The (im)materiality of literacy : the significance of subjectivity to new literacies research.

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Abstract

This article deconstructs the online and offline experience to show its complexities and idiosyncratic nature. It proposes a theoretical framework designed to conceptualise aspects of meaning-making across on- and offline contexts. In arguing for the '(im)materiality' of literacy, it makes four propositions which highlight the complex and diverse relationships between the immaterial and material associated with meaning-making. Complementing existing socio-cultural perspectives on literacy, the article draws attention to the significance of relationships between *space*, *mediation*, *materiality* and *embodiment* to literacy practices. This in turn emphasises the importance of the *subjective* in understanding how different locations, experiences and so forth inflect literacy practice. The paper concludes by drawing on the Deleuzian concept of the 'baroque' to suggest that this focus on articulations between the material and immaterial helps us to see literacy as multiply and flexibly situated.

Key words: literacy, online, space, mediation, materiality, embodiment

Introduction

As researchers in the field of new literacies, we have been influenced by sociocultural perspectives that recognise the diversity of situated literacies and underline the relationships between literacy, power and identity. However, our work has led us to question what we mean when we describe literacies as 'situated'. Starting with insights from New Literacy

Studies, we recognise, from Barton and Hamilton, the relationship between literacy practices, the things people do with literacy, and the domains or sites from which they originate (Barton and Hamilton 1998). Sometimes the site and domain are the same, for example, 'schooled' literacy practices (Street and Street 1991) can be identified with a site called school, and sometimes they are different, for example when school-related literacy practices are carried home, as in the case of homework.

Central to this perspective is the notion of literacy as practice - an emphasis that sees literacy as more than a set of skills, exploring instead what people 'do' with literacy. An ethnographic approach (Street 2000) can aid an understanding of the literacy practices that occur in everyday life. However, we also concur with Leander and Sheehy (2004) who critique the notion of situated literacies and argue instead that literacy practices are produced through space and that space itself has been overmaterialised. Their argument is that little work has been done on, 'the circulation of paper in classrooms and media practices, on the boundaries for literacy shaped by walls, desks and neighbourhoods, and on the ways in which material participants in the world – such as the bodies- become sites for the writing of myriad texts.'(P.3). In this article, we take up that challenge.

We also recognise the multimodality of communicative practices and are interested in the social affordances of diverse media and how these are utilised and made meaningful in different contexts. We draw, from Kress (1997), the insight that children quite naturally use a number of modes to make meaning from an ensemble of semiotic resources. However, we extend this understanding to include an appreciation of the materiality of that world, and its affordances in terms of material cultural practices and the 'stuff' of everyday life (Miller 2010).

These perspectives have played out in different ways in our work as we have investigated, among other things: the collaborative and participatory literacy practices surrounding new technologies (Merchant, 2010a; 2010b), home and community literacies (Pahl, 2002, 2004) multimodal and artifactual literacies (Pahl and Rowsell, 2009; 2010), the production of multimodal texts (Rowsell, in press), and digital literacies, identity and space (Burnett, 2011a; 2011b. 2011c). This diversity of work has led us to a shared interest in what happens as individuals make meaning across on- and offline contexts with a particular focus on the significance of what we call the *im(material)*. By this term we signal that we would like to challenge the binaries between the material and the immaterial, and, crucially, do so in relationship to practice.

In what follows, we explore what we mean by the im(material), outlining a series of propositions that we feel are significant to meaning-making in contemporary contexts. Some of these relate to arguments that have already been well-rehearsed. Others, we suggest, bring new but important perspectives drawn from a variety of disciplines, including geography and material culture. Together, they provide a new perspective on relationships between the material and immaterial which we suggest is significant to understanding meaning-making around digital texts and, in particular, draws attention to the role of subjectivity in situating literacy. We argue therefore that a focus on (im)materiality offers an important new lens to the study of literacy practices.

Insights into on/offline literacy practices

Central to a sociocultural perspective on literacies is the notion that literacies vary in different domains and that they are socially and culturally situated. This calls up well-established ways of organising the social world and the literacies that are associated with specific domains: home literacies, community literacies, school literacies and so on. Of course notions of situatedness that rely on particular contexts are problematic. Defining the context in which

literacy is situated can imply a certain boundedness. Individuals' lived literacy practices, however, often span different domains or evoke a variety of contexts that intersect in multiple ways. Street (2003), for example, argues that we need to look at literacy practices in relation to more general issues of textuality, figured worlds, identity and power. Acknowledging such relationships can lead to an understanding of the flows of identity across different textual spaces. For example, Kell's analysis of the texts associated with building practices in South Africa highlights the text trajectories that happen across sites. She argues that each of these movements is locally situated within a web of relationships of power and situated histories of those texts (Kell, 2006). Notions of situatedness are further complicated in relation to practices involving digital literacies, new media, and multiliteracies where participants often occupy both real and virtual networks and rapid local-global movements are common.

This problematisation of situatedness has led us to become interested in articulations between different contexts: the threads and traces of other times and places that play out in any literacy event, particularly those involving digital media. Various writers and researchers have explored ways of theorising this complexity and we draw on some of this work in what follows. Our particular contribution however unpacks ways in which the *material* dimension of experience – the 'stuff' such as artefacts, walls, texts and screens and our embodied experience of all this- is significant to these articulations. In doing so, we explore the varied and multiple ways in which the physical and representational may inter-weave as individuals make meaning from texts. We explore how the material constantly conjures the immaterial which in turn relies on material experience for its salience. It is this reflexive and recursive relationship between the material and immaterial that we refer to as (im)materiality.

The (im)materiality of literacy: four propositions

In expanding on what we mean by (im)materiality, we suggest four propositions which each explore different ways in which the material and immaterial articulate with each another. In illustrating these, we focus on a brief vignette of a single literacy event, noted during an investigation of the use of networked technologies in classroom contexts (Burnett, 2010). Using a single vignette of course has limitations as it does not enable us to present an extended evidence base for our argument or to explore how relationships between material and immaterial play out in different contexts. However, we use it here to provide a single point of reference for a complex set of ideas whilst recognising that further ethnographic research is needed to explore the nuanced relationships between the material and immaterial in diverse contexts.

The vignette describes what happened as a teacher encouraged a class of young children to explore their local area using Google Street View. Such incidents are becoming increasingly common in contemporary classrooms, prompted by ready access to the Internet and interactive whiteboards that enable websites to be projected large enough to be seen by a whole class. They are often introduced by confident, 'digitally savvy' teachers, like this one, keen to capitalise on pedagogical opportunities offered by new technologies through making links to children's lives beyond the classroom and enabling access to wide-ranging experiences, texts and connections.

Vignette: Street View

As part of a cross-curricular topic focus on Houses and Homes, a teacher and his year 1 class (aged 5-6 years) are developing spoken and written comparisons of houses. The children are sitting facing the electronic whiteboard, whilst the teacher sits at the front, just to the right of the board. A teaching assistant sits at the back of the class with the children.

Prior to the lesson, the teacher has used Google Street View to locate the area immediately surrounding the school and has projected this onto the electronic whiteboard. He announces that they are all going to 'go for a walk around the school' and invites children to take turns to come to the front of the class and move through the projected street. As they make their way to the board, the children must pick their way carefully around the others sitting on the carpet.

When the children reach the front of the class, they are given instructions by the teacher. Sometimes these encourage them to see themselves within the virtual environment (the image of their neighbourhood projected on screen): 'Take us to the bottom of the street.' At other times instructions relate to use of the program tools to manipulate the image: 'Go all the way round and give it a spin.'

During this virtual street tour, the children sitting on the carpet make comments: 'That's my house', ' I live just down there' . Sometimes they give instructions themselves. One calls out: 'Go down there, go through the jennel, go down there and there's my house.' The program doesn't allow these instructions to be followed and the teaching assistant suggests, 'Maybe you can do that walking but not on the computer.' She turns to the teacher and comments to him that the child is referring to a cut-though that doesn't have vehicular access.

It is not the purpose of this paper to explore the pedagogical assumptions and possibilities associated with this kind of teaching and learning opportunity - such analyses can be found elsewhere (see, for example, Moss, Jewitt, Levacic, Armstrong, Cardini and Castle, 2007; Littleton, Twining and Gillen,, 2010). Moreover our focus is not solely on the use of online texts *in classrooms*. We use the vignette to illustrate four dimensions of the complex meaning-making that might occur in any literacy event associated with an online text. We make four propositions (see Fig 1) about how the material and immaterial may interweave as

meaning is made. We recognise that these four propositions are inter-linked and that there are loose boundaries between them. We argue however that each suggests a different dimension of (im)materiality which is worthy of attention. We focus on the incident from four distinct but linked perspectives, honing in on different dimensions of the event to explore how literacy is materialised and materialises in different ways through texts, bodies and screens and the spaces they generate.

Figure 1: The 4 propositions

1. Relationships between the material and immaterial are relevant to how literacy is spatialised.	2. Screen-based texts mediate reality in ways that prompt shifting relationships between the material and immaterial.
3. Literacies are materialised in things.	4. Meaning-making is embodied.

Proposition 1: Relationships between the material and immaterial are relevant to how literacy is spatialised

Our first proposition builds on work which has explored the spatial dimensions of literacy practices. Recent years have seen increased interest in applying spatial theory to literacy research. Leander and Sheehy (2004) present a diverse collection of such work in their volume, *Spatialising Literacy*. Much of this work is influenced by the work of social geographers who have viewed space as undergoing constant construction. Such work sees space as more than a background to social action; its boundaries and qualities are shaped by what people do and have done in space as well as how they and others see its significance and future possibilities. (Lefebvre, 1991; Soja, 1996). Such work helps explain how space may be framed by and reproduce dominant discourses but also be over-layered with other kinds of meaning producing hybrid fluid spaces. Applying such perspectives to literacy practices has highlighted the role that literacy practices play in the production of space and also how they are in turn inflected by the kinds of social spaces available.

In applying a spatial perspective to online environments it is worth noting some concerns we have about how 'online space' has been popularly conceived. It is commonplace to think of online contexts in spatial terms: we 'search' and 'navigate' the Internet for example, forging pathways through what seem like infinite textual places and building communal spaces as we connect with others. This conceptualisation of a separate digitally mediated space is however problematic. If, as explored above, digital literacy practices span real and virtual networks, we would argue that it is important to explore space-making across on and offline contexts (Burnett, 2011a). Leander and McKim offer a way forward here. They suggest that instead of identifying 'sites' for online practices, it is more appropriate to investigate 'siting' across online and offline spaces (Leander and McKim, 2003: 213). Rather than looking at what happens 'in' online spaces as distinct, a focus on siting draws attention to the ongoing

negotiation of shifting social spaces as people move within and between online and offline worlds.

This perspective offers much to our understanding of the Street View episode. It draws attention to how the qualities and boundaries of space, and associated relationships and meanings, seem to change from moment to moment and differ for individuals or groups (Burnett, 2011b). Of particular interest to us are the relationships between material and immaterial that seem to be salient to this process. In the vignette, we see interactions between people and things working to site spaces in different ways so that space seems bounded differently for different participants at different times. The large-scale projection of the image brings familiar places into the classroom and children begin to shout comments and instructions drawing on their experience of that place. For a moment, the text seems to evoke a sense of being in the street: one child calls - 'that's my house'- as they might on seeing a photograph - whilst another recognises that the text extends beyond what's visible on screen and knows she can move within that representation- 'Go down there...' (This may be due to expectations of the site or the Internet or her familiarity with the local area that in turn frames how she reads the image.) This particular confluence of the material and immaterial - being able to move virtually through a familiar street- seems to prompt a momentary shift in status. Positioned here as expert on the local area, the child becomes an instructor in managing the text. Momentarily new spaces seem to open up as the material and immaterial interact in different ways.

Similarly, the limits of texts may help bound the space. It soon becomes clear that the world represented is not quite the world as the children know it. They must negotiate a text rather than a familiar street, dragging and clicking rather than walking, and follow instructions that require them to shift rapidly between different dimensions: 'Take us to the bottom of the street'/ 'Go all the way round and give it a spin.' They can't travel around this textual space

in the same way as the streets they know. Rather than bringing their world to the classroom, the Street View activity seems in some ways to make their world strange. What may begin as an activity designed to make connections with children's worlds beyond the classroom may result in making the material world of the classroom even more omnipresent. It is also notable that no children suggest exploring beyond the street presented, either within Google Street View or the rest of the Internet. Consequently, they seem to site the classroom (even with its network connection) as ultimately bounded. Experience of the boundedness of the material classroom perhaps mediates what is deemed possible in its virtual extension.

Through enabling connections between sites, online texts may intensify opportunities for overlayering different experiences as the looser boundaries (spatial and temporal) associated with digital texts seem to enhance possibilities for movement within and across those spaces; texts are part of the terrain and, through them, other places and spaces may become part of the terrain too. The kinds of meanings available however may shift according to the particular ways that literacy events play out and space is sited, drawing in different ways on what we might see as the material, textual and connected dimensions of that space (Burnett, 2011). In this example, as different dimensions are foregrounded or backgrounded and in turn mediate other dimensions, the children's relationship with the text seems to shift, sometimes the street displayed is their street, sometimes the teacher's street, and sometimes Google's street. By highlighting the shifting location of meaning, a focus on the process of siting could be seen as de-centring situatedness.

This focus on siting highlights a range of ways in which relationships between the material and immaterial are significant to meaning-making. In what follows, we focus on different aspects of this process. The second, third and fourth propositions draw our attention to different ways in which these articulations might occur.

Proposition 2: Screen-based texts mediate reality in ways that prompt shifting relationships between the material and immaterial

Our second proposition focuses on the interface between the virtual and the material. The study of multimodality has drawn attention to the changing significance of different meaning-making systems in contemporary life (Kress, 2010), but whilst a strong thrust of this work has been to highlight the visual, there is a significant gap in accounting for how we *believe* in visual images as semiotic representations and consequently how we understand the relationship between the virtual and the material. Following the work of Hayles, we take the virtual to describe what happens at the interface between the world of data and the material world.

> Virtuality is the cultural perception that material objects are interpenetrated by
>
> information patterns. (Hayles, 1990:13)

We argue here that this process of mediation is significant to the shifting relationship between the material and immaterial and that as technological sophistication draws us ever closer towards the 'logic of transparent immediacy' Bolter& Grusin (2000), this relationship becomes increasingly more complex. This can be illustrated by looking again at what happens as the teacher clicks on the board and the pre-captured screenshot of Google Street View appears. 'Street View' is conjured up through a multimodal ensemble of semiotic resources (Kress 2003; 2010). The very 'thingness' of the board recedes from our gaze (Ihde, 1990), as the teachers and children operate at the interface (the surface) whilst immediately seeing something recognisable, being there on a familiar street and so on.

As the scenario unfolds, further clicks on the screen, using the whiteboard pen, generate changes to the image projected on screen. As the children take their turns to access the program, they must both navigate the material world to avoid bumping into one another and

deploy the whiteboard tools to navigate the virtual world. In doing so, they appear to *believe* in both worlds. It is as if the material world is screened from the virtual world with its lifelike representation of a familiar street, just by the thinnest of windows - a screen, that is to say, 'a flat, rectangular surface existing in the space of our body' (Manovich, 2001:20). At the same time, the image exists as so many pixels in the world of data. It is a sort of reality; but not one that can be easily grasped. It appears in the material world behind the screen. This logic of transparency is only disrupted when a connection crashes, a control breaks down or, as in this case, users discover what technology cannot deliver, when they are reminded of the artifice and they are unable to negotiate the street as they know it. In this way there is a to-and-fro movement between a believable virtual space and an awareness of the materiality of the means of its production.

It is through the presence of this connected space of virtuality that we witness the ways in which two different kinds of spaces inter-relate and overlap. In the vignette children appear to be at a critical point in uncovering the sorts of discontinuities that exist in this relationship. They move seamlessly between the material and the immaterial. They are realizing that in Street View only certain views are available, that those views may be out-of-date, that the world of Google is a constructed one, and so on. In this sense Street View is a text like any other in the classroom. It is produced elsewhere, it is pre-selected and in order to read it we have to do two important things. We have to operate at the interface and we have to believe in it by mapping it on to our unfolding experience. Propositions 3 and 4 explore some of these relationships -between the material and immaterial- that may be evoked by this mapping.

Proposition 3: Literacies are materialised in things

Our third proposition highlights how the reflexive relationship between the material and immaterial plays out as meanings are constructed through texts. We can see this by

considering how experiences, memories, feelings and perspectives (the immaterial) are materialised in texts. The making of texts can be seen as part of a realm of meaning making that could be described, from Holland as 'figured worlds' (Holland, Lachicotte, Skinner and Cain, 1998). From this perspective, textual worlds can be seen as spaces of improvisation or 'as if' realms. 'Street View' therefore can be seen as a figured world of practice which does not simply represent a material world but captures it in a particular way. This perspective enables us to see texts as traces of social practice. They are objects that carry different identities sedimented (Rowsell and Pahl, 2007) within them: of their creators and revisers and of those who interact within and around them. Each brings their own personal meanings so that prior and contemporaneous material worlds live on in texts.

At the same time, many literacies are ephemeral. We might consider for example the lost literacies associated with travelling, such as bus tickets, traced inscriptions in dust on cars, street literacies such as street art and oral stories, in short the complex, meshed 'stuff' of everyday cultural life in which literacy plays a part (Miller, 2010). The echoes of lost objects can also be found across the web, in which past blogs and reminiscences litter the blogosphere in a way that old photographs and objects are stored in attics and cellars in homes. In the Street View episode, the image projected is of the past. It captures a reality that is no longer there, calling up a memory of a place that has now gone. At the same time, however, it is experienced in the moment of encounter as these particular children experience and see the place depicted from within the classroom. These literacies however quickly dissolve as the cursor moves across the screen (abandoning images and all the associations they evoke in that particular instant). Entangling the meaning that is meshed in with the object makes sense of the resonances and echoes that are left when the object is no longer present but the meaning is still there (Bissell 2009). It is often these invisible or ephemeral literacies that capture the working of culture (Pahl 2002). The children's comments on the

missing jennel, for example, provide insights into their experience of the place depicted and highlight the sharp distinction between the visual representation of the street and the one they have experienced.

In addition to illustrating how personal meanings may materialise in texts, the incident also shows how literacies are inflected by the material conditions in which they take place and which they move between. Texts must always be received within a material world and so literacy practices can be understood as materially situated, that is, connected to material culture of the surroundings in which they occur. As Pahl and Rowsell (2010) have argued, literacies need to be understood as linked to things. Texts are 'thing-like' as they are manifested in material forms; they are represented within things (in this case a PC or whiteboard screen.) Coming to know on screen is therefore partly a material process in that the computer, located in a particular place, has material properties, made of plastic with associated tools and objects. As the screen lights up, icons appear, as well as words, that encode certain meanings. Some of these icons are symbolic, for example, the 'save' icon is an image of a floppy disk, although this is no longer in use. 'Street View' is a space that is conjured up through a multimodal ensemble of semiotic resources (Kress 2003; 2010) which work together to provide textual meanings that are bounded momentarily by space and time.

Proposition 4: Meaning-making is embodied

This focus on how texts materialise the immaterial brings us to another (im)material relationship: the relationship between texts and subjective or felt experience. As Hoggart (1957) wrote in 'The Uses of Literacy', 'The core is a sense of the personal, the concrete, the local' and, as Rowsell (in press) has described, modal choice calls up feeling, emotion and a felt connection with modes. In relation to the Street View episode, directs our attention to the children's subjective experience and the way texts anchor emotions. In our fourth

proposition, we therefore draw on Merleau-Ponty's argument that we experience objects in place and perception has an active, subjective dimension (Merleau-Ponty, 1962). Merleau-Ponty firmly believes that we never cease to exist in the perceived world. Merleau-Ponty focuses on unearthing the perceived worlds hidden under the sediment of history; our bodies inhabit space and serve as a means of expression in the world. He argues for digging down deep into the perceived world to materialize immaterial thoughts, values and ruling passions. Colour, smell and texture, for example, call forth perceptions of ourselves in the world. In relation to the Street View episode, then, children's subjective experience of the event is significant to their unfolding experience of it. This focus on subjective perception also leads us to consider how we make meaning in the light of what's gone before or in this case in the light of trajectories through and across online environments (Mackey, 2011).

This focus on embodied meaning-making illustrates how our lives are lived, as Pink (2009) says, in the new 'coming to know' of place, in what she terms 'place-making' and our sense of place is always lived, in the moment of encounter. Ingold (2007) discusses our 'entanglements' with objects, but also how we move through these object landscapes, the 'lines' we make, and the threads we follow and traces we leave of that activity. As we walk, we create invisible lines in the landscape that can, if trodden over and over, create a trace of our movement over the earth (Ingold 2007). These lines can be seen as a form of meaning making; the visual landscape constantly shifts in response to the press of a footstep, the smell of the street, the feel of the tarmac. Pink has used the term 'sensory ethnography' to describe this phenomenological turn in social science, away from the linguistic 'schema' of multimodality, into a lens that is more 'in place' that involves 'coming to know' in perceptual terms (Pink 2011).

There is extant research that incorporates embodied experiences in meaning making. In an article by DaSilva-Iddings, McCafferty, & Teixeira da Silva (2011), the authors apply an

ecosocial semiotic theoretical framework to an analysis of graffiti literacies in the Vila Madelena neighbourhood of Sao Paulo, Brazil. Building on Freire's notion of *conscientizacao,* they interpret how material, sensorial, visual properties in graffiti strongly influence meaning-making:

> Graffiti is grounded in the urban environment in which it appears and derives its power by being produced by community members. In addition to its content, how and where a graffiti painting appear is a direct aspect of its meaning-making potential, which includes the audience as well. (DaSilva-Iddings et al, 2011: 8)

This is viewed from the gaze of locals who experience the reality of pollution, soot, harsh material realities of the crowded urban sprawl and use their senses to render the graffiti meaningful. Holland et al (1998) take a different yet equally elusive perspective on embodiment . They describe experiences during fieldwork during which they witnessed an intersection of material worlds, felt sensibilities, and socio-cultural understandings, referring to 'figured worlds' as ways of understanding the world and our place in it. They recount an incident when a researcher observed a research participant from a lower caste, considered 'an untouchable', scale a wall to avoid awkwardness and discomfort with a person of a high caste. The incident resurrects sensory worlds of a local and an ethnographer interpreting an action and its accompanying senses and attendant meanings. There is a similarity between Holland et al's analysis of the interaction and Dasilva-Iddings et al's descriptions of graffiti in Brazil:

> How the message is said – through accent, tone, or tempo, what language or dialect it is said in, what style (formal and informal), what mode (whether phrased as a question or command) – all these index the relationship among speaker, addressee,

and audience and constitute signs of the speaker's claim to social position. (Holland et al, 1998: 11-12)

These examples illustrate how the layering of culture and experiences plays a key role in meaning-making.

Such research draws attention to the significance of children's subjective experience of the Street View incident. For example, we see an interweaving of different journeys: the children's memories of walking through a real street are overlayered, or mediated by, journeys to and from the screen and their on-screen exploration of the image projected. As these children trace these trajectories they may draw on subjective experiences of the material and so arrive at felt experiences of the text.

The role of subjectivity in situating literacy

These four propositions provide us with different perspectives on the articulations between the material and immaterial and in so doing help us by providing a language of description for the complex ways in which meanings are made with artefacts, print and digital texts in contemporary contexts. In summary, the propositions and key themes are as follows:

1. Relationships between the material and immaterial are relevant to how literacy is spatialised. Here the focus is on the concept of *space*.

2. Screen-based texts mediate reality in ways that prompt shifting relationships between the material and immaterial. Here the focus is on the concept of *mediation*.

3. Literacies are materialised in things. Here the focus is on the concept of *stuff*.

4. Meaning-making is embodied. Here the focus is on the concept of *embodiment*.

We suggest that these propositions can work together to provide a useful descriptive approach. The themes are over-layered and interact in multiple ways, as represented in Figure 2. What we have so far called the (im)material is captured in the connections between these different constituent parts. To illustrate the point it may help to consider the example of writing this text, itself an event that has taken place over a number of months and that draws on conversations (or remembered conversations) on Skype, exchanges over email, multiple updated versions, numerous print-outs, jottings and annotations, not to mention face-to-face meetings in various locations. In this sense the text carries traces of meanings back and forth across time and space, and in so doing it is materialised, repeatedly mediated and re-mediated, and associated with other stuff at various stages in its journey. At all these various stages subjective perception has inevitably come to the fore as the authors work with the felt experience of the project, as it is refracted through their own subjectivity. The central idea then is that these dimensions are co-dependent and mutually constituted, and that in any literacy/meaning-making event they are connected to, reach out, or flow between other contexts. It is in this way then that the material and immaterial become enmeshed.

Figure 2: Conceptualising (im)materiality
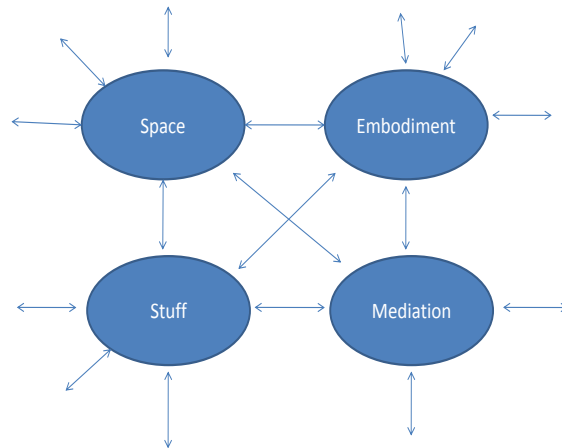
In the Street View vignette it seems to us that children appear to make meanings through inter-connecting pathways that move across these thematic areas. As we return to the vignette it might be productive to see the activity as taking place on a single plane – one that is patterned by an array of things, events and texts. Perhaps all that the children have to do is to traverse the patchwork of this plane in order to make sense; nothing about this seems either strange or problematic to them. And from this point of view the conceptual binaries of the virtual and the actual, the online and the offline, and the local and the global that have been stamped on to the gell of new literacies begin to collapse. The human subject is embodied and all activity is situated (there is little choice in this, after all). As a result there may be little gain in 'looking up' to more abstract theory, except to glimpse the constellation of social forces, differences and mechanisms of control, but a compelling richness in 'looking down' into the complexities and interconnections of situated activity itself. Rather than moving in the direction of coherence and convergence our four propositions together suggest a view of new literacies that looks to the notion of 'baroque complexity' (Kwa, 2002) to provide a more nuanced account of how digital texts enter the communication economy of contemporary literacy practices.

Drawing generously on the work of Deleuze (1993), Kwa underlines three characteristics of the baroque which resonate with the theoretical work which comes out of the propositions we explored above:

> First the historic baroque insists on a strong phenomenological realness, a 'sensuous materiality'. Second, this materiality is not confined to, or locked within a simple individual but flows out in many directions, blurring the distinction between individual and environment. And third, there is also the baroque inventiveness, the ability to produce lots of novel combinations out of a rather limited set of elements, for instance as in baroque music. (Kwa, 2002:26)

Kwa's emphasis on the phenomenological echoes our theme of embodiment, the idea of interconnectedness matches the model of meaning-making in Figure 2, whereas the concept of inventiveness introduces the inherent creativity of the subjective viewpoint. Kwa's version of the baroque encourages us to 'look down' at the detail rather than to 'look up' for some broader picture (Law, 2004). In practice that may well mean seeing the ways in which the broader patterning of practices such as the global flows of information, shifting power relations and so on are inscribed or become manifest in specific situations.

We suggest then, that the implications of this perspective go beyond what is possible to illustrate in this one vignette and we argue that, whilst we can never know a practice as participants did and whilst our own material presence will always shape a research context, we nevertheless need to recognise the significance of felt connections in our research into new literacies. If we are to gain insights into how globally available texts are translated into local contexts, we need to locate our research in situations and lived experiences. The baroque sensibility of the (im)materialities lens prompts us to focus particularly on the subjective experience of the interconnectedness of space, mediation, stuff and embodiment. It

draws attention to the multiplicity of ways in which the material and immaterial are caught up with one another as well as the interwoven stories, discourses, values and memories that pattern individuals' understanding and production of texts. In bringing together notions of the sensory, unfolding material world and the multimodal, textual and 'imagined' digital world, the (im)materialities lens helps us see literacy as multiply and flexibly situated.

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