. For Sam it mattered differently. She was disabled. Her ability to communicate with the act of talking was muted with keyboard strokes and text on screen. She felt less present online. She wanted to move 'completely' and occupy the online space *bodily*. This is not a matter of right or wrong. It is a matter of meaning and experience, which defines the limits of our skin. Consequently, there is a tendency to measure the mediated space and bodily presence against a full bodily co-presence (Ihde, 2002). Hence, the feeling of loss or partiality online as described by Sam above. But as already discussed, our bodies are plastic, we can extend our presence linguistically and imagine ourselves differently (Feenberg, 2003).

With the widespread use of mobile devices and of the Internet, notions of space and place have been intensely complicated. Mobile phones and iPods, for examples, invade and transform the physical space of our embodied location in ways that allow presence and absence, distance and proximity, individualism and community to 'occupy' the same temporal and spatial reality. The boundaries between physical and virtual spaces have become to some extent both irrelevant and ambivalent in the emerging effects and characteristics of what it means to be mobile not just in terms of bodily movements, but also cognitively. Oxymorons like absence and presence, proximity and distance, alone and together combine and co-exist in mediated spaces. Now, we can talk about 'absent presence' (Gergen, 2002), 'alone together' (Bull, 2007) in isolated connectivity or what Wellman (2001) refers to as 'networked individualim'. Also, we have attained rights to 'public privacy'. These oxymorons are explored in the remaining sections in relation to the practice perspective of mobilities. These are emergent properties of mobilities that we have to pay attention to in educational research and in advancing the use of mobile devices for learning and in participating to the mobile lives of both teachers and learners.

#### Being (t)here: Absent presence

Absent presence is made possible and sustained by technologies of separation from the immediate, physical space, such as mobile phones and iPods. Mobile technologies have progressively empowered an individual precisely by removing them from the physicality of urban relations. What happens if presence and absence or proximity and distance are not opposed to one another? Subjects are compelled or orientated towards interiority – a public retreat. Consequently, public spaces are no longer made up of chance encounters. Instead, subjects are 'alone together' (Bull, 2007). Gergen (2002) identified four challenges of the integration or co-location of absence and presence as follows:

- 1. erosion of co-presence or flat community
- 2. erosion of a coherent and centered sense of self and moral bearings
- 3. devaluation of the depth of relationships
- 4. uprooting of meaning from material context

The convergence of spatiality with mobility leads to the convergence of the cognitive and the physical, alienating co-presence in public spaces. The immediate and direct is no longer necessarily the priority, in fact relationships with 'absent others' are sustained more in mediated spaces. Mobile users consume space and appropriate it according to their needs (Wellman, 2001). Besides, there is evidence that tasks are increasingly synchronised to music using iPods (Bull, 2007).

The above challenges are discussed further by focusing on the combined presence and absence of people in subtle ways in terms of: (a) public privacy – that of being physically present and cognitively absent; and (b) isolated connectivity – that of being present with 'absent others'. Such are the norms of the inherent person-to-person system that has emerged in the convergence of communication and spatial mobility. Modes of presence and absence become interweaved in all aspects of human relationships, of family, work and education (Urry, 2007). How do these modes of movement of objects, people, ideas and images affect how we engage learning in various spaces/places?

## **Public privacy**

In educational institutions, the 'silence rule' in libraries allows for public privacy. "Silence please" signs are mounted on walls to remind each visitor that one should not disturb others by making noise. With iPods and headphones, such noise may be contained and silence maintained, not only in libraries but also in other public spaces. Privatising public spaces is not a new phenomenon. Such strategy has been practiced long before the invention of mobile phones, radios, computers and other portable gadgets. To free ourselves from the immediate social surroundings and to filter out the noise of public spaces, reading a book in buses, trains and planes is commonly practiced. Reading in public spaces (in libraries in schools and universities) signifies that one is unavailable, absorbed psychologically or cognitively with the text at hand.

With mobile phones and other devices proliferating, individuals can easily evade any interaction with surrounding 'present others' by making a call or listening to music using a walkman, a MP3 player or an iPod. These are 'gating' or 'filtering strategies' (Bull, 2007). With the white cable of headphones dangling in between one's ears, one earns the right to be left alone (Sennett, 1990). Such strategies allow individuals to be 'bodily present here', but 'cognitively absent' (Wellman, 2001).

In the classroom, both teachers and learners 'wear' their mobile communication devices. Katz (2005) reports on how professors and teachers would answer mobile calls in the middle of a class session. Absent others take priority. Public privacy interferes with the class lecture, group discussion and other kinds of appointments and meetings. Therefore, enclosed spaces such as the classroom are coordinated differently as public privacy intrudes with mobile devices and cyberspace 'fractures' the well-bounded ordering of space (Lankshear & Bigum, 1999) and create an environment of 'perpetual contact' (Katz & Aakhus, 2002; Katz, 2005).

#### Isolated connectivity

Media technologies simultaneously isolate and connect (Bull, 2007). The more we privatise our spaces of communication, the more isolated we become in public spaces. Phone space is prioritised over local space. Geographical space becomes recessed as the speaker occupies or moves to 'another' space. The desire for mediated withdrawal is evident in physical segregation (e.g. different rooms in a household) and this is associated with media segregation (Douglas, 2004). In effect, we may be in the same physical space, but with different experiences. This is easily illustrated in the classroom when students bring their own laptops and connect to 'absent others'. Mobile media allows us to 'ctrl-alt-del' our surroundings to filter experience and attend to other things. To maintain immediate presence, students are usually asked not to bring their laptops in class and perhaps a common shared experience is when we are asked to switch off our phones in conferences and meetings.

A community can easily become an accumulation of privatised (isolated) connectivities. Isolated connectivity becomes a 'public retreat'. This public retreat allows students to be in close proximity with present others and yet engage in individual activities. For example, it is rather common to find students sitting together in groups in libraries, cafes and open spaces engaged with different things as they 'shut' the immediate space or other with headphones, tuned in to their private soundscapes.

The effects of mobile devices in blurring the boundaries of bodies and spaces are ordered and coordinated by other mobile and moored relations. How long one could sit outside on a sunny day, doing online tasks while connected wirelessly, is determined by the battery life of one's laptop. Wifi connection is one thing a café should have and another to have electrical sockets fixed on walls (including floors) to accommodate not only the customer's need for coffee, but also the 'power' need of his/her technologies. The examples here are rather 'anaemic'. However, these provide insights into the fact that contrary to claims that ubiquitous computing permits anytime-anywhere learning, there are material arrangements and contingent relations at play when one goes to a place or moves from one space to another that hold/halt mobility in place. Research has to be done based on a practice perspective of mobilities to

understand our ways of knowing and learning by *doing mobility* – by 'being mobile' bodily and spatially and not just by claiming the use of mobile devices in fixed locations or enclosed spaces.

# 'Placing' and 'body-ing' mobilities where

This paper simply reiterates and includes those who have been placed 'elsewhere'. Both in theoretical and methodological sense, the conventional meaning of place and location-based systems or place-to-place systems (Wellman, 2001) has been replaced by places not necessarily anchored in spaces and by personbased systems. Cyberspace is a (dis)location – something that is both positioned and not positioned, producing a range of positionings (Edwards & Usher, 2000). The implication of this then that our methods maybe understood as simultaneous enactment of presence and absence (see Law 2004). And with this lens, this movement -driven research brings to the fore theories, methods and exemplars of research that have been out of sight. As Callon and Law (2004) point out, social science research in general is not well equipped to handle the question of mobilities. First, the tools and metaphors used are limited and orientated towards stagnation and embeddedness. Technological determinism is a constant risk. The dichotomy between the social and the technical still persists. Perhaps alternative metaphors and performativities of methods have to be explored (Law & Mol, 2003; Law, 2004). Researchers have explored the creative mode of spaces developed by Law and Mol (2003) (e.g. Al-Mahmood, 2006; Maintz, 2007). Four spatial metaphors can be used to achieve a mobile view: (1) regions refers to immutable immobiles, those that retain their shape 'here' and nowhere else; (2) networks refers to immutable mobiles, those that have moved 'there' from 'here; (3) fluid spaces refer to mutable mobiles, those that depend on gradual change between 'here' and 'there'; and (4) fire spaces refer to mutable immobiles, those that depend on the abrupt and discontinuous movements between 'here' and 'there'.

These could be experienced simultaneously as they interfere and structure spacing and bodying. The STS literature has a lot of examples. However, for the reader less familiar with Latour and more familiar with Engeström's work in education, which has been heavily influenced by versions of Vygotsky's work. I return to Engeström's (2009) 'wildfire' activities to articulate bodying and spacing in terms of practice as 'flickering' and 'fungible':

There are wildfire activities that prediate internet and mainly take place outside the sphere of digital virtuality. Examples include skateboarding, birding and disaster relief of the Red Cross. One of their salient qualities is that they can pop up in unexpected locations at unexpected times and expand very rapidly. They also seem to become extinguished from time to time, yet they reappear and flare up again.

They are dispersed and distributed, yet well coordinated and aware of the global whole in each local node. ... They are not just internet, and they are not just open source. ... [They] are very bodily and down-to-earth activities (pp. 4-6).

"Circulating entities we might say are increasingly production of circulation itself" (Urry, 2007, p.15). Instead of enclosures and control, we have to engage the mobilities of learning in spaces of encounters and anticipations (Callon & Law, 2004; Engetrom, 2009; Simonsen, 2008). Absent presence redefines copresence. It is no longer just about being located somewhere but also about being related anywhere and how absence performs presence at a distance. An illustration perhaps of this is the practice of 'missed calls' using our mobile phones to mean 'I'm here' (present).

#### Closing: Stop-for-now

The mobilities paradigm is truly multiple in its deliberations and propositions, with many routes. Here a practice perspective of mobility is proposed as a starting point to move all modes of learning (blended, e-, distance, campus-based, mobile) slowly, but never surely as mobilities halt and fixities slide. This perspective does not suggest a mobile framework that is "all movement". Knowledge does not only spring from travel, but equally from "remaining where you are" (Hoving, 2002). After all, every geographical location or immobile is a site where other places meet - a point of passages, of entries and exits for the mobiles to keep coming and going. In this standpoint, the 'mobilities/moorings dialectic' persists in active and passive bodies in different places. What is being done (t)here becomes the focus of articulating bodies, spaces and technologies through the proliferations of oxymorons that the circulation of these entities produce themselves in repeated patternings, flickerings, 'fungibility' (Geser, 2002): absent presence, isolated connectivity and public privacy.

Connections and communities are simultaneously private and public, intimate and distant. These could be described as new fractal social spaces, as each realm folds over, under, through and beyond each other in striking new social topologies. These are oscillatory, flickering, both here-and-there, both inside and outside, rather like a Mobius strip. (Urry, 2007, p. 181).

Mobility is characterised by ambivalence – how privacy becomes an intrusion to the public as we engage in personal conversations in public spaces or how we may choose to be 'invisible' online whilst present in Skype, Yahoo or MSN – making oneself 'manifest absence'. Places/spaces become mimetically "in tune", put "in place" with our needs, movements and tasks (Bull, 2007). Such differences broaden analysis – how the pauses and gaps matter and how the in-betweens allow mobilities to be fixed into position, so others may keep moving.

The starting point of an investigation of research into the mobilities of learning is (t)here – meaning it is no longer confined within the identification of a physical place to perform ethnography or phenomenology. Instead, the starting point of place implies being elsewhere whilst remaining 'here'. The question that is then asked brings us to an ontological turn, how we learn is not just an encounter of intellects mediated by tools, but a bumping into of bodies in spaces as part of the ways of knowing in motion (Dall'Alba & Barnacle, 2007; Sheller & Urry, 2006). The contingent and distant relations of fire or fungi spaces and dividual bodies with 'absent others' (both human and non-human, both near and far) assemble learning differently. Mobility is not just about departures and arrivals, but also about not being in a particular place – a being (t)here. Consequently, I hope the title of this paper ultimately makes some sense – a 'tug' of neither here nor there in absent presence, public privacy and isolated connectivity. Our mobile technologies have simultaneously kept and moved us (t)here. Now, it is time to move on. In the words of Law and Mol (2001), 'it is necessary to go elsewhere. It is necessary to go to places that are absent ...' (p. 8) here to distant and absent others that are present there. Where next?

#### References

- Adey, P. (2006). If mobility is everything then it is nothing: Towards a relational politics of (im)mobilities. *Mobilities*, 1(1), 75-94. https://doi.org/10.1080/17450100500489080
- Al-Mahmood, R. (2006). Spatial imaginings: Learning and identity in online environments. In Who's Learning? Whose Technology? Proceedings ascilite Sydney 2008.
  - http://www.ascilite.org.au/conferences/sydney06/proceeding/pdf papers/p153.pdf
- Al-Mahmood, R. (2008). Spatialities and online teaching: to, from and beyond the academy. *In Hello! Where are you in the landscape of educational technology? Proceedings ascilite Melbourne 2008*. http://www.ascilite.org.au/conferences/melbourne08/procs/al-mahmood.pdf
- Axtell, C., Hislop, D. & Whittaker, S. (2008): Mobile technologies in mobile spaces: Findings from the context of train travel. *International Journal of Human-Computer Studies*, 20(12), 902-915.
- Barnacle, R. (2009). Gut instinct: The body and learning. *Educational Philosophy and Theory, 41*(1), 22-33. https://doi.org/10.1111/j.1469-5812.2008.00473.x
- Barnett, R. (2005). Recapturing the universal in the university. *Educational Philosophy and Theory*, 37(6), 785-797. https://doi.org/10.1111/j.1469-5812.2005.00158.x
- Bresler, L. (2004). Knowing Bodies. Moving Minds. Dordrecht: Kluwer.
- Bull, M. (2007). Sound moves: IPod culture and urban experience. London: Routledge.
- Callon, M. & Law, J. (2004). Absent presence: Localities, globalities and methods, *Environment and Planning D: Society and Space*, 22(1), 3-11. https://doi.org/10.1068/d313
- Clifford, J. (1994). On ethnographic allegory. In S. Siedman (Ed.), *The postmodern turn: new perspectives on social theory* (pp. 205-228). Cambridge: Cambridge University Press.
- Crang, M. (2000) Public Space, Urban Space and Electronic Space: Would the Real City Please Stand Up? *Urban Studies*, *37*(2), 301-317. https://doi.org/10.1080/0042098002203
- Crang, M. (2003). Qualitative methods: Touchy, feely, look-see? *Progress in Human Geography*, 27(4), 494-504. https://doi.org/10.1191/0309132503ph445pr
- Cresswell, T. (2002). Theorizing Place. In G. Verstraete & T. Cresswell (Eds.), *Mobilizing Place, Placing Mobility: The Politics of Representation in a Globalized World* (pp. 11-32). The Netherlands: Rodopi. Cresswell, T. (2004). *Place: A short introduction*. Oxford: Blackwell.
- Dall'Alba, G., & Barnacle, R. (2007). An ontological turn for higher education. *Studies in Higher Education*, *32*(6), 679-691. https://doi.org/10.1080/03075070701685130
- Dall'Alba, G., & Barnacle, R. (2005). Embodied knowing in online environments. *Educational Philosophy and Theory*, 37(5), 719-744. https://doi.org/10.1111/j.1469-5812.2005.00153.x
- De Laet, M., & Mol, A. (2000). The Zimbabwean bush pump: Mechanics of a fluid technology. *Social Studies of Science*, 30(1), 225-263. https://doi.org/10.1177/030631200030002002

- Donath, J. S. (1999). Identity and deception in the virtual community. In M. A. Smith & P. Kollock (Eds.), *Communities in Cyberspace* (pp. 29-59). London: Routledge.
- Douglas, S. (2004). *Listening in, Radio and the American Imagination*. Minneapolis, MN: University of Minnesota Press.
- Edwards, R. & Usher, R. (2000). *Globalisation and pedagogy: space, place and identity*. London: Routledge.
- Engeström, Y. (1996). Perspectives on activity theory. Cambridge: Cambridge University Press.
- Engeström, Y. (2009). Wildfire activities: New patterns of mobility and learning. *International Journal of Mobile and Blended Learning*, *I*(2), 1-18. https://doi.org/10.4018/jmbl.2009040101
- Feenberg, A. (2003). Active and passive bodies: Comments on Don Ihde's *Bodies in Technology*. *Techné*, 7(2), 102-109. https://doi.org/10.5840/techne2003725
- Gergen, K. J. (2002). The challenge of absent presence. In J.E. Katz & M. A. Aakhus (Eds.), *Perpetual Contact, Mobile Communication, Private Talk, Public Performance* (pp. 227-241), Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511489471.018
- Geser, H. (2002). Towards a (Meta-)Sociology of the Digital Sphere. Online Publication. Zurich, December 2002. http://socio.ch/intcom/t\_hgeser13.htm.
- Geser, H. (2004). *Towards a Sociological Theory of the Mobile Phone*. Online Publications, Zurich, March 2004 (Release 3.0). http://socio.ch/mobile/t geser1.htm.
- Giddens, A. (1984). The Constitution of Society: Outline of the Theory of Structuration. Cambridge: Polity Press.
- Glotz, P., Bertschi, S. & Locke, C., Eds. (2005). *Thumb culture: The meaning of mobile phones for society*. Bielefeld: Transcript Verlag. https://doi.org/10.1515/9783839404034
- Harrison, S., & Dourish, P. (1996). Re-place-ing space: The roles of place and space in collaborative systems. *Proceedings of the 1996 ACM Conference on Computer Supported Cooperative Work*, pp. 67-76. https://doi.org/10.1145/240080.240193
- Hebdige, D. (2002). Subculture: The meaning of style. London: Routledge.
- Hoving, I. (2002). Remaining where you are: Kincaid and Glissant on Space and Knowledge. In G.
   Verstraete, & T. Cresswell (Eds.), *Mobilizing Place, Placing Mobility: The Politics of Representation in a Globalized World* (pp. 125-140). The Netherlands: Rodopi.
- Ihde, D. (2002). Bodies in technology. Minneapolis, MN: University of Minnesota Press.
- Kakihara, M., & Sorensen, C. (2002). Mobility: An extended perspective. *Proceedings of the 35th Annual Hawaii International Conference on System Sciences (HICSS'02)*, pp. 1756-1766.
- Katz, J. E., & Aakhus, M. A. (2002). *Perpetual contact: Mobile communication, private talk, public performance* Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511489471
- Katz, J. E. (2005). Mobile communication and the transformation of daily life: The next phase of research on mobiles. In P. Glotz, S. Bertschi, & C. Locke (Eds.), *Thumb culture: The meaning of mobile phones for society* (pp. 171-184). Bielefeld: Transcript Verlag.
- Kukulska-Hulme, A., Sharples, M., Milrad, M., Arnedillo-Sa nchez, I., & Vavoula, G. (2009). Innovation in mobile learning: A European perspective. *International Journal of Mobile and Blended Learning*, *I*(1), 13–35. https://doi.org/10.4018/jmbl.2009010102
- Lankshear, C. & Bigum, C. (1999). Literacies and new technologies in school settings. *Pedagogy, Culture and Society*, 7(3), 445-465. https://doi.org/10.1080/14681369900200068
- Lasen, A. (2002), *The Social Shaping of Fixed and Mobile Networks: A Historical Comparison*, DWRC, University of Surrey.
- Latour, B. (1987). *Science in action: How to follow scientists and engineers through society.* Cambridge, MA: Harvard University Press.
- Latour, B. (1999). On recalling ANT. In J. Law & J. Hassard (Eds.), *Actor Network Theory and After* (pp. 15-25). Oxford: Blackwell. https://doi.org/10.1111/j.1467-954X.1999.tb03480.x
- Law, J. (2004). After method: Mess in social science research. London: Routledge.
- Law, J., & Mol, A. (2001). Situating technoscience: An inquiry into spatialities. *Environment and Planning D*, 19(5), 609-622. https://doi.org/10.1068/d243t
- Leander, K. M., & Lovvorn, J. F. (2006). Literacy networks: Following the circulation of texts, bodies, and objects in the schooling and online gaming of one youth. *Cognition and Instruction*, 24(3), 291-340. https://doi.org/10.1207/s1532690xci2403\_1
- Lemke, J. L. (1997). Cognition, Context and Learning: a social semiotic perspective. In D. Kirshner (Ed.), *Situated cognition: Social, semiotic, and psychological perspectives* (pp. 37-56). Hillsdale, NJ: Erlbaum. https://doi.org/10.4324/9781003064121-3
- Maintz, J. (2007). Synthesizing the face-to-face experience: e-learning practices and the constitution of place online. *Social Geography Discussion*, *3*, 31-55. https://doi.org/10.5194/sgd-3-31-2007
- Massey, D. (1993). Power-geometry and a progressive sense of place. In J. Bird, B. Curtis, T. Putnam, G. Robertson & L. Tickner (Eds.), *Mapping the Futures: Local Cultures, Global Change* (pp. 59-69), London: Routledge.

- Mol, A. (2002). The body multiple: Ontology in medical practice. Durham: Duke University Press.
- Mol, A., & Law, J. (1994). Regions, networks and fluids: anaemia and social topology. *Social Studies of Science*, *24*(4), 641-671. https://doi.org/10.1177/030631279402400402
- Normark, D. (2006). Tending to mobility: Intensities of staying at the petrol station. *Environment and Planning A*, 38(2), 241-252. https://doi.org/10.1068/a37280
- Paechter, C. Edwards, R. Harrison, R. & Twining, P., Eds. (2001). *Learning, space and identity*. London: Paul Chapman Pub. in association with the Open University.
- Sennett, R. (1990). The Conscience of the Eye. London: Faber.
- Sharples, M., Taylor, J., & Vavoula, G. (2005, October). Towards a theory of mobile learning. *Proceedings of mLearn 2005 Conference*, Cape Town. Retrieved from http://www.mlearn.org.za/papers-full.html
- Sheller, M. & Urry, J. (2006). The new mobilities paradigm. *Environment and Planning A*, 38(2), 207-226. https://doi.org/10.1068/a37268
- Simonsen, K. (2008). Place as encounters: Practice, conjunction and co-existence. In J. O. Bærenholdt & B. Granås (Eds.), *Mobility and Place: Enacting Northern European Peripheries* (pp. 13-25). Burlington, VT: Ashgate.
- Star, S. L. (1999). The ethnography of infrastructure. American Behavioral Scientist, 43(3), 377-391.
- Strathern, M. (1991). Partial Connections. Savage, MD: Rowman & Littlefield.
- Suchman, Lucy (1999). Working relations of technology production and use. In D. Mackenzie & J. Wajcman (Eds.), *The Social Shaping of Technology, Second Edition* (pp. 258-268), Buckingham and Philadelphia: Open University.
- Troshynski, E., Lee, C. & Dourish, P. (2008). Accountabilities of presence: reframing location-based systems. *Proceedings of the 26th Annual SIGCHI Conference on Human factors in Computing Systems*, pp. 487-496. https://doi.org/10.1145/1357054.1357133
- Tyre, M. J. & von Hippel, E. (1997). The situated nature of adaptive learning in organizations. *Organization Science*, 8(1), 71-83. https://doi.org/10.1287/orsc.8.1.71
- Urry, J. (1995). Consuming places. London: Routledge. https://doi.org/10.4324/9780203202920
- Urry, J. (2003). Global complexity. Cambridge: Polity.
- Urry, J. (2007). Mobilities. Cambridge: Polity.
- Wellman, B. (2001). Physical Place and Cyberplace: the rise of personalized networking. *International Journal of Urban and Regional Research*, 25(2), 228-252.https://doi.org/10.1111/1468-2427.00309

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