

THE ROLE OF CONCEPTUAL METAPHOR  
WITHIN KNOWLEDGE PARADIGMS

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## Abstract

The general paradigm which spans this research has perhaps best been summarised by Mark Johnson when he wrote that; 'Meaning and thought emerge from our capacities for perception, object manipulation, and bodily movement'. (2007: p.113)

Knowledge, in all its forms, is a category of meaning and thought, and therefore also figures within these capacities. The main purpose of this writing will be the detailed unpacking of this central idea with particular reference to the blog *The Conference Report*.

A major argument that I will be developing is that the particular forms of knowledge that we think of as 'objective' are thought of in that way for specific reasons, and that these reasons appear through the embodied capacities that Johnson specifies. That is, through our capacities for perception, object manipulation, and bodily movement, a trilogy of factors to which I will be adding the fourth of 'space' (implied in his use of the term 'capacities'). I will suggest that the phenomenological notion of the 'object', which underpins the abstract concepts of 'objectivity', is more complex than might be immediately apparent, as are its relations with 'perception' and 'bodily movement', and indeed 'space'. Whilst offering appropriate respect for scientific empiricism and logical deduction, I intend to demonstrate that the complexity of these capacities render certain aspirations toward the formulation of 'objective knowledge' problematic.

By placing objective knowledge in the wider conceptual framework of embodied cognition through the application of a theoretical line which runs through phenomenology, cognitive poetics, conceptual metaphor, and image schema, I hope to provide a framework that allows for the organised consideration of forms of knowing which do not aspire to the condition of the object. These forms of knowing, it will be argued, may be instantiated and expressed through the medium of the blog from which some of this writing is drawn and to which some of it returns.

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## **Introduction**

After a short preamble outlining its origins, this thesis will consider the status of the internet blog as a space through which knowledge might be acquired, accumulated, organised, or disseminated, giving something of an introduction to the acceptance of blogging and other non-print based epistemic forms within the academy. From a discussion of media as carriers of (what might be perceived as) different types of knowledge, this writing, complementary to the blog, discusses how language tends to function in relation to epistemology, particularly the language of ‘objectivity’.

In order to unpack the functioning of language and media in relation to knowledge, an overview is given of the theoretical framework around which this document is based, and which features extensively in the blog *The Conference Report* (<http://theconferencereport.net>). This consists of an analysis drawing from a set of practices generally subsumed under the rubric of ‘embodied cognition’. Particularly salient are ideas relating to ‘conceptual metaphor theory’ and ‘image schema’, which are described in detail below. Here it is argued that certain uses of language and media give what is often covert support to an epistemology which awards special value to the ‘object’; it is further suggested that this usage may be inappropriate in the furtherance of knowledge which operates within a different epistemology, or more accurately, focuses on a different aspect of the overall epistemological ‘landscape’.

As a way of identifying what might be considered the ‘lie of the land’ that a cognitively embodied epistemology might map, three established systems of knowledge organization will be examined: Michael Polanyi’s *Tacit Dimension*, the *Proactive/Performative/Possessive* continuum of educationalist David Perkins, and the *Date-Information-Knowledge-Wisdom Hierarchy* (DIKW) used in the Knowledge Management industry, and chiefly associated with Ackoff. Through this analysis consistencies in the metaphorical schema that these systems draw from will be identified, with particular attention paid to common understandings of perception (which is not limited

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to the visual), the status of 'objects', and the potential for manipulation and movement within conceptual space.

This is followed by a more detailed analysis of one aspect of the schema which these systems all seem to include, which (after Perkins) I refer to as the *performative*. This concept is related to parts of Polanyi's model and to features within the DIKW Hierarchy, and this suggests that it has particular significance to ways of knowing which do not tend to follow an empirical method to its objective conclusion. Included within this section is an analysis of how the concepts of *touching* and *walking* might figure within the overall schema.

Finally, the blog as a space within which knowing might take place is further discussed, with an argument being advanced that it suggests an epistemology based less on the scopic and objective, but rather on the tactile and the ambulatory. Precisely because this thesis problematises the 'objective', I shall consciously shift between first person narrative and more traditional academic discourse in what follows. This shifting of discursive position is discussed in more detail below, together with a consideration of the implications of adopting the passive voice in contrast to the first person perspective, (see 18ff). This variation in tone will be shown to be a common feature of blog writing, including the blog to which this document refers.

The main body of this dissertation is in the form of a blog and is therefore ideally accessed online at <http://theconferencereport.net>. If this should not be possible there is an archival copy of the entire blog, together with appendices and complementary materials, in the CD at the back of this document.

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## **Preamble**

‘ It may be that universal history is the history of a handful of metaphors’ (Borges, 1962: p.224).

This complementary document is written to accompany the blog *The Conference Report*, itself a range of writings, which comprises the bulk of my doctoral submission. By way of entering the writing I would like to say a few things about the blog; how it came about, how it gets written, what gets left out, and how it works (if it works).

Most mornings I take my dogs, Phoebe and Guy, for a walk along the canal. We cut up and go along the Salt Line, which is the old disused railway line where the trains used to take the salt from Northwich and Middlewich to the Potteries. Then we cross a field that has an old white horse in it. The horse was owned by a young girl who died tragically, and the girl’s mother couldn’t bear to part with it. Sometimes the horse stands facing the wall, its head inches away. There is an oak tree in the field that I take a picture of whenever I pass; I take it from the same spot each time.

On these walks I usually talk to myself, usually silently but sometimes out loud. Occasionally I find myself gesturing while I am thinking aloud, and sometimes passers-by look at me in a funny way. I keep doing it though because the gesturing makes it easier for me to put the thoughts together in satisfying ways.

For a while I took notebooks with me and would stop occasionally to write down what I was thinking, but I kept losing the notebooks, and anyway, the dogs didn’t like it when I stopped. They liked the steady, three miles per hour rambling that accompanied their sniffing, and digging, and barking.

When I got home I would sit by the laptop with a cup of coffee and write down whatever I had been thinking about, but detached from the walk, and the horse, and the canal, and the

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oak tree, it didn't make much sense, so I started thinking about horses, and water, and trees, and writing about those things.

Then I started to worry that if my laptop crashed I would lose everything, like I lost my notebooks, so I started a blog where everything would be safe. The internet is everywhere so anything you put on the internet is everywhere. Everything I thought about I put on the blog, and that seemed to be mostly about trees, and space, and walking, and occasionally about dogs.

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### **What is a Blog?**

A blog is a basic content management system for the online delivery of information and the archiving of that information. It is one of a range of screen-based media forms which use the features of the web environment (including recent developments often referred to as ‘Web 2.0’ and the ‘semantic web’) to create, share, and distribute original and found material.

The form of the blog has been identified by Stephen Downes (2004) as partially reflecting its dual origins as both a space for personal ‘diary’ type reflection by the blogger and also as a place where other sites which may be of interest to the reader are brought together and ‘logged’, and it is still the case that many blogs foreground one or other of these functions. This is the case for the wider ‘blogosphere’ but also within the narrower domain of arts-related blogging. The *Networked Performance* blog<sup>1</sup> for example, acts as a node for the synthesis of news items, information, and event promotion originating across a range of different sites. Others, such as those listed at *Artists Blogs*<sup>2</sup>, tend to contain more personal material with relatively little reference to outside sources. This variable combination of personal expression (which in artists blogs typically includes documentation of artworks), and the collation of content from other sources produces an interesting mix of intertextual quotation and material which makes more of a claim to originality or subjective expression.

Structurally the blog has a passing similarity to a number of other digital knowledge forms, most specifically the *hypertext* and the *wiki*, and it may be useful to consider some of these similarities, and also the significant differences. Also, the paradigmatic difference between all of these digital forms and the analogue form of print material are sufficiently large to warrant special attention.

Apart from obvious material differences, and the equally obvious variations in access afforded by technologies of knowledge which use the screen rather than the page, there is little that can be bound between the pages of a book that cannot be put onto a screen. As

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<sup>1</sup> <http://transition.turbulence.org/blog/> (Accessed 17/06/08)

<sup>2</sup> <http://art-blogging.blogspot.com/> (Accessed 17/06/08)

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has been noted by Kevin Brooks, Cindy Nichols and Sybil Priebe (2005), in this respect the blog can be seen as an example of 'remediation' (Bolter and Grusin, 1999), in which 'the language of cultural interfaces is largely made up from elements of other, already familiar cultural forms' (Manovich, 2001: 71). Conversely however, the technologies of the digital environment offer the possibility of including types of information, (video, sound, animation), which cannot be reproduced in analogue form. More importantly, digital media offers ways of navigating information, and indeed structuring information, which are radically different to the book, essay, monograph, article, or thesis.

The two most significant strategies for the reading of digital material, and which distinguish it from print media, are the *browse*, and the *search*. Browsing allows the reader to move through the text in a way which is non-linear, and therefore requires that the author of that text take into account this non-linearity in their writing. Typically this may involve the presentation of a number of different ways into and out of a specific piece of information. The familiar links on a web page which invite the browsing reader to follow the logic of their own reading process is an obvious example. This has the effect that most digital knowledge resources have the feeling of a network rather than a story or argument; in writing a piece that follows the logic of the browse the writer cannot rely on the linear and sequential moving through of material. Remaining within a network of information predicated on browsing may allow the reader to accumulate knowledge represented within that network, but there is no guarantee that this process will be orderly or constrained to the precise intentions of the writer.

The logic of the browse, at least for most online resources, also blurs the edges of the text such that the most casual click on a link takes the reader imperceptibly across the planet to information on another server, another site, another body of text. This trailing into and out of the home text may be formalised in the language of the deli.cio.us tag list<sup>3</sup>, for example, or may appear more covertly behind the hexadecimal blue of an unfollowed link word. This intertextual feature of digital technology, and particularly online resources, has been widely

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<sup>3</sup> Del.icio.us is a 'social bookmarking' service which allows users to maintain and share links to interesting websites online. The links associated with this project can be found at <http://delicious.com/conferencereport> (accessed 01/08/08).



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referred to as providing a material instantiation of postmodern, poststructuralist concepts which previously were purely theoretical. Although this aspect of the practice is outside the main focus of this analysis, to be laid out below, some of the examples referred to do look to such sources for theoretical underpinning.

The serendipity of the browse as a reading strategy is complemented within many digital forms with the *search*. Searching gives the opportunity to the reader of making a proactive entrance into the body of the text. Search results respond to the desire of the reader, who may disregard any obvious and sanctioned reading order in favour of a specific probing advance. Not only that, but search also organises and edits the entirety of the text into a collation thematically arranged under the heading of the search term. The hypermedia writer may assist such acts of collative creation by the use of suggested search terms or labels, and in the blog *The Conference Report* that forms the body of this thesis these search terms are referred to as the *index*.

These systems of knowledge construction and retrieval are common to many digital media products. The specific forms noted above, the blog and the wiki, add specific additional features to this list which increase their distinction from print media. The defining feature of the wiki is that it is (usually) a collaborative form. Its charm is that large, sometimes very large, groups of people have access and editing rights and can add, subtract, or change the content of the wiki at any time. This feature of multiple editorial access gives the wiki a ‘hands-on’ appeal but may also prejudice the status of the knowledge so constructed. As is developed below, one of the desirable features of knowledge which aspires to objectivity and permanence is that it is located beyond the reach of the tinkering hands of the under-qualified or the willfully destructive. The credibility issues associated with much of the material on the extensive and influential wiki, *Wikipedia*, is perhaps the best example of this epistemological uncertainty, to the extent that, at the time of writing, some universities forbid the use of Wikipedia references in student essays, despite the fact that a 2005 study in the journal *Nature* found little empirical difference in the credibility of information found on Wikipedia and that in the *Encyclopedia Britannica* (Giles, 2005).

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Like the wiki, the blog also has the option of allowing collaborative creation, although this is usually only to the extent of facilitating the attachment of comments to a posting. Whilst comments may present opposing information or points of view, the original content of the blog is not over-written and thus maintains (literally) high visibility and primacy. The other, and perhaps most unique, feature of blogs is that any posting on a blog is time-stamped, which gives a layer of structure that is largely absent from wikis and from hypertext or web media more generally.

Time stamping means firstly that blogs tend to reflect, and reflect upon, events and issues which are contemporaneous in a way which is impossible in other media. Whilst it is certainly true that a book or article will usually try to be current, and to include an up-to-date set of references and referents, it would be unusual for these references to change from one page to the next. This is exactly what one would expect from a blog however; as events transpire in the wider world, or in the slightly less wide discipline to which the blog refers, then the writing on the blog shifts to include these events. New discoveries and developments in relevant practices are dynamically related to the times in which the blog is written, and the progress of the blog reflects these dynamic changes. This is particularly evident with blogs that address topics which proceed rapidly; political or ‘warblogs’<sup>4</sup> for example. Those which are focused on ‘theory’ or academic practice tend to be more slow moving, as Jodi Dean writes in the *Bad Subjects* blog;

(T)he emphasis on speed overlooks a key feature of blogs—they are archives, specific accountings of the passage of time that can then be explored, returned to, dug up. At any rate, my point is that the temporality of theory blogs is not that of action news, of the reflex conditioned to conform to the hegemonic organization of time spans in terms of specific seasons, cliff hangers, or perpetual urgency. Nor is it the same as the temporality of the face to face seminar, the pressure to respond immediately in the classroom or academic meeting. Instead, it is a more thoughtful, human time. The time one wants to take and is willing to offer (Dean, 2006).

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<sup>4</sup> Blogs which provide information and commentary either from war zones or which are directly related to military conflicts include *Blogs of War* (<http://www.blogsofwar.com/>), and the more general *Milblogging* (<http://milblogging.com/>) which is, as the strap line on the website phrases it “a daily snapshot of the top milblogs, milblogs by country, and other cool stuff in the military blogosphere”. (Accessed 15/06/2008).

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The slower pace of academic blogging noted by Dean suggests a less immediately reactive response to events and a more considered, reflective engagement. Supporting this less frenetic pacing is the necessity within academic blogs, as within the wider practice of academia, not only to acknowledge current practice but also to recognize the epistemological history which has led to this moment. In this passage, Dean notes the particular significance of the archival aspects of blogs, a feature missing from wikis and other media forms. The history of past postings is always accessible such that the reader has the option not only to read the most contemporary entry, which in most blogs is presented at the top of the first page, but may also track the history and development of a story, idea, or concern.

On a more personal, processual level, as information becomes available to bloggers through the course of their own experience and study, then this too makes a gradual appearance. Rather than the entire document appearing as if it were written at one sitting, in the full light of acquired knowledge, as is often the case with the book, there is the gradual accumulation of the light, and the progressive journey through different knowledge sources. This will be evident in *The Conference Report* blog as a developing set of concerns and interests (what I have referred to in the blog itself as ‘a tongue returning to a broken tooth’<sup>5</sup>). As I have accumulated more knowledge relevant to the broad set of concerns which feature in the blog, so the entries tend to reflect this accumulation. This means that ideas are often returned to several times as new information has come to bear on the process.

The blog, then, has a temporal structure which is absent from other digital media forms, and which is absent from print. Firstly it is located across a swathe of historical time rather than a cross-section, which gives it an internal structure inferring growth, progress, and change. Secondly it is embedded and interconnected to the moving moment of contemporaneity at multiple points and many different levels. Some bloggers have utilized this feature of temporal sequencing to use the blog as a site for the delivery of narrative fiction, which

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<sup>5</sup> This blog entry is available at <http://theconferencereport.net/2008/04/02/a-tongue-returning-to-a-broken-tooth/> and is the transcript of the video on the Video Log (vlog) which forms appendix to the main blog site. The video can be viewed at <http://www.youtube.com/watch?v=zyMuQsjhLZw>

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tends to be similarly time-bound in form. Perhaps the most well-known example of this usage is ‘Belle du Jour: diary of a London Call Girl’<sup>6</sup> which won an award for best blog by the Guardian newspaper (Waldman, 2003). In this and similar works, the narrative is delivered in installments over days, weeks, or longer, with the avid reader visiting the site regularly to receive updates on the progress of the narrative. This particular blog has subsequently been reverse remediated into book (De Jour, 2005) and television (Prebble, 2007) format.

This date-stamping not only locates each blog entry in a temporal sequence such that today’s entry evidently follows yesterday’s, it also places it within the wider, but highly specific, cultural moment of its writing. This is particularly pertinent with current affairs, political, or fashion-related blogs in which the most current information or most recent research is usually the most valuable. As with narrative blogs, whilst such sites typically encourage the reader to access the most recent information first, there is also an assumption that previous entries have already been read, or at least could be read. The procession of entries which lead to the most recent are easily accessible, either on the page itself or as archive entries accessed via the sidebar<sup>7</sup>. The temporal sequence that blogging articulates is therefore firmly established as a structural element in the overall blog ‘artifact’.

### **Blogging Knowledge**

Because of the relatively recent development of hypermedia forms, and particularly blogs, there is inevitably far less use of these forms as media for the encapsulation and dissemination of new knowledge. Most web-based media which draws on wiki or blog technology tends to be used by academic communities for the distribution and transfer of existing knowledge, rather than as a space within which new knowledge might be instantiated. In this respect it may be the case that blogging is, as yet, an underused technology. Within the knowledge management (KM) community the status of blogs is part

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<sup>6</sup> <http://belledejour-uk.blogspot.com/>

<sup>7</sup> A *sidebar* is a standard feature of many websites, including blogs, and consists of a part of the screen, usually the left or right side, which contains the navigation elements of the site. The sidebar is usually consistent throughout the site, in contrast with the main part of the screen which contains variable contents.

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of a wider discussion concerning the differences between knowledge which is visible and available and that which is not. As Lilia Efimova (2004) reports, within KM it is reckoned that only 20% of knowledge that is owned and used by individuals is made available. This, she argues, is due to a historical focus on 'scientific' methods of management in which productivity is linked to specific, tangible, object-like outcomes. She goes on to argue that this necessarily oversteps the much greater percentage of knowledge work that is carried out and which does not have such clearly identifiable explicit results. The historical invisibility of this knowledge work may be, in part, due to the lack of simple and efficient methods for capturing and disseminating this less object-like knowledge. In this respect the particular features of blogs as noted above, as well as other non-blog specific aspects of web-based media; linking, RSS feeds<sup>8</sup>, integration of multimedia elements etc.; may facilitate their use as tools for making available this invisible 80%.

As noted above, blogs currently span a wide range of uses including highly personal, diary-like writings, works of serial fiction, news and current affairs reporting, artist's blogs which often act as online galleries, and academic blogs. Regarding these uses, in an influential article for the online academic blog 'Into the Blogosphere', Torill Mortensen writes,

In January, 2004, there was a discussion of categories in blogs among academic bloggers. Danah Boyd (2004a) excluded journals and diaries when she talked of blogs, and with Liz Lawley she expressed the need for a conference on how blogs should be classified (2004b). Categories, rules of form, studies of genre and structure, these are the criteria of a pure taste as opposed to the barbaric taste (Bourdieu, 1984, pp. 30-31). While the barbaric taste values sensuous enjoyment, the object of pleasure appreciated for the sake of emotional or immediate pleasure, the pure taste is for the educated and culturally sophisticated, those who have learned to appreciate the abstract values, the rules underlying an abstract painting, the play with genre and the understanding history and context. (Mortensen, 2004. Citations in original)

There is in this quotation from Mortensen the recognition that acceptable academic activity, and therefore acceptable 'knowledge' is hedged in by rules of form. Citing Pierre Bourdieu, it is claimed that the pure taste of authentic knowledge is acquired by a distinction from the

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<sup>8</sup> An RSS feed allows for the changing content of a website or blog to be embedded within another site. So for example, a news site might provide synopses of some of its content in the form of RSS feeds which users can then embed within their home page so that it can be easily accessed.

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‘barbaric’, based, at least partially, on genre, structure, categories, and these rules of form. When applied to blogging, the structure, genre, and rules of form of which are still very much in development, it may be the case that such a distinction is less easy to make<sup>9</sup>. This suggests that, whilst blogs may indeed be useful in capturing and preserving knowledge which would otherwise remain invisible and uncommunicated, it is likely that the academic value of blogs as knowledge artifacts may require close arguing. Certainly the more genre-specific and formal elements (multimedia, intertextual openness, temporal locatedness) and the structural possibilities (navigation which includes browsing and searching) may not meet the established criteria for the tasteful transparency of hegemonic knowledge.

Despite the abovementioned difficulties in accommodating the practice of blogging within an epistemology which meets acceptable standards of academic rigor, it is beginning to be acknowledged that this and similar forms such as the wiki might indeed be treated as knowledge vehicles. For example, the research methodology adopted by Anne Galloway for her thesis on *Urban Computing and Locative Media* largely consists of her blog *Purse Lip Square Jaw* (2008b). The topic of Galloway’s thesis is evidently within an area that lends itself to the kind of theorization that overlaps with a critique of the construction of knowledge through formal distinction, (she cites Bourdieu at various points, although not self-referentially within an analysis of her blog itself). Instead of mounting a critique on epistemological traditions which might deprivilege her non-traditional process she argues instead that ‘methodological bricolage is particularly well suited to tackle the indeterminacy and contingency of social and cultural knowledge in the early years of the 21st century’<sup>10</sup>. She is therefore arguing that her particular use of the blog form matches a type of knowing appropriate to the times and the media that her work addresses.

My dissertation, then, weaves together theoretical and analytical discussion with multiple genres of text: scholarly quotes, survey and interview excerpts, blog posts, news stories, personal reflections, etc. And it is precisely in their entangled differences that the reader is invited to

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<sup>9</sup> Within the discussion that follows Mortensen’s posting, it is suggested that the blogging format supports a writing style more suited to female writers; one in which the personal and the ‘objective’ are not separated. Although this viewpoint is not one from which I am arguing, some of its supporting framework, particularly Cixous’ *écriture féminine*, is alluded to below.

<sup>10</sup> From the introduction, at time of writing available online at [http://www.purselipsquarejaw.org/papers/Galloway\\_Dissertation\\_Intro\\_Draft.pdf](http://www.purselipsquarejaw.org/papers/Galloway_Dissertation_Intro_Draft.pdf) (Accessed 17/06/08)

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join. By following my zig-zagging paths, and remaining open to understanding things according to their own logic rather than imposing a singular or stable logic to control them, the reader becomes an active producer of her own knowledge rather than a passive consumer of academic wisdom (Galloway, 2008a: 4)

This statement, from the draft introduction, alludes to exactly the kind of poststructuralist paradigms of knowledge construction and the ‘readerly text’ that one finds in Roland Barthes (1976) and Michel Foucault (1988). It is this form of theorization that George Landow (1992) and others offer as strategies for recognizing bricolage as structure and provides the ‘rules of form’ which Bourdieu claims as conferring tasteful knowledge status on the material.

Whilst the practice of blogging is a relatively recent phenomenon, the use of hypertext and hypermedia forms as knowledge conveyance is well established. One of the earliest, and best documented, examples from the U.K. is Cornelius Holtorf’s work within the field of archeology (1998). His dissertation, a hypermedia exploration of megaliths in an area of Germany, was written and submitted as a web document, effectively readable only online (although he was also required to submit a ‘hard copy’ in CD format) and this submission was accepted by the University of Wales in 1998. It is currently available on the web<sup>11</sup>, together with extensive documentation of not only the primary research, but also the process through which this format for submission was argued as acceptable. Holtorf subsequently outlined this use of the online hypertextual document as an appropriate epistemological form in the web journal *Internet Archeology* (Holtorf, 1999).

In a response to Holtorf’s article, published in the same issue of *Internet Archeology*, Andre Costopoulos suggests that the rather extensive dialogue that seemed to take place between Holtorf and the university authorities prior to the acceptance of the proposal might have been due to reservations about the status of knowledge presented in this format. He claims that non-linear writing is unsuitable to ‘the spirit of scientific enterprise’ (1999b) apparently arguing for a kind of positivist epistemology which, whilst it may be necessary for certain scientific endeavors, was certainly not deemed uniquely appropriate for the articulation of knowledge in this particular field.

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<sup>11</sup> <https://tspace.library.utoronto.ca/handle/1807/245> (Accessed 17/06/08)

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Holtorf's response<sup>12</sup> to Costopoulos on the Jiscmail list related to the *Internet Archeology* journal makes it clear that no such concerns were raised by the various academic authorities regarding the epistemological status of this kind of submission, either in terms of its content or its necessary mode of reading. The only questions asked were in relation to storage and access; points which were easily and satisfactorily addressed.

Holtorf in fact makes an extensive argument for the understanding of hypertext as a vehicle for the delivery of original research in which he cites, among others, George Landow and Jay Bolter (noted above). In this he argues a case paralleling that made subsequently by Anne Galloway in relation to the writing in *Purse Lip Square Jaw*, ultimately resting on a complementarity between poststructuralist thought and the protocols of web-based media.<sup>13</sup> It may be noted in passing that Costopoulos' own doctoral thesis was also submitted in hypermedia format (1999a), and whilst the structure of the main document essentially followed the rules of form typically associated with a text-based submission, including the linearity which he seems to regard as a formal requirement if one is to abide by the 'spirit of scientific endeavor', it did make extensive use of the facility within hypermedia of including content which would not fit between the pages of a book.

Another example of academic research emerging from online practice is Christine Boese's 'The Ballad of the Internet Nutball: Chaining Rhetorical Vision from the Margins of the Margins to the Mainstream in the Xenaverse' (Boese, 1998), which was the first doctoral thesis awarded in the United States to embrace the possibilities of online media. A particularly interesting aspect of this work was the inclusion of numerous other voices within the submission. The community of users that Boese joined and interacted with, largely fans of the T.V. show 'Xena Warrior Princess', contributed considerable amounts of the content which ultimately embodied the thesis. The argument constructed by Boese for the significance of the form, and particularly of the inclusion of this polyphonal writing, again draws on Landow, Bolter, and others, but also stresses the political dimension of

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<sup>12</sup> <http://www.jiscmail.ac.uk/cgi-bin/wa.exe?A2=ind9905&L=intarch-interest&F=&S=&P=1293> (Accessed 17/06/08)

<sup>13</sup> <https://tspace.library.utoronto.ca/citd/holtorf/3.9.html> (Accessed 17/06/08)



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knowledge construction (alluded to in Bourdieu, above), citing Foucault and Habermas, and the language of ‘critical research praxis’.<sup>14</sup>

Another pioneer in this area is Virginia Kuhn, who submitted her thesis in multimedia (but not online) format in 1998 and met with some difficulties regarding the status of such a submission. These concerns were unrelated to the academic or epistemological viability of the content of this submission however, but referred to the extensive inclusion of images and film clips; a possibility only afforded by the nature of the medium. These reservations revolved around the issue of copyright and intellectual property law; and it was feared that such inclusions would contravene these statutes. However, it was successfully argued, by Kuhn and the University of Wisconsin that the established principle of Fair Use traditionally applied to textual quotations also applied to these multimedia elements. A report of this ‘Digital Dissertation Dust Up’, as it was phrased, featured in the *Chronicle of Higher Education* (Monaghan, 2006), and was a lively topic within the academic corners of the blogosphere<sup>15</sup>.

These early incursions of digital, non-linear, multimedia, polyphonal, objects into the realm of academic publishing have enormously enriched the area and advanced the credibility of these knowledge forms, the laws of which overstep the jurisdiction of the traditional ‘book’ format. This is an area of practice which has also moved on considerably since these examples noted above opened up these possibilities. The website and blog *if:book a project of the institute for the future of the book*<sup>16</sup> maintains an invaluable repository and ongoing discourse along these increasingly well-drawn lines.

### **The Conference Report**

The writing in the blog *The Conference Report* was conceived of as both comprising and internally reflecting upon the research leading to a Ph.D. submission; acting as a repository

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<sup>14</sup> Boese’ full argument is available at <http://www.nutball.com/dissertation/mains/Line2.html#L27> (Accessed 17/06/08)

<sup>15</sup> [http://www.serendipit-e.com/serendipite/2006/05/xena\\_dissertati.html](http://www.serendipit-e.com/serendipite/2006/05/xena_dissertati.html) (Accessed 17/06/08)

<sup>16</sup> <http://www.futureofthebook.org/blog/> (Accessed 17/06/08)

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for the various wayward ideas, both relevant and somewhat tangential, that developed over the period of its writing. In terms of the distinction noted by Downes, above, it was my intention that it function partly as a collation of ideas from elsewhere and partly a space of personal expression and creative play. Because of my admiration for the work of the Polish author Stanislaw Lem I chose initially to frame these sometimes purposive, sometimes nomadic thoughts within a literary conceit, a technique which Lem used in a number of his imaginative fictions (1991b, 1991a). The conceit I elected to use was that the blog was the report of a fictional conference, a space which offers the unusual literary form of the *conference abstract*.

Although I moved away from a close adherence to this conceit quite early on in the process of that writing, the status of the *conference abstract* is nevertheless relevant to how the rest of this writing is working. It may be useful to consider the particular ontology I am awarding to the idea of the *abstract* since this conceptualisation informs not only that original conceit but also the blog in its entirety.

### **Poetic Abstractions<sup>17</sup>**

The abstract for an academic conference can perhaps be seen as poised between two different poles of knowing and being<sup>18</sup>. On the one hand is the apparently transparent revealing of the full paper, representational and scopic in its claim for truth, realism, and authenticity. Here is knowledge in the public domain, fully visible, fully referenced, and solidly objective as a rock or a book. This is the direction in which the abstract leans and toward which it directs our gaze. On the other hand is the subject and origin of those ideas, the person from whom it is emitted, with all of the irretrievable tacit knowledge and personal wisdom that comprises their being. Between these hands is this slightly odd not-

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<sup>17</sup> This short section on the status of the conference paper abstract is lifted from the blog *The Conference Report*, to which this writing refers. The writing style, it may be noted, is slightly different and more allusive or figurative in tone. This variation in the extent to which the writing is overtly poetic, or conversely the extent to which the figurative language is suppressed, is a variable that I am consciously manipulating in the blog. This is discussed further below.

<sup>18</sup> The understandings of 'knowing and being' that I am referring to here are discussed below with reference to Polanyi's use of these terms.

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quite-object of the *abstract*; what I am thinking of as the performance, the experiment, the experience, the processual step and the moment of coming-into-being which is external to the subject but precedes the object. It is ephemeral, artistic, and phenomenal and is upstream from all writing; we are carried swiftly on, the illumination casts shadows on the page, the video of the performance misses the moment when the dancer's foot is at *just this angle*.

Abstracts for conferences, from my experience, are often far more engaging than the full papers to which they refer. A well-articulated abstract not only outlines a set of findings or lays out the terms of a new piece of analysis, it also achieves something of the status of an artwork, compressing extensive polyphonal expressions into a single, dense piece of prose. There is something engagingly ludic about such writing; when done well it reveals the swings and roundabouts of conceptualisation and invites us to play on these for a while, before the more formal fencing off of that area that will take place during the full exposition of the paper. Metaphorical images and performances flow and strut across the paragraphs with an unfettered air of poetic freedom that is often suppressed in the more extensive discursions.

So whilst the writings in the blog submitted here are not confined to the form of abstracts for non-existent academic papers, it is my intention that the writings do traverse what I see as this oddly liminal, 'performative', space, (bearing in mind that the term 'performative' has a varied and interesting history, which will be partially opened up in this writing below.) In this instance I am indicating a space of performance which is perhaps also indicated in this reading of the status of the conference abstract; sometimes reaching forward into the objective space ahead and touching the material of hard facts and shared knowledge, sometimes falling backwards toward the point of origin.<sup>19</sup>

A second theme which emerged some time into the writing of the blog was that other conference, the *Conference of the Birds*, a 12<sup>th</sup> Century poem by Farid-Al-Din Attar (Farid-al-Din and Nott, 1974). Although this work is not cited in the blog, the sense of an

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<sup>19</sup> It should perhaps be noted that the blog has produced a number of 'outcomes' in the form of full conference papers and related artworks. One of these artworks consists of these *conference abstracts* compiled into the form of a series of hypothetical conferences. See website.

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allegorical ‘journey of discovery’ that it presents, in which the journey itself is revealed to be the goal, has some resonance. The writing produced in the blog over a period of three years is accompanied by a range of ‘outcomes’; artworks, conference papers, and journal publications; and whilst there is a sense in which these objects of practice can be seen as lying at the end of the research process which the blog narrates, these artifacts are not the focus of this submission. The aim is rather to treat the research process, as recorded and expressed within the blog, as a space created by the writing through which the reader is invited to move. Movement within the space of the blog, like the journey of the birds in Attar’s poem, is not intended to take one to a place where the object of knowledge can be found. The moving itself, across a digital textual terrain in which a range of writing styles are deployed, is the object of study. As such, it is enmeshed in the problematic of all ‘practice as research’ wherein (typically written) documentation of the process might be seen inappropriately to be, or to stand in for, the process itself. A key aim in this project has been to explore the specificity of blogging as simultaneously a process and the documentation of a process.

This property of blogging, in which different modes of writing might coexist, and thus traverse this intermediary space between the subject and object, the body and the book, is one which I am particularly interested in exploring. To this end I will not be making extensive use of some of those features exploited by the bloggers cited above; comments are disabled so there are no other contributory voices; all of the material is either my own or follows established rules of Fair Use as applied to textual quotation; the use of multimedia is minimal within the main body of the blog (although there are several hours of video material in the Youtube ‘vlog’ appended to the main document as a link). Features I am making most deliberate use of include the temporal embeddedness of blogging which, as stated earlier, both ties the individual postings to a particular moment in the history of its own writing, and also structures successive postings along a timeline, with the possible narrative and developmental structure such temporal organization implies. Also, the archive feature, with its categorial *browse* and *search* functions, is an inevitable and necessary navigational tool.

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### **Method of Analysis**

The following outlines the status of the knowledge presented in the blog *The Conference Report* in relation to a range of different understandings of what the term ‘knowledge’ signifies. One of the most common ways in which artifacts of knowledge are organised and are distinguished one from another is through their designation as either objective or subjective, and this distinction is accompanied by a range of value judgments and use-specific assumptions which serve to reinforce these categories as distinct and, for the most part, unproblematic. It is fundamental within the empirical sciences that only objective knowledge is permissible,<sup>20</sup> largely because of the inherent difficulties of finding effective ways to mobilise knowledge located only in the Subject, (although the pursuit of a form of knowing which acknowledges the first-person perspective is at the heart of the phenomenological approach). In a sense this distinction, (and I use this terms in both its literal and Bourdieu’s sense) is one in which the politics of knowledge is echoed in the substance of its instantiation. To the extent that this blog lies between the book and the body it also lies between the hard object of formal empiricism and the soft centre of a phenomenological, embodied knowing.

The systematic tendency in the Academy to acknowledge objectivity and ignore subjectivity is, I will argue, also found outside of the hard sciences and, despite some understandable but misguided resistance, forms the foundations for procedures of knowledge authentication in the arts and humanities. As a way of articulating this distinction I will be carrying out an analysis of the language games which are used in the explication of these two, apparently distinct, knowledge forms, as well as of more specific epistemological systems. Drawing on a set of ideas emerging from cognitive linguistics, experiential philosophy, and embodied cognition, and specifically the work of George Lakoff and Mark Johnson, Eleanor Rosch, Rafael Nunez, and others, I will argue that within the discourses of epistemological systems different metaphors, metonyms and image schema structure the relevant concepts. Moreover, there is a coherent and consistent pattern in which these metaphors and schema are used: some of the terms already in play (*hard* and *soft*, *object* and *subject*, *between*, *beyond*, *high*, *process*, and *location*) will be

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<sup>20</sup> This is the assumption made by Costopoulos, above.

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included in this analysis. Following the theorists cited, I will be noting that knowledge which is understood as existing at the objective end of the spectrum makes extensive use of metaphors related to the act of seeing, including the entailments of visual awareness such as the presence of light and the placement of the object of knowledge in an external space. Subjective knowledge, on the other hand, is much more likely to make use of metaphors related to taste (or smell). Again, I will refer to some of those named above in claiming that the entailments associated with this latter metaphorical understanding support the conceptualisation associated with subjectivity; interiority, unilateral experiencing, and proximity to the core self of the experiencer.

I will further argue that between these two extremes of seeing and tasting, and the binary division in knowledge which they suggest, is a zone of possible metaphorical engagement based on the haptic sense; the reaching, touching, stroking, and caressing of the human hand (and in a further development the reaching out toward the ground that the human foot makes in walking). Knowledge constructed around the metaphor of the hand allows the object of such knowledge to be either grasped or rebuffed. Haptic knowing, I will claim, allows for both the claiming and possession of information that subjects require, but also the open-handedness and baton-passing that marks the public-spirited scientist. Relating this to the blog *The Conference Report*, I will suggest that the technological circumstances for such tactile and ambulatory empiricism is already with us in the form of Web 2.0, the collection of database-driven, interactive, user-generated web environments characterised by MySpace, Facebook, Amazon, Wikipedia, and most specifically, Blogger and related sites. The knowledge present on such sites is always in time and in flux and ranges from personal reflection and comment to the most rigorously researched outcomes of the scientific method. Thus another aspect of this research into the processes of blogging and their implications for knowledge production, is the exploration of an apparently systemic disposition to blur the established objective/subjective boundaries. The key features of this network of knowledge are instantiated in the form of its protocols, and thus in the means by which it facilitates epistemological creation and management. Crafted and moulded by the efforts of the end-users, such sites can perhaps be seen as paradigmatic examples of haptic

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knowledge, and can provide models of how we might come to know in ways which slip between the eye and the tongue.

### **Practice as Research**

At the time of writing, and within the academy in the U.K. there is a lively debate taking place regarding how an understanding of *practice* (by which is usually meant some kind of artmaking) might be aligned with the concept of *research* (which is generally acknowledged as relating to the generation of new knowledge and significant insight). In the course of this debate the phrase *practice as research* (PaR) and its variants (practice-led research, research-driven practice, etc.) has acquired something of a political dimension along which various positions might be adopted. Broadly speaking, at one extreme there are some who claim that art is a form of knowledge which requires no explication beyond itself, and at the other it is argued that the objects of knowledge must, by nature, exist in a common communicable form (words written in organised sentences, forming coherent propositions, bound between the covers of a book, for example) if it is to be part of a cumulative, progressive exercise.<sup>21</sup> This submission may be said to fall across and between these extremes, as well as self-reflexively commenting upon its own epistemology.

Particularly pertinent to this thesis is work carried out by Robin Nelson (2006) in which PaR is interrogated as a concept within the terms of shifting and contested epistemologies. After placing ‘the problem of knowledge’ within an historical, post-enlightenment context, Nelson elucidates some of the key agendas around the status of different knowledge-creating practices, particularly in regard to poststructuralist ideas and theories. The trajectory described is one in which knowledge moves from position of ideal and elevated matter perhaps best illustrated in Plato, to an approach to knowing which is multiple, experiential and most significantly ‘performative’.

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<sup>21</sup> For an overview of the discussion on PaR in the academy, see NELSON, R. (2006) Practice-as research and the Problem of Knowledge. *Performance Research*, 11, 105-116.

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A second aspect of Nelson's analysis is the problem posed to knowledge by work which is, by nature, ephemeral, particularly performance practice. Ephemeral work not only requires non-traditional rules of form to be applied to its understanding, but also asks that its dissemination not be oriented around the paradigm of permanence which validates typical research submissions. The traditional bound thesis, for example, written in clear, properly referenced prose, not only represents prototypically 'objective' knowledge through the language and conventions of its expression, but also embodies this objectivity in its most literal manifestation. The apparent solidity and permanence of the book gives comfortable substance to the knowledge it contains, and might be seen to represent in physical form the Platonic ideal of object-like knowledge. Knowledge expressed through practice, on the other hand, evades the grasp of permanence so does not fit easily on the shelf of ideal forms.

Whilst blogs and other digital practices find form in bits and pixels rather than atoms and ink, they are not ephemeral in the way that a theatrical performance perhaps typifies. There is no evidence to suggest that the text which currently resides on this or any other blog has a shorter lifespan than a typical book. In fact, given the distributed and multiple nature of internet information management, it could be claimed that work placed online has a greater chance of remaining available than most works on paper. The British Library holds copies of all published books, but online texts have the advantage of ubiquity, being duplicated endlessly across servers throughout the network. For this reason it may not be useful to treat blogging as an ephemeral form and apply those elements of PaR which refer to ephemerality to this work. This is not to say that other debates which mark PaR do not apply however; there is clearly something of the 'performative' about blogging, as well as an approach to knowledge which does not respond well to the post-Enlightenment paradigm which Nelson rightly critiques. These issues are implicitly and explicitly taken up in the analysis of discourse which follows.

The blog comprises a set of some 600 postings, made over a period of three years. These vary in length from a few words to longer entries of several thousand. Some posts also have images. The content of these posts, whilst almost always emerging from or linking to



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the developing themes of the research, varies in style and discursive mode; some follow the conventions of standard empirical objective discourse, with the use of passive voice and appropriate footnoting and citation, others are more ‘poetic’ or autobiographical in style, whilst some form part of a fictional narrative or describe workshop exercises. This corresponds to the various modes of thinking and working that I found it necessary to adopt in exploring the ideas, and the reader is invited to take a similar praxiological journey.

It should also be noted that the blog has produced a number of ‘outcomes’ in the form of full conference papers, published articles, and related artworks. As noted above, these outcomes, which I am including in this submission of complementary writings as appendices, similarly straddle the divide between empirical and practical research, however, the focus of this research is not on these explicit outcomes. The reason for this is that all outcomes are, in different ways, ‘objects’ and the aim here is to look at the circumstances which produce objectivity (and other kinds of knowledge), not at the objects themselves. The focus is on the productive space within which knowledge is created, acquired, and communicated, and the blog is an articulation of that space. In total, the postings are arrayed across an epistemological landscape stretching from the subjective toward these objects which the reader is invited to traverse, and it is this landscape and its traversal which I see as constituting the ‘practice’ of this research. In this regard, the blog problematises the distinction noted above between the hard facts of positivist objectivity and the non-objective knowledge forms typically associated with PaR.

### **Clean Language and Purple Prose**

As indicated above there is a perceived relationship between the ‘rules of form’ through which knowledge is articulated and the value and status which is awarded to that knowledge. I have discussed how this applies in relation to epistemological expressions made in non-standard media but ‘(c)ategories, rules of form, studies of genre and structure’ (Mortensen, 2004) apply most tellingly to language itself, and not only to the media utilized

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for its conveyance. The linguistic style in which knowledge is expressed has a bearing on the perceived status of that knowledge; and since, as noted above, knowledge which appears to have followed ‘the spirit of scientific endeavour’ acquires, in metaphorical terms, some of the features of an object, so the style of writing should reflect this schematic entailment. This object-like appearance is predicated upon a set of techniques or ‘rules of form’, and these differ from the techniques used when the aim is not to create such a knowledge object. Furthermore, the kind of ‘metadiscourse’ used when referring to such styles is itself a contributor to the overall schema of knowledge within which the sense of our communication is formed.

A significant distinction to which I would like to draw attention is the assumed difference between *literal* and *metaphorical* expression. When the aim is to produce objective, empirical knowledge, particularly in the form of written or verbal language, it is a tacit assumption that forms of speech which rely on figurative and ‘literary’ language are inappropriate. As Martin Gregory argues in a commentary in the journal *Nature* titled ‘The Infectiousness of Pompous Prose’;

There are two kinds of scientific writing: that which is intended to be read, and that which is intended merely to be cited. The latter tends to be infected by an overblown and pompous style. The disease is ubiquitous, but often undiagnosed, with the result that infection spreads to writing of the first type. (Gregory, 1992)

His extensive use of a metaphor of disease as a rhetorical device to support his argument is not acknowledged.

Following an article on style in scientific writing in 1996, again published in *Nature*, a number of letters appeared either supporting or disagreeing with the points made. Particularly pointed up was the use of the *passive* voice, with one respondent writing:

Using the passive voice in scientific writing allows the researcher to stand at a distance from his or her work. By standing at a distance, an unbiased viewpoint is much more likely to be reached. An unbiased viewpoint

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encourages a world view and an open mind, surely prerequisites for good science.<sup>22</sup>

This phraseology, in which the quest for objectivity represented by ‘good science’ is understood as taking place within a clear space offering unimpeded views, is typical. The largely covert metaphors of *clarity*, *lucidity*, and *transparency* which mark the metadiscourse describe the space in which the ‘spirit of scientific endeavour’ (Costopoulos, 1999b) becomes manifest. This is expressed well in the work of Jean Baudrillard, who writes:

It is here that lucidity is at stake. Lucidity is precisely that which sets itself against this fixing of reality, this materialisation of truth, no matter what form it takes. In itself, it is nothing, and the only way of speaking of it would be that of negative theology, in the sense that it is not. It is neither a contract with reality nor with knowledge. It is a pact and, if it has anything to do with light, literally speaking, it is not with Enlightenment reason and objective knowledge. It would lie, to evoke a very beautiful image, at the intersection of the light issuing from the object and the light coming from the gaze. Or rather it would consist, as Musil says, in looking at the world with the eyes of the world – and not, as he says, in having the world at the distant end of the gaze [au fond du regard], because it would then crumble into absurd details, as sadly separated from each other as the stars at night... (Baudrillard, 2007: para.21)

This quotation can be seen to serve as an example of the use of language to frame certain forms of knowledge through a largely covert appeal to the metaphors of sense-making. As intimated above, the rules of form which articulate an epistemology which leads to the object also legislate the means by which they are themselves rendered invisible. The pursuit of a hygienically clean language style metaphorically constructs a similarly clean, clear, open space in which the object of knowledge might appear. This certain style in writing is, therefore, one in which the metaphorical and figurative are not eradicated but in which they are denied. The use of the passive voice is a part of this process, as indicated in the letter to *Nature* quoted above, in which the ‘unbiased worldview’ achieved by ‘standing at a distance’ corresponds to having an ‘open mind’.

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<sup>22</sup> Simon R. Leather, Department of Biology, Imperial College, Silwood Park, Ascot. Letter published in *Nature* **381**:467 6<sup>th</sup> June 1996.

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One of the aspirations accorded to this open-minded paradigm is that it represent not an individual, (and therefore necessarily perspectival), viewpoint but a ‘worldview’, however, it follows that a speaking position which suggested particularity and individual locatedness whilst simultaneously claiming the high ground of a totalizing vision would be a contradiction, one which is recognized by Thomas Nagel in *The View from Nowhere* who notes that:

One of the strongest philosophical motives is the desire for a comprehensive picture of objective reality, since it is easy to assume that that is all there really is. But the very idea of objective reality guarantees that such a picture will not comprehend everything; we ourselves are the first obstacle to such an ambition (Nagel, 1986: 13).

The aim within object-making language, therefore, is the discursive production of ‘lucidity’ through appropriate metaphorical framing, which in turn relies on an embodied metaphor which is primarily oriented around the visual sense. The various entailments of the overall schema which are active in the discussion above are all reliant upon the experience of seeing, and as is developed more fully below, these are examples of one of the key metaphors through which knowing is understood through the association of KNOWING with SEEING<sup>23</sup> (Lakoff and Johnson, 1981, Lakoff and Johnson, 1999). This metaphorical relationship is part of a larger set of body-based metaphors which map different types of knowing with different modes of sensory access; touch, smell, hearing, taste, etc. (Rouby, 2002, Owen, 1984, Classen, 1998). The KNOWING IS SEEING metaphor is particularly relevant because it is through the entailments of this metaphor that many aspects of the structure of knowledge are articulated. Some of these entailments support the concept of a particularly ‘objective’ or ‘object-like’ knowledge, and allied to this, other entailments narrate the relationship between the human subject and this knowledge object. It is these latter entailments which shape the metadiscourse, such as that above, in which we talk about different communication styles.

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<sup>23</sup> It is a convention within the fields of practice I am citing here to capitalize these metaphorical relationship. I will be following this convention where appropriate.

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Henri Lefebvre writes of this 'illusion of transparency' in *The Production of Space*, in which he says,

Anything hidden or dissimulated – and hence dangerous – is antagonistic to transparency, under whose reign everything can be taken in by a single glance from that mental eye which illuminates whatever it contemplates ... Comprehension is thus supposed, without meeting any insurmountable obstacles, to conduct what is perceived, i.e. its object, from the shadows to the light. It is supposed to effect this displacement of the object either by piercing it with a ray or converting it from a murky to a luminous state (Lefebvre, 1991: 28).

Irit Rogoff, in an analysis of the visual culture associated with the practice of geography, refers to this suggestion by Lefebvre as,

... of the utmost importance to numerous endeavors in cultural studies and cultural criticism. It provides a critical apparatus for dealing with positivistic thought and with analyses which do not take on board issues of situatedness, of unmediated positionality, and which believe unselfconsciously both in exteriority and in the ability to define the realm of the 'known' (Rogoff, 2000: 24).

This noted significance accorded to endeavours in cultural studies and other related practices may be indicative of a distinction between the kind of positivistic analysis appropriate to scientific enquiry, and the more 'fluid', 'soft knowledge' associated with social facts<sup>24</sup>, and most distinctly to forms of knowing associated with arts practices<sup>25</sup>. It may also be valuable to note that the visual/spatial metaphor invoked throughout these writings is productive of an 'exteriority' and the optically transparent space in which the hard facts of objective knowledge might appear to appear.

Acknowledgement of the situatedness of one's views (sic.) suggests a relativism which is not in accord with the desired sense of ideal objectivity. As illustrated earlier, the technique used to suppress this aspect of the metaphorical schema is to avoid reference to such a located speaking position by either using the passive voice ('it can be seen that ...',

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<sup>24</sup> Durkheim, E., S. A. Solovay, et al. (1965). *The rules of sociological method*. [S.l.], The Free press. Available online at <http://www.faculty.rsu.edu/~felwell/TheoryWeb/readings/DurkheimFactForm.html> (Accessed 23/06/08)

<sup>25</sup> These metaphorical material qualities of 'fluidity', and 'hardness', are discussed in more detail below.

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rather than ‘I see ...’), or to use the Royal ‘We’; replacing a singular, and therefore situated, viewpoint with a universalizing ‘view from nowhere’ (or everywhere).

This notion that knowledge varies in type and that this variation might be conceptualised as a spatial dimension, and that the position of knowledge on that dimension entails variation in value, applicability, and status, is described by Nagel (1986) as follows:

Though I shall for convenience often speak of two standpoints, the subjective and the objective, and though the various places in which this opposition is found have much in common, the distinction between more subjective and more objective views is really a matter of degree, and it covers a wide spectrum. A view or form of thought is more objective than another if it relies less on the specifics of the individual’s makeup and position in the world, or on the character of the particular type of creature he is (Nagel, 1986: 4).

In this passage Nagel introduces a number of metaphors but the primary organization of the ideas depends upon entailments associated with space. He refers to ‘standpoints’, ‘places’, ‘views’, and ‘position in the world’, with the major (oppositional) distinction articulated through this spatial metaphor being one in which the ‘subjective’ is differentiated from the ‘objective’. In this, there is a correspondence established between subjective knowledge and a location in space which is proximal to the individual ‘subject’. Objective knowledge, by inference, is found at a point distal to this subject and, as Marilyn Friedman, discussing Nagel, puts it, can only be arrived at through a process of ‘detachment’ (Friedman, 1990: 501). There is a sense in this of ‘stepping back’ and the breaking off of physical contact; further entailments of spatial metaphors. Nagel also refers to this objectival detachment as ‘transcendent’ and ‘transcending appearances’ (Nagel, 1986: 139), which carries a suggestion not only of a horizontal distancing but also of an ascendant disembodied panopticism.

Because of the higher (*sic*) status awarded to objective knowledge within Western culture it is inevitable that the apparent determination of objectivity through the use of metaphorical framing within discourse has a political dimension. Although it is not the main aim of this writing to enter this area of the debate it is important to note that such a dimension exists.

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This process by which claims for objectivity are advanced through a strategic deployment of totalizing visual metaphors which deny ‘viewpoint’ whilst simultaneously adopting an omnipresent viewing position, has been widely critiqued, particularly within feminist theory (duBois, 1988, Braidotti, 1994). Donna Haraway (1997) refers to this slight of hand through which a visual metaphor is transformed into a claim for omniscience as ‘the God Trick’<sup>26</sup> simultaneously implying not only a panoptical objectivity but also the lofty, elevated, and authoritative position from which such a viewpoint might be gained; in this she seems to be following Nagel’s observation regarding such claims to objectivity. In the book *The View from Nowhere* he writes on the development of a visually-based ‘detached’, viewpoint, associating this with Descartes who ‘tried to recapture knowledge by imagining his relation to the world from the point of view of God’ (Nagel, 1986: 129).

Although I do not intend to pursue these critiques within this writing, it is significant to note that in most cases the critique of objectivity, whilst recognizing the power of visual metaphor in the organizing of epistemology, is largely mounted through the deployment of the same metaphor structure, evidenced by the use of terms such as ‘situatedness’<sup>27</sup>. A notable development of this critique is the ‘écriture feminine’ of Helene Cixous (1981), Julia Kristeva (1984), and others in which an epistemology of vision is complemented by one which acknowledges *touch*, and the distant, autonomous object of scopic knowledge is joined by the up-close and personal knowing of the haptic<sup>28</sup> and the visceral. As Kelly Oliver (2000) describes it, this form of writing is;

... primarily tactile, bodily, and interior in the extreme... *écriture feminine* is hard to follow because it is not linear but begins from all sides at once – allowing for a new departure in history; wandering through the

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<sup>26</sup> A variant on this claim for a universal viewing position as legitimizing authority over knowledge is presented by Foucault in ‘Discipline and Punish’. In his analysis authoritative power asserts itself directly not by simulating omniscience but through the elevation of a singular ‘viewpoint’ to a position of panoptical disciplinary control.

FOUCAULT, M. & SHERIDAN, A. (1977) *Discipline and punish: the birth of the prison*, London, Allen Lane.

<sup>27</sup> George Lakoff refers to this process as ‘accepting the frame’, by which he means that any attempt to argue a point which is framed metaphorically (as most are) usually requires that parties to that debate use the same set of metaphors. This means that those who determine the metaphorical ‘frame’ of the argument are at a distinct advantage. LAKOFF, G. (2004). *Don't Think of an Elephant: Know Your Values and Frame the Debate--The Essential Guide for Progressives*, Chelsea Green Publishing Company.

<sup>28</sup> This concept of the *haptic*, in which knowing is narrated using metaphors of the hand rather than the eye, is opened out in more detail below.

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unknown elsewhere, across detachment and boundaries, crossing categories, and opening onto a certain laughter'. (Oliver, 2000: 256)

The overt use of metaphors in the passage above, and their exuberant mixing and confusion<sup>29</sup>, is typical of *écriture féminine* itself. The rejection of a scopic epistemology centered on the distanced, disembodied *object* also necessitates an abandonment of the rules of form which prescribe the simulation of a 'clear space' within which the object seems to appear. In its use of figurative language such writing may read as 'poetic' but this effect is a measure of the extent to which the equally poetic writing of scopic objectivity is unconscious and hegemonic.

An interesting and salient variant on this metaphor is found in some of the writings of Pierre Bourdieu, who makes the observation that this exteriorised, visually-constructed sense of objectivity is claimed by power elites through a kind of synaesthetic transformation<sup>30</sup>. As Loic Wacquant, summarising Bourdieu's thinking, puts it,

...to impose one's art of living is to impose at the same time principles of vision of the world that legitimize inequality by making the divisions of social space appear rooted in the inclinations of individuals rather than the underlying distribution of capital (Wacquant, in Stones, 2008: 11).

The correlation between certain forms of 'knowing' and the gustatory (and olfactory) senses is outlined in Constance Classen (1998), who points out that the English words 'sagacious' and 'sage', both referring to intelligence, are based on Latin words meaning to have a good sense of smell. Similarly the word 'sapient', meaning wise, is based on the Latin word for taste; hence the term *Homo sapiens* means 'tasting man' as well as 'knowing man'. (The sense of smell is outside the terms of this writing, although it is extensively covered within the literature on conceptual metaphor and in more general

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<sup>29</sup> This use of the term 'confusion' is ideally read in its original etymological sense from *confundere*, signifying the act of being 'poured together'.

<sup>30</sup> Although beyond the range of this writing, some work has been done on the switching of sensory modes used within metaphor, which seems to show that such 'synaesthetic' transformation of concepts is systematically ordered. See; SHEN, Y. & COHEN, M. (1998) How come silence is sweet but sweetness is not silent: a cognitive account of directionality in poetic synaesthesia. *Language and Literature*, 7, 123-140, DAY, S. (July 1996) Synaesthesia and Synaesthetic Metaphors. *PSYCHE*, 2.



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terms; (Brennan, 2004; Chu and Downes, 2000; Drobnick, 2006; Eno, 1992; Howes, 2005; Rouby, 2002).

In Bourdieu, this exterior, conceptually public space undergoes a sensory sleight-of-hand through which access to knowledge-making is removed from the empirical interpersonal sphere of visual exteriority and placed inside the body of certain individuals, the arbiters of 'taste'. The largely covert mobilisation of the *taste* metaphor within an epistemology which is structured visually, allows those with vested interests in controlling these epistemological processes to claim exclusivity and centrality. The logic of *taste* is that it is individual, interior, and inaccessible, and the mixing of metaphors which uses this concept of *taste* whilst simultaneously maintaining a visually panoptic, omniscient position gives such claims the appearance of lucid objectivity. An entailment of this strange mixing of eye and tongue in the economy of Capital knowledge is that other members of a society are unable to make a claim for this global gustatory gnosis. Located eccentrically or peripherally within social space, the possessors of these other unaccountable 'tastes' are not in a position to claim the principles of higher vision owned by the (aesthetic) elite.

Taste is a practical mastery of distributions which makes it possible to sense or intuit what is likely (or unlikely) to befall — and therefore to benefit — an individual occupying a given position in social space. It functions as a sort of social orientation, a 'sense of one's place'. (Bourdieu, 1984: 466)

The various entailments mentioned above which give structure to the otherwise abstract concept of *knowing* are mapped consistently or strategically from their metaphorical source within the embodied experience of *seeing*. The circumstances and conditions in which seeing takes place, the clarity of the air for example, are carried over into the schema such that the clarity required for effective seeing becomes part of the discourse around (this understanding of) effective knowing.

Mark Johnson claims that 'Meaning and thought emerge from our capacities for perception, object manipulation, and bodily movement' (2007: 113), from the discussion above it can be inferred that the capacities to which he refers are always utilised within an environment.

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This embedded nature of the embodiment which is the source of metaphors and schema also contributes to the organised emergence of meaning and thought, including epistemology. What seems to emerge from the above consideration of ‘clear language’ is that this concept is understood through the application of metadiscursive metaphors which present the conceptual environment in which objects might be manipulated as ideally possessing ‘clarity’. This indicates, as noted in the preceding paragraph, a particular emphasising of the visual in the construction of an embodied epistemology.

Some of the critiques of ‘objective’ language and the use of visual and spatial metaphors have been applied to digital practice in general and blogging in particular. Michele Knobel and Colin Lankshear, writing about the development of academic blogging as a research and dissemination practice make the following assertion;

... we need to expand our definition of a literacy event to include surrounding contextual factors and also to acknowledge the fact that the “situatedness” of a specific event is more complex online. Furthermore the notion of “event” seems to suggest that it is temporally bounded – clearly this does not apply in the same way to a blog. (Knobel and Lankshear, 2007: 171)

The placing of the word ‘situatedness’ in scare quotes partly draws attention to its non-literal nature, but also refers the reader to a set of ideas which similarly draw upon the idea that knowledge might not be objectively ‘global’, but rather might be situated in an imaginary location, representing the view from that location, and yet still have value; this concept of ‘situated knowledge’ was discussed above. It should be noticed, though, that the paragraph is also replete with less obvious spatial metaphors; *expand*, *include*, *surrounding*; all of which contribute toward the reader’s comprehension whilst covertly (and unavoidably) supplying a rich metaphorical framework to the understanding. This functioning of the metaphorical sense-making process within the discourse around online practice is (again self-referentially) discussed by Gunther Kress who, according to Knobel and Lankshear,

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... approaches an analysis of online practice from a socio-semiotic perspective, pointing out the significant differences between screen-based and page-based modes of communication. He identifies the multimedia capabilities of online display and the different affordances of the screen as supplying distinct experiences which favour the visual (rather than the alphabetical), and these variations, he maintains, effectively extend digital literacy into areas where multiple discourse communities operate. To this extent, he claims, 'new digital technologies invoke new ways of meaning-making, and these challenge the authority of the book and the printed page as dominant sites for representation' (Kress 2003, in Knobel and Lankshear, 2007: 171).

Again, this passage begins by articulating a relatively transparent space of thought for us to enter; one in which particular 'perspectives' might be recognized that, like perspectives in the visual space of lived experience, are determined by the 'situation' we occupy. Standing alongside the author in this metaphorically situated location, objects of significance might then be pointed out to us. The spatial metaphor then undergoes something of a mutation, in which the subject under discussion, 'digital literacy', is said to 'extend into areas where multiple discourse communities operate'. There is a feeling that the hovering omniscient eye of the text, from which vantage point a variety of 'situations' are initially visible, has caught sight of a space in which its visual acuity is dysfunctional. A space in which the *lingua franca* is less to do with display and more to do with exchange. The space of 'discourse communities', despite its favoured visuality, Kress seems to suggest, is not primarily visual in conceptual meaning-making. Kress's introduction of the concept of 'affordance', a term associated primarily with J.J.Gibson (Gibson and Carmichael, 1968), suggests an engagement with knowledge based less on the visual 'scopic' sense, and more on the 'haptic' processes of touch and the felt sense. As Torill Mortensen phrases it in the 'Into the Blogosphere' blog,

... the sensual element of blogging is beyond the tools of the pure gaze, and cannot be broken down into standardized categories or organized according to strict formal rules. These belong to the barbarians, and can only be studied by understanding and accepting involvement as a quality of the methodology and not a problem for the analyst. (Mortensen, 2004).

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These processes allude to an understanding of blogging as not only not embodying the spirit of scientific endeavour but as avoiding the elevated spiritual ascension of any kind of totalizing panoptical situation. To be stationary in any kind of position, even the convergent position ocularly occupied by the tricky eye of God, is to miss the point.

The purpleness of some of the prose associated with certain discursive forms and the variation in tone typical of blogging, may, therefore, not always be an indicator of a lack of clarity in thinking, but may constitute the surfacing of the colourful and figurative nature of all thinking. The concept of the empirically ‘known’ is partially conceptualised through the deployment of a metaphor involving this manipulation of imaginary objects, and as representative of the goal aspired to by the spirit of scientific endeavour, the *object* gleams in the luminous light permeating the illusory transparent space in which this manipulation takes place. Endeavours which are motivated by a different spirit, however, may have to shun the light and feel the pressings of other knowing.

### **Knowing and Seeing**

As indicated above I am referring throughout this document to a metaphor which understands *knowing* in terms of *seeing*, and the above discussion begins to surface this relationship. Since this idea is drawn upon extensively below as part of an analysis of different epistemological systems, it is helpful to foreshadow some of that discussion with a partial description of the environment in which knowledge and knowing are arranged, extrapolating from the conditions which seem to be metaphorically constructed in the examples above to convey and privilege ‘clarity’ as a means of achieving ‘objectivity’. Some of the ideal conditions for *seeing* are therefore the conditions under which, in the embodied physical world, the objects around us might best be observed in their most sovereign state, since it is likely to be these conditions which map across as entailments of the metaphor within the overall schema.

First, for seeing to take place there must be a space for the ‘seer’ and the ‘seen’ to occupy. Secondly, this space in which both seer and seen are present must be sufficiently

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illuminated for seeing to take place. Thirdly, the space between the seer and the seen must be empty and without obstruction, and should also be neither so great that the object disappears into the distance (or over the horizon), nor so near that it cannot be focused upon, or presses against the body in an uncomfortable way. Fourthly, there should be no disturbance in the air between seer and seen, and that air should be free from vapours, fogs, shadows, distracting aerial effects, or in fact anything which might draw the attention of the eye away from the seen object. The air should be colourless, still, and to all intents and purposes, absent; it should approximate the condition of pure space, a perfect conduit for the gaze. These are the conditions one would wish to find at the summit of a mountain, and which might cause one to say “I can see our house from here”. This is the state of interstellar space, where the blackness of the sky is testament to its ability to allow the unimpeded transmission of the light. Crystalline moons with unambiguous, razor-sharp edges. Under such conditions objects achieve their greatest clarity and the features which define them as objects become most available.

If these are the conditions under which the sense of sight produces the most perfect representation of distant objects, clearly outlined and uniquely visible, then it is likely to be the case that these same conditions are taken over as entailments when we wish to produce similarly perfect representations of metaphorical objects. When the intention is to convey the impression that an article of knowledge is objective we should find an aspiration to such conditions within the language used to make such knowledge claims. It should also be the case that overt reference to these conditions is made when these linguistic aspirations are spoken. So, for example, we might try to make our communication ‘clear’ or ‘lucid’, and also be able to say that that is what we are attempting. We might want to make our points (the directions in which we are pointing) as obvious and direct as possible. We would certainly avoid filling the vacuum of this space with conceptual fogs, or put up any obstacles to understanding. We like the space of objectivity to be colourless, so we would avoid purple prose, or the occluding shadows of the occult.

Again, it is likely that we would be completely overt in our stating of these aspirations and take pride in our desire to avoid obscurantism through such ‘plain speaking’. These are the kinds of criteria for objective communication that we would cite in any metalinguistic

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discourse about how we talk about knowledge. The reason for this seem clear (sic); in order to simulate in language the conditions in which objects optimally appear, we have to reproduce these conditions in the form of conceptual metaphors, effectively creating the conditions through which our knowledge can appear lucidly as object. When we say ‘speak clearly’ we really mean ‘simulate with your speech the emptiness of the space around the moon on a cloudless night in Winter, when the frost has taken all of the moisture from the air.’<sup>31</sup>

A question arises, however, as to how such an airless space of language might be produced; what are the mechanisms by which this evacuation of atmosphere and blowing away of conceptual fog might be effected. Although a full retelling of this story of banishment and cleansing is beyond the range of this writing, the recent history of how the word ‘metaphor’ has extended its reach affords clues.

To return to the distinction between the *literal* and the *metaphorical* introduced earlier, according to ideas located within such fields as embodied cognition and cognitive linguistics, its lack of validity has been demonstrated. All expressions of any complexity involve the extensive use of metaphors and schema, because such usage is at the core of human cognition and conceptualization. The apparent differences between language which appears figurative and that which appears ‘clear’ derive from the fact that most metaphor usage is covert and non-conscious. Furthermore, this covert use extends to the discussion about such expressions; the idea that language can be ‘clear’, ‘clean’, ‘lucid’, or ‘transparent’ is a further use of metaphor used to organise and frame the metadiscourse.

The explanatory power of the theoretical framework provided by embodied cognition and cognitive linguistics is demonstrated by the range of cultural practices to which it has been applied. The following introductory text from a recent reader on this subject gives some indication of this:

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<sup>31</sup> A style of communication in which such metaphor construction is minimized does exist within certain counseling practices. The ‘Clean Language’ technique of David Grove, developed by Lawley and Tompkins is a good example of this. This practice does not remove metaphor from discourse entirely however, it is rather a technique through which the counselor allows the client to control the introduction and use of these metaphors, with a subsequent analysis of the client’s choice of metaphor forming a key element of the counseling process. See Lawley, J. and P. Tompkins (2000).

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(These) essays adapt and amplify embodied cognition in such different fields as art history, literature, history of science, religious studies, philosophy, biology, and cognitive science. The topics include the biological genesis of teleology, the dependence of meaning in signs upon biological embodiment, the notion of *image schema* and the concept of force in cognitive semantics, pictorial self-portraiture as a means to study self-perception, the difference between reading aloud and silent reading as a way to make sense of literary texts, intermodal (kinesthetic) understanding of art, psychosomatic medicine, laughter as a medical and ethical phenomenon, the valuation of laughter and the body in religion, and how embodied cognition revives and extends earlier attempts to develop a philosophical anthropology. (Krois, 2007: xi)

As Stephen Pinker describes it in the title of one of his books on the subject, this understanding treats language as ‘a window into human nature’ (2007). There are two possible implications for this analysis of the way language supports the construction of knowledge through conceptual metaphor. Firstly, there is the slightly vertiginous loss of certainty which inevitably accompanies the realisation that things were not as they seemed and that the prized goal of objectivity is sometimes made rather than found. This is particularly salient in this case since, not only has everything that was solid melted into air but the clean, clear air itself has been sucked out along with the space which contained it<sup>32</sup>. Within the overall context of conceptual metaphor theory and embodied cognition however, nothing has really changed. This is not the landscape of endlessly deferred meaning one finds within poststructuralism, nor the ‘nothing to scrute’ of W.V.O. Quine for example who wrote that ‘The thesis of the inscrutability of reference tells us that it makes no sense to say absolutely, i.e., in any language or framework-independent sense, what objects a speaker is talking about’ (Quine, 1969: 58). Within the terms of embodied cognition, the observation that most language, and indeed most thought, is metaphorical does not banish the world, but rather casts the body and the sense-making processes inherent in that body as the interface between thought and world. Cognitive operations such as the deployment of conceptual metaphor becomes one of what Andy Clark calls ‘(T)he slippery strategies of the embodied, embedded mind.’ (1997: 207). Language is therefore configured as a part of that interface.

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<sup>32</sup> Which irresistably reminds me of the scene in the film ‘Yellow Submarine’ when the Beatles are sailing through the Sea of Holes and Ringo reaches out and grabs one of these holes, a black circle of empty space, plucking it from its setting and putting it in his pocket. What was left behind after the removal of the hole doesn’t bear thinking about.

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Again and again we use words to focus, clarify, transform, offload, and control our own thinkings. Thus understood, language is not the mere imperfect mirror of our intuitive knowledge. Rather it is part and parcel of the mechanism of reason itself (Clark, 1997: 207).

Objects remain objects and metaphorical objectivity becomes one of a number of imaginative poetic devices for the active comprehension of the otherwise incomprehensible, including the often counter-intuitive but verifiable knowledge objects found at the end of scientific procedures. Without diminishing the status and particular value of such procedures, it might be said that the shared facts of empirical science, in the terms of this analysis, appear as shimmering stanzas of interpersonal poetry; the ultimate acts of collaborative art. As Richard Dawkins puts it ‘Science is the poetry of reality’ (Dawkins, 2007).

The second implication for this embodied embedded view of the relationship between language and knowledge, and how cognition relates to both, is that there may be occasions when the knowledge figuring in the communication is not usefully considered to be a prototypical object lying at the end of some explicatory procedure. If this were the case then setting up linguistic conditions, and by implication cognitive conceptual conditions, which simulate the condition of objectivity may be counter-productive, reminiscent of Michael Polanyi’s example: ‘Suppose a lecturer points his finger at an object, and tells the audience: ‘Look at this!’ The audience will follow the pointing finger and look at the object’ (1969: 181). If the point was not where he was pointing or the aim where it was aimed, this constitutes a misdirection. It may be that a better strategy is to accept the inevitable power of language, and the embodied cognition it evidences, to constitute not only ontology but also epistemology.

Since the use of spatial metaphor appears to be ubiquitous if anything is to be said at all, the space of writing which does not confine itself to the necessary constructions of empiricism will have features and variations which are similarly unconstrained. This space was well described by Michel Foucault, tracing its origins to some of the sources from which this writing also springs.



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Bachelard's monumental work and the descriptions of phenomenologists have taught us that we do not live in a homogeneous and empty space, but on the contrary in a space thoroughly imbued with quantities and perhaps thoroughly fantasmatic as well. The space of our primary perception, the space of our dreams and that of our passions hold within themselves qualities that seem intrinsic: these is a light, ethereal, transparent space, or again a dark, rough, encumbered space; a space from above, of summits, or on the contrary a space from below, of mud; or again a space that can be flowing like sparkling water, or a space that is fixed, congealed, like stone or crystal (Foucault, 1986: 23).

So to this extent the writing I am undertaking here, and also in the blog which this essay accompanies, only partially engages with the production of objects and only partly offers lucidity. I hope that the conceptual space that I am opening out in order to share it with the reader is clean enough to allow us to both enjoy the 'interpersonal poetry' and 'collaborative art' shaped by the agreed discourse of *homo academicus*<sup>33</sup>. I also hope, however, that the more slippery rules of form which characterise blogging, and indeed which may characterise (arts) practice more generally, offer different spaces in which ideas can play.

### **Knowledge (noun)**

On the subject of language, the distinction that is implied in the choice of the term 'knowledge' or 'knowing' in which there is a shift from noun to present participle is also an indicator of exactly how the discourse around epistemology is being framed.

As indicated above, the organisational logic for our understanding of different forms of knowledge is drawn from our embodied experience as spatially-located entities, and the differences in knowledge types is mapped from the differences in spatial and sensory awareness produced by that embodiment. The use of these terms 'knowledge' and 'knowing' can be identified with reference to this organisational schema.

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BOURDIEU, P. (1988) *Homo academicus*, Cambridge, Polity Press in association with Basil Blackwell.

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When we use the word ‘knowledge’ we are implicitly conferring upon the ‘object’ of knowledge some of the properties associated with objects in the physical world of our embodiment, or conversely, we are using the experience of the ‘object’ as an image schema through which the abstract concept of knowledge might be understood. This idea of the object as image schema is developed in Ronald Langacker (1987) and Naomi Quinn (1991); research which has been collected in Francisco Santibanez essay *The Object Image Schema and Other Dependent Schemas* (2002). In this last work, Santibanez lists what he argues are the features of the ‘prototypical’ object

- a) We can move and manipulate objects in different ways, which may modify their properties as well as their relations with other entities.
- b) Objects are typically perceived as unified wholes which, on closer inspection, may be mentally divided into parts in order to reason about their physical arrangement and functionality.
- c) ... loss of integrity may result in the destruction of the object.

Paul Stockwell, in ‘Cognitive Poetics’ (2002) gives a slightly different description of some of the features of ‘objects’<sup>34</sup>, in which objects tend to be clearly bounded, be (visually) available to more than one individual at once, to persist over time and to continue to exist in absence of a viewer.

This last feature has particular salience since, as a defining feature, it marks the object as distinct from the observer in a fundamental way<sup>35</sup>. This intuitive separation between the observer and the observed, which serves to determine the ontological sovereignty of the *object* and therefore the similarly sovereign state of *objectivity*, has been critiqued by a number of writers, even whilst the apparent naturalness of such a separation is acknowledged (see Bloom, 2004). This critique also appears in the philosophy of science. As the physicist Percy Bridgman, put it:

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<sup>34</sup> In presenting this list, Stockwell is drawing largely on a Gestalt tradition in which objects or figures are distinguished from the ‘ground’ against which they are placed.

<sup>35</sup> As the science fiction author Philip K. Dick put it “Reality is that which, when you stop believing in it, doesn't go away”. [http://en.wikiquote.org/wiki/Philip\\_K.\\_Dick](http://en.wikiquote.org/wiki/Philip_K._Dick) (Accessed 19/06/08)

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Since an object never occurs naked but always in conjunction with an instrument of measurement or the means whereby we obtain knowledge of it, the concept of 'object' as something in and of itself, is an illegitimate one. (Bridgeman in Hook, 1974: 48)

This is also a question which exercised Albert Einstein (in Schilpp, 1959), particularly in relation to the status of the moon as an ontological/epistemological object of realist knowledge. Despite these reservations, however, the condition of the prototypical object described by Stockwell still seems to figure within the logic of the language game of empiricism, and forms the object at the end of the panoptical gaze discussed earlier. This use of the term 'knowledge' places our attention on the apparently autonomous object, and distracts us from the presence of the instrument of our own processes of knowledge production. The body is rendered 'absent' and 'ecstatic' (Leder, 1990: 20) in this flight away from the source of such 'measurement' toward its destination in the perceived/conceived, and theoretically 'possessed' object.

### **Knowing (verb)**

The term 'knowing' has a very different function within the overall schema, and it is revealing that certain writers, Mark Johnson (2007) for example, makes explicit and insistent use of 'knowing' as a preferential term. Knowing, as a verb, demands the acknowledgement of a subject engaged in the act indicated; there is no escape or flight from the body of the knower as seems to be implied by 'knowledge'. In using the term 'knowing' the focus is shifted away from the destination of the knowledge production process and widened to include something of the source and the path. There is also a sense, in this use of the verb, that the object of such knowing is not complete and permanent, existing like a rock on the riverbed, but rather is open to the pressings of engagement.

In order to flesh out these sentences, with their shape-shifting references to objects, subjects, acts of knowing and scripts of knowledge, it might be useful to return to the original binary of objectivity and subjectivity. These are the compass directions on a map of knowing which is shared by each of the examples opened up in the examples below and

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which point to the two locations that mark the limits of a horizontal epistemological dimension; inwards to the core of the self, seat of understanding, fount of wisdom, and viewpoint on the tacit; and outwards to the experimental horizon of data, the unrolling procedural path to the possessible object.

### **Embodied Cognition and Conceptual Metaphor**

In this section of the writing I unpack some of the background to embodied cognition as it has informed the relationships between body, language, and environment. I introduce conceptual metaphor and image schemas as analytic frameworks for approaching the thesis, and begin to indicate some of the main areas of exploration that this framework will be brought to.

Whilst modern theories of embodied cognition, including the use of conceptual metaphor and image schema, are grounded in evolutionary psychology, linguistics, and neuroscience, their philosophical roots are elsewhere. Johnson, for example, who has written several seminal texts which have helped to define this field, (both sole authored and in collaboration with George Lakoff), places these ideas in a lineage coming out of the American Pragmatism of William James and John Dewey, and into the phenomenology of Maurice Merleau-Ponty, Eugene Gendlin, and Drew Leder among others. Although Johnson does not mention Gaston Bachelard, I would also place him within this trajectory, to the extent that his aim in, for example, *The Poetics of Space* (1994) is to uncover the embodied, sensate, and indeed sensual relationship between the poetic imagination and lived experience.

In proceeding with this analysis, it may be relevant to note that suggestions of universality have been made regarding some of the ideas in the writing (Lakoff and Johnson, 1999, Lakoff, 1990), basing this universality on common human experience, common embodiment, and common evolutionary history. Although I find many of these propositions compelling, this is not a claim that will be advanced here. I am referring

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primarily to the epistemological discourse of the Western philosophical tradition; primarily that line of thought which, as noted above, arises out of American Pragmatism, phenomenology, and the experiential philosophy that is informed by developments within embodied cognition and cognitive linguistics. This is the tradition that is critiqued and reinterpreted in Lakoff and Johnson's 'Philosophy in the Flesh' (1999) and which is a key resource within this analysis.

Until relatively recently an understanding of the relationships between language and the world involved an unproblematic division between the literal and the metaphorical, (see Ortony, 1979). Developments in embodied cognition, grounded ultimately in evolutionary psychology, have demonstrated that our ability to conceptualise abstract concepts, including the concept of *knowledge*, requires the extensive, and largely unconscious, use of metaphor and related figurative devices. Moreover, the notion of metaphor as primarily a linguistic phenomenon is replaced with an understanding that considers it as present in all forms of expression; signs, gestures, behaviour etc.

The biologist and linguistic Stephen Pinker traces the origins of metaphor use to an adaptation of existing cognitive mechanisms originally designed to allow the body to sense and negotiate its environment. As Pinker describes it, the structures of cognition which in early humans, as in other animals, originally evolved to deal with the problems of moving through a physical spatial environment; sensing objects and movements, experiencing force and resistance, at some point were copied into other parts of the brain such that they became 'scaffolding whose slots are filled with symbols for more abstract concerns like states, possessions, ideas, and desires' (Pinker, 1997: 355).

Lakoff and Johnson identify a second mechanism by which the cognitive 'scaffolding' proposed by Pinker becomes populated with metaphorical associations. They claim that in early childhood terms from the concrete 'source' domain of lived experience are fused with terms from the abstract 'target' domain through their repeated coincident occurrence. So, for example, the experience of seeing the level of liquid in a container go up as more liquid is added to it leads to the association of MORE with UP (Lakoff and Johnson, 1999).

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This association then becomes available as a metaphor to express the sense that some otherwise abstract concept is increasing or decreasing. Lakoff and Johnson cite expressions such as ‘prices rose; his income went down; unemployment is up; exports are down; the number of homeless people is very high’ to demonstrate this process.<sup>36</sup> Working with the same metaphor, Zoltan Kövecses (2001: 214) cites the example of sound intensity which is often identified as being ‘high’ in volume, and this can be reduced by turning the sound ‘down’. Allied to this use of UP as a metaphor for MORE is an elaboration in which UP is GOOD (Lakoff in Ortony, 1979: 240); although this entailment is not developed directly here, it may be evident throughout some of the examples discussed below that this association is at work in the construction of certain ideas.

An important example of this ‘conflation’ is that which is argued as linking the concrete experience of *seeing* with the abstract concept of *knowing*. This metaphorical link is developed by Christopher Johnson (1999), Joseph Grady (1997), and Lakoff and Johnson (1981), and is claimed to be forged through the recurrent experience in which one ‘comes to see’ (something) at the same time as one ‘comes to know’ (that thing). This example of a metaphorical association is significant to this writing and is discussed in more detail below.

The conclusion of these various theories and developments is an understanding of the key role that metaphor plays in language and cognition. This is summed up by Lakoff and Johnson as follows:

Metaphor is for most people a device of the poetic imagination and the rhetorical flourish – a matter of extraordinary rather than ordinary language. Moreover, metaphor is typically viewed as characteristic of language alone, a matter of words rather than thought or action. For this reason, most people think they can get along perfectly well without metaphor. We have found, on the contrary, that metaphor is pervasive in everyday life, not just in language but in thought and action. Our ordinary conceptual system, in terms of which we both think and act is

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<sup>36</sup> Lakoff goes on to claim that this association between the conflated terms of the metaphor has a cultural universality based on the commonality of certain human experiences. As I state above, whilst this claim for universality is compelling I am not advancing that claim in this thesis.

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fundamentally metaphorical in nature.... But our conceptual system is not something we are normally aware of. (Lakoff and Johnson, 1981: 6)

Lakoff and Johnson go on to make a robust claim that metaphor, rather than simply providing poetic flourishes to otherwise transparent<sup>37</sup> speech, is constitutive of major aspects of cognition itself, and that this cognition is revealed through language and other expressive forms. This model of the relationship between embodiment, cognition, and language, is further supported by research in the areas of evolutionary psychology (Barkow et al., 1995), consciousness studies (Barnden, 1997) neuroscience (Feldman and Narayanan, 2004; Rapp et al., 2004), philosophy of science (Brown, 2003; Jones, 1983), politics (Lakoff, 2002, 2004), studies of gesture, (McNeill, 1992; Kendon, 1997; Kendon, 2004), and education (Lee and Timothy, 2003; Wilson, 1995). To date no extensive work has been carried out which applies the theoretical frameworks provided by embodied cognition and cognitive linguistics to digital media practices, including blogging and web-based expressions. Nor has there been any attempt to use these analytical techniques to uncover relationships between different forms of knowledge and knowing. These are some of the areas under investigation in this thesis.

### **Image Schema**

The term 'image schema' is developed particularly in the work of Mark Johnson (1992, 1995), although it has been used and expanded by others (Stockwell, 2002, McVittie, 2007, Gibbs and Colston, 1995), and indicates a particular use of conceptual metaphor that is found in much complex cognition, and is one which I use within this writing. An image schema, (or sometimes 'kinesthetic image schema') is a structured set of interrelated images and/or actions which are imported wholesale for use as a means to comprehend the otherwise incomprehensible. As Stockwell defines it in 'Cognitive Poetics: An Introduction';

Image schemas are mental pictures that we use as basic templates for

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<sup>37</sup> As noted above, the very concept that speech might be 'transparent' is evidence of the pervasiveness of metaphor within discourse.

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understanding situations that occur commonly. We build up image schemas in our minds, and we tend to share particular image schemas with the community in which we live, on the basis of our local bodily interaction with the world. (Stockwell, 2002: 16)

Image schemas differ from conceptual metaphors in that, whereas metaphors are used to refer to relatively simple, static concepts, image schemas have complex dynamic structures which articulate relationships amongst metaphorical entities drawn from the relationships between their counterparts in physical experience. This set of relations allows more detailed and highly structured concepts to be understood.

The development of conceptual metaphor theory and image schemas has provided a meta-analytic framework to consider a range of different types of writing: scientific, poetry, impressionistic, anecdotal, imagistic, and technical. All of these highly varied writing forms, and the concepts they refer to, are ultimately grounded in the common vocabulary of the body and the sensorimotor system. Indeed, there is no good reason why non-written forms might not also be embraced within the terms of the theory since pictures, actions, objects, etc are as susceptible to metaphor analysis as written or spoken texts.

George Lakoff in 'Women, Fire, and Dangerous Things' (1990) begins just such a cross-modal analysis in his discussion of the concept of anger. Through the identification of a key metaphor for anger in which it is conceived of as pressure in a sealed container, (usually in the presence of heat), he is able to track this idea across personal narratives, cartoon images, fictional writings, and scientific (psychoanalytic) texts.

The common ground of poetic cognition out of which all expression exudes and of which metaphor is a part, regardless of its status as objective or subjective, personal or interpersonal, scientific or artistic, provides a space in which all of these expressive forms can be considered. As such it provides a structure for the analysis of epistemologies at work in the blog to which this writing refers. In *The Conference Report* a range of writing styles are utilised suggestive of these different ways of knowing, and one of the aims in the



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following sections will be to identify the key metaphors and schema which underpin and connect these knowledge forms.

### **Metaphors of Knowledge**

As noted above, according to Lakoff and Johnson (1981) and others, the most common metaphor for knowing is KNOWING IS SEEING. This metaphor is revealed in turns of phrase such as ‘I see what you mean’ and ‘I’m looking for a solution to this problem’. In both of these phrases the visual term is substituted for what would otherwise be an abstract and therefore less comprehensible term.

The following pages draw out some of the unspecified, but nevertheless implicit entailments of the KNOWING IS SEEING schema and relate it to the wider schema KNOWING IS SENSING (see Lakoff and Johnson, 1981). Thereafter, the concrete scenario from which this schema and its entailments are unconsciously drawn is explained, marking how shifts in this scenario affect the conceptualization of knowledge in a coherent and structured way. I will argue that the KNOWING IS SENSING schema is part of an overall large-scale schema, broadly based on the embodied experience of *being in space*, and that the variations in how this space might be conceived, in what one might expect to encounter in that space, in the different ways of accessing that space, and the possibilities of movement within that space, have salient effect on the time of KNOWING that is effected. Using this overall schema I will aim to demonstrate that the differences that we find in knowledge types (objective/subjective, tacit/explicit, felt/propositional etc.) fall out from the application of this schema relating knowing to the variable experiencing of *space*.

In order to demonstrate how this understanding of *knowing* and *knowledge* functions through the application of an image schema based on the experience of ‘being-in-space’ I

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consider how this plays out in terms of established systems of epistemology. I demonstrate that a consistency can be observed within the structure of different knowledge systems and that this consistency reflects the image schema noted above. As a means to make this manifest I will first consider three such systems; Michael Polanyi's *Tacit and Explicit Knowledge*, David Perkins *Proactive, Performative, Possessive* model, and the *Data, Information, Knowledge, Wisdom Hierarchy* associated with Ackoff, Zeleny, and others.

### **Michael Polanyi – The Tacit Dimension**

Dorothy Leonard and Sylvia Sensiper, writing on the role of 'tacit knowledge' in group innovation make the following claim:

Knowledge exists on a spectrum. At one extreme, it is almost completely tacit, that is semiconscious and unconscious knowledge held in people's heads and bodies. At the other end of the spectrum, knowledge is almost completely explicit or codified, structured and accessible to people other than the individuals originating it. Most knowledge of course exists between the extremes. Explicit elements are objective, rational and created in the 'then and there', while the tacit elements are subjective experiential and created in the 'here and now'. (1998: 113)

These terms, 'tacit' and 'explicit' come from the writings of Michael Polanyi and signify types of knowing which it may be informative to relate to the overall schema informing this essay. In Polanyi's terms, explicit knowledge is simply that which can be communicated in symbolic form and has some overlap with 'propositional'<sup>38</sup> or 'declarative' knowledge. Explicit knowledge is typically 'know that' in character and corresponds with that which can be written, spoken, represented diagrammatically, or articulated in the form of

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See

KLEIN, P. D. (1971) A Proposed Definition of Propositional Knowledge. *The Journal of Philosophy*, 68, 471-482. An important distinction, although one which is not relevant at this point in the writing, is that propositional knowledge consists of 'that which can be stated as the case', which contains the suggestion of the subjective and the personal perspective. It is therefore not analogous to 'objective knowledge'.

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instructions, rules, laws, and heuristics. Explicit knowledge, in metaphorical terms, approaches the condition of the object in that it can be fixed, outlined, and rendered permanent through its encoding into language or other form.

The concept of tacit knowledge has been extended by writers since Polanyi such that it is sometimes taken to include almost any form of knowledge which is simply not expressed, (Leonard and Sensiper, 1998, Koskinen and Vanharanta, 2002). Polanyi's original understanding of the term was more precise however. Polanyi saw tacit knowledge as providing the fundamental components from which other, more explicit forms of knowing might proceed, and as underpinning the most apparently autonomous, conscious, and explicit, see Haridimos Tsoukas (1996). Tacit knowledge may include the linguistic and cultural contextual information which is necessary for an article of knowledge to be understood, or in a more physically embodied sense, it might consist of those elements of perception which are unavailable to consciousness but nevertheless contribute to conscious observation. In the essay 'The Structure of Consciousness' in *Knowing and Being*, (1969) Polanyi gives the example of our ability to see the world in three dimensions. This ability is the result of our having two eyes, set a few inches apart, each capturing a slightly different version of the visual field. These two images, combined with the extra information provided by the differences between them, are processed by the visual system in the brain to produce the final image which is presented to consciousness; an image containing the dimension of 'depth' that was not present in either of the originating images. What is significant here is that the images presented separately to the left and right eyes are not available to us consciously, and in fact we would have no way of bringing these images to consciousness (apart from closing one eye of course, which simultaneously dismisses this kind of depth perception). The three dimensional image, which Polanyi referred to as constituting our 'focal awareness' cannot be decomposed back into its constituent 'subsidiary' elements. Whilst the observable scene is explicit and can be spoken of descriptively, the subsidiary materials from which it emerges are necessarily tacit and, whilst obviously 'known', inasmuch as they figure in the process of cognition and composition, necessarily remain in silence. As Polanyi observed in *The Tacit Dimension*, 'we can know more than we can tell', (Polanyi, 1983: 4).

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It is significant that, for Polanyi, the processes through which tacit knowledge is composed and utilized do not necessarily ever become available as explicit knowledge. Rather, such accumulations of subsidiary sensation and experience give rise to the play of hunches, guesses, intuitive leaps, and gut responses which he referred to as ‘passions’. Tacit knowledge is not sterile and distant, but is rather threaded throughout with emotion and responses close to the heart of the person. It is this understanding which underpins and gives the name to Polanyi’s best known work, ‘Personal Knowledge’ (Polanyi, 1958).

Without wishing to reduce meaning to etymology, and in the spirit of the kind of metaphor analysis which is key within the conceptual frameworks I am utilising<sup>39</sup>, these terms, *tacit* and *explicit*, will be considered in more detail. This may help to open up the relationship between the forms of knowing they stand for and the image schema of a spatially-extended, sensorially-equipped being that is introduced above.

## **Explicit**

In some formulations the term ‘explicit’ has come to mean sexually exposed or provocative and, when applied to rap music for example, to mean containing uncensored and possibly offensive speech<sup>40</sup>. As far as the origins of the term go, whilst they may appear to lie elsewhere, they do suggest a continuity which embraces these contemporary vernacular uses and Polanyi’s application of the word to a form of knowledge. Explicit comes from the Latin *explicitus* which translates as ‘to unfold’ or ‘to roll out’ (Hoad, 1986), and traces of the *plicitus* can be found in the modern usage *plait* of hair or *plywood*. As noted in the same source, the words *explicitus est liber* could often be found at the end of medieval

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<sup>39</sup> For examples on the application of metaphor analysis within a range of academic and clinical contexts see <http://creet.open.ac.uk/projects/metaphor-analysis/project-introduction.cfm?subpage=bibliography> (Accessed 18/06/08)

<sup>40</sup> The term ‘explicit’ features extensively in the regulations produced by the RIAA, the regulatory body in the USA overseeing the recording industry. The so-called ‘PAL sticker’, attached to the outside of recordings regarded as having potentially offensive content, reads ‘Parental Advisory: Explicit Content’. Current RIAA guidelines are available online at [http://riaa.com/parentaladvisory.php?content\\_selector=](http://riaa.com/parentaladvisory.php?content_selector=) (Accessed 19/06/08)

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manuscripts where today we might find *The End*. The location of this sentence at the end of piece of writing makes literal and appropriate sense when that writing takes the form of a scroll, which is where one would originally find them. In arriving at that point of the writing, the ‘explication’, one had literally unrolled the knowledge into the world and hence made it ‘explicit’. The examples of modern usage in sexually-loaded images or potentially-offensive language can be seen to follow that tradition in metaphorical form. The pornographic picture is explicitly provocative because it does not lie dormant on the page, but is felt to unfurl across the space between image and viewer and seems to touch his passions directly. The obscenities and violence found in the lyrics to some music may, in this sense, be thought of as the unfolding of an arm and the throwing of a punch out at the listener. The explicit knowledge of Polanyi shows a family resemblance to these metaphorical instantiations, and indeed to a raft of other uses, all of which link some work of the intellect to an outgoing occupation of space.

Walter Ong includes this term amongst those which he saw as relating knowing not only to the occupation of space, but also to vision<sup>41</sup>, ‘when knowledge is likened to sight it becomes pretty exclusively a matter of explanation or explication, a laying out on a surface, perhaps in chart-like form, or an unfolding, to present maximum exteriority’ (Ong, 1977: 123). There is the sense that the knowing which can be described, articulated, proposed, and declared, has extended itself outward from the person of the speaker, carving a clear path through space such that it stands as an object at the end of that path.

The close allegiance of the notion of the explicit is thoroughly exploited in Rebecca Schneider’s ‘The Explicit Body in Performance’ (1997). As part of a series of closely argued propositions about, particularly, the status of women in relation to body-based arts practice she says that, in exploring Carolee Schneemann’s work, she intends to ‘unpack the legacies of visual perspectivalism relative to the “scene” of body made explicit in contemporary feminist performance’ (1997: 7). She goes on to say that:

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<sup>41</sup> The particular significance of *vision* is returned to below.

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Habits of perspectival vision have emblematically placed the female body at the vanishing point even as the primary scene or landscape of representation is feminized. Taking issue with those who claim that the twentieth century has seen the demise of perspectival ways of seeing, I argue that certain tenets of perspectival vision, particular the removed, invisible viewer, are still very much at play even in so-called antiocular economies of vision.... I suggest that explicit body performers employ second sight/site, a doubled vision, as the “look back” at visual perspective. (1997: 7)

I would not wish to unpack this paragraph in its entirety in terms of the various conceptual metaphors of space that it draws upon and which allow it to make sense; some of these are, indeed, addressed later in this writing. What we might note at this point is that the term *explicit* is clearly being adopted because of its implication of an unfolding across (possibly contested) space. This application of the schema is used by Schneider along with a set of understandings concerning the politics of space, gaze, and objects.

### **Tacit**

The other term in Polanyi’s apparent binary is, as already noted, ‘tacit’, and is familiar from its derivative, ‘taciturn’. (‘Apparent’ because they are neither complementary nor opposite, as Polanyi himself indicates they are terms which describe the structure of a ‘dimension’, not separate and isolated alternatives). Both words have in common their origins in silence, and in that which is passed over in silence. The difference that makes a difference is that, whilst *taciturn* suggests a reluctance or unwillingness to speak, *tacit* does not offer even the possibility. In this sense the *tacit* is reminiscent of Wittgenstein’s ‘what can be said at all can be said clearly, and what we cannot talk about we must pass over in silence’ (1961: 151). Paralleling the physical principle of ‘subsidiary awareness’ outlined above, to be tacit is to be constitutive of expressibility but to take no part in that expression. Though it has position within the body of the speaker, that position is disposition. In contrast to explicit knowledge which folds out in the direction of a metaphorically external, distant object, tacit knowledge stays close to home and the condition of the subject. In the spectrum of knowing and being, tacit knowledge blends into being.

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The overall image that Polanyi provides is therefore supportive of the overall image schema that we are here articulating; an understanding of knowledge and knowing which maps onto our experience of being at the centre of phenomenal space. That which is close to us, or which is interior to us, does not extend into space and cannot be visualized and objectified. It is held in the necessary silence of our being. Beyond the limits of our skin and the limits of our arms the act of knowing rolls out toward the horizon, leading our eyes to the object created by that unfolding.

### **Other Knowledge Binaries**

Like the distinction that Polanyi makes between *tacit* and *explicit* knowledge, many taxonomies of knowledge rely on an apparent binary division which separates what are seen as two prototypically different forms of knowing. A list of such pairings, particularly as they are applied to mathematics, is provided by Lenni Haapsalo and Dorde Kadjevic;

- conceptual vs. practical knowledge
  - manifest (structural) vs. instrumental content
  - knowing that - knowing how
  - declarative vs. procedural knowledge
  - facts/propositional vs. skills/procedural knowledge
  - hierarchies of cognitive units - condition-action rules
  - relational representations - condition-action rules
  - understanding - algorithmic performance
  - conceptual competence - procedural competence
  - rich vs. poor in relationships/algorithms
  - theological vs. schematic knowledge
  - deductive vs. empirical knowledge
  - meaningful vs. mechanical knowledge
  - logical/relational vs. instrumental understanding
  - connected networks - sequences of actions
  - connections between conceptions - computational skills
  - words specifying concept - mental images/processes
  - definitions/connections - rules/connotations
  - proceptual vs. procedural thinking
  - structural vs. operational thinking
- (2000: 141).

This plethora of epistemological systems which divide forms of knowing into opposing binaries might suggest that the terms on each side of this distinction are necessarily synonymous, however, there are, in fact, subtle differences between these adjacent concepts. It would be beyond the scope of this essay to unpick all of the possible distinctions in detail, however, an analysis of the difference between two terms which are occasionally merged, that is the difference between Polanyi's *tacit* and the *procedural* knowledge which features in some of the pairings above, may be useful. The identification of what distinguishes these terms from each other brings out certain subtleties in the working of the overall image schema for which I am arguing.

### **Tacit vs. Procedural Knowledge**

The term *procedural knowledge*, articulated most clearly by Gilbert Ryle (1949) as 'know how' (as opposed to 'know that') is often contrasted most directly with descriptive, declarative, or propositional knowledge. Generally, but not exclusively, applied to physical knowing such as sport or craft-based activities, procedural knowledge takes the form of a set of learned actions and physical schema which allow for complex tasks to be undertaken. The acquisition of procedural knowledge might prototypically involve such strategies as apprenticeship, 'on the job' training, rehearsal, 'trial and error' learning, or some kind of guided 'learning by doing'. Typical examples might include learning to drive, choreography or dance technique classes, or teaching oneself to juggle. The common feature of these activities is that they have a common metaphorical structure which is, in turn, drawn from an established image schema known as the SOURCE PATH GOAL schema (Johnson, 1992, Lakoff and Johnson, 1981). In this schema the acquisition of knowledge is seen as progress along a path, with the incremental movement along that path corresponding to the incremental gaining of knowledge or skill. The ultimate aim of this movement, the final goal, is the desired knowledge which is conceptualised as lying at the end of that path, (or in some variants as comprising the path itself, or as the terminal point of that path). The procedure of gaining knowledge, then, is understood through the



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embodied metaphor of proceeding along a path to a preconceived location, with the attainment of the goal involving arrival at that location. In terms of the learning of a physical craft or skill, the gradual progression toward expertise that typifies apprenticeship-type training for example, is closely mapped onto this SOURCE PATH GOAL schema. In fact, the match is so close that it can be quite difficult to detect the presence of a metaphor in operation, we routinely say of such learning that it involves ‘steps’, ‘progression’, ‘advancing ones studies’, etc. This unconscious application is typical of a conceptual metaphor in action.

Although, as noted above, this metaphor of journeying along a path to a goal is typically applied to procedural knowledge in a craft-based or other ‘hands on’ activity<sup>42</sup>, it also informs many other common understandings of knowledge acquisition revealed in expressions such as ‘training course’, etc. Again, this use of metaphor is so intuitive that it tends to pass below the radar of conscious awareness in a way that more overtly ‘poetic’ metaphor would not.

Procedural knowledge tends not to be articulated in the form of language, or to the extent that it is so expressed it is usually recognised that the words do not capture the knowledge in its entirety; learning to drive by only reading the manual is unlikely to be successful, (although it may be significant that such a manual exists which at least points one in the direction of the knowledge; see below). In this regard procedural and tacit knowledge show some similarities, however, in other respects they are quite different and such difference seem to suggest complexities in the schema which are perhaps not immediately apparent. Whereas procedural knowledge contains within the logic of its unspoken and unconscious metaphorical construction the idea of a path which knowledge acquisition must proceed along, tacit knowledge has no such trajectory. And while the directions that procedural knowledge must follow to reach its final goal may be available in propositional form, as a manual giving instruction on the technique of driving for example, such propedeutic devices do not engage with the idea of the tacit at all. As noted above, Polanyi

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<sup>42</sup> The relationship suggested here between the haptic sense of ‘crafting’ knowledge and the movement through space that is implicit in ‘procedure’ is explored later in this writing.

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likens tacit knowledge to the *subsidiary awareness* which is constitutive of the depth of knowing, but which is itself unavailable to *focal awareness*. As a dispositional faculty, the tacit is embodied at the level of perception and constitutive less of knowing than of being. Tacit knowledge has no ultimate goal, and whilst it can be deployed in the making of maps and identification of goals, it does not comprise either map or goal in itself. Therefore, just as *tacit* is not simply the opposite term of a binary to *explicit* (the opposite of which, presumably would be *implicit*), so it is also not understood as synonymous with *procedural*.

Rather than being different terms for the same categories within a purely binary taxonomic index of knowledge types, these concepts, *tacit* and *procedural*, as well as many others, figure within a complex but substantially coherent metaphorical image schema.

### **David Perkins – Beyond Understanding**

In ‘Beyond Understanding’, a keynote speech at the symposium on Threshold Concepts at Strathclyde University, David Perkins (Perkins, 2006) laid out a taxonomy of knowledge and its application to teaching and learning. He describes knowledge as taking up one of three ontologically distinct forms.

The first he describes as ‘possessive’ knowledge, in which the object of knowledge is felt capable of being owned by the individual and can be produced on request. In this the item of knowledge is considered as possessed by the individual and this possession is, in turn, conceived of as a kind of object, a rock that can be produced on demand. This metaphorical mapping of the concept of knowledge-as-object has the effect of awarding other object-like properties to the knowledge item. Objects tend to be relatively solid, clearly bounded, and consistent over time. Similarly, knowledge which has this character of a possessed object is also intuitively experienced as solid, bounded, stationary, and permanent. (This understanding of knowledge-as-object is expanded in a later section of this writing.)

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The second form of knowledge that Perkins introduces is that which he considers 'performative'<sup>43</sup>. This type of knowing goes beyond the rote recitation of solid items of data and begins to use this data, these facts, not as objects of thought but as tools to think with. Knowledge, in this formulation, becomes less like a set of solid, separate, inert entities and more like living dynamic structures, capable of breeding, hybridising, fissioning, fusing, and blending (Fauconnier and Turner, 2002).

Performative knowledge responds to situations in a way which is not hard and resistant, but which is flexible and yielding, and the clearest examples of this knowledge is its ability to respond to creative or problem-solving situations. Possessed, object-like knowledge is speechless when faced with problems which require more than the rote revealing of a pre-existing solution. The individual, isolated facts which characterise a possessed knowledge approach do not allow the kind of analysis and creative thinking which active problem solving demands. Performative knowing, on the other hand, is well equipped to make an appropriate response. This ability of what Perkins calls performative knowledge to dynamically construct novel solutions to problems and creative responses to situations is referred to frequently in literature on creativity and innovation. Arthur Koestler (1989) calls it 'bisociation'<sup>44</sup>, elsewhere it is formalised into knowledge generation systems and training routines such as Triz (Altshuller, 1984) Synectics (Gordon, 1961) amongst others. Performative knowledge is very good at responding to set briefs, solving problems, fulfilling creative criteria, and producing novel answers to well-framed questions.

The third type of knowledge which Perkins introduces, and the one which adds the most to current understanding of knowledge, is what he terms 'proactive'. This form of knowing, as the name implies, is neither inert nor reactive or responsive, but rather is actively engaged in the processes of its own implementation. Individuals who are able to mobilise proactive

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<sup>43</sup> As indicated earlier, the term 'performative' and its etymological root 'performance' have been widely used and have shifted their meaning considerably through this usage.

<sup>44</sup> It is revealing to note that Koestler explains 'bisociation' in saying "I have coined the term 'bisociation' in order to make a distinction between the routine skills of thinking on a 'plane' as it were, and the creative act which, as I shall try to show, always operates on more than one plane". (ibid: p.135) Even though Koestler draws our attention to his use of the word 'plane' being a figure of speech by placing it in scare quotes, it still passes seamlessly into our understanding through the use of this familiar embodied spatial metaphor.

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knowledge resources are not ‘problem solvers’ they are ‘problem finders’, that is, the knowledge that they embody (possess is too passive a term) seems to constantly engage with the world around them looking for opportunities to perform. Proactive knowledge does not simply appear on demand when a question is posed or a problem is set. This type of knowledge seems largely to be dispositional; certain attitudes or habits of behaviour need to be in place in order for proactivity to emerge, and whilst such disposition can be learned or cultivated, according to Perkins it is likely that some individuals would find this easier than others. Proactive knowledge users, whether by accident of nature or design of education, are constantly asking questions of the world, noticing small irregularities in the fabric of society, finding new uses for old objects, coining new words and phrases because they like the taste of language. They make extensive and joyful use of metaphor and analogy, and are incontinent inventors.

This continuum of knowledge, from the possessive at one extreme to the most proactive at the other, is complementary to the continuum of objectivity and subjectivity. Possessive knowledge, constitutive of object-like facts, appears, unsurprisingly, at the objective end of the spectrum. It is experienced as distant, removed, existing in interpersonal space. Proactive knowledge, conversely, is felt against the surface of the body, or even inside the body, and is inseparable from the experience of being. Proactive knowledge is most likely to be identified as a component of the personality of a person, rather than something outside the orbit of their identity. It is part of the subjective phenomenological experience of one's self concept. Between these telomeric endpoints Perkins places ‘performative’ knowledge,

As noted above, the term ‘performative’ has an extensive history and figures in a wide range of discourses outside of the particular use that Perkins makes of it. This variation in use has been partly mapped by Bal (2002), who identifies it as one of a number of ‘travelling concepts’ which show this peripatetic tendency to cross disciplinary boundaries. Its deployment within the writing of Judith Butler (1990, 1997), has been particularly influential, although its origins in J.L. Austin’s seminal work ‘How to Do Things with Words’ (1971) is possibly closest to the sense in which Perkins is using it. In Austin’s formulation a performative term is a word which carries out a particular action; ‘I swear’,

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for example, or 'I name this ship'. Such performative expressions or 'illocutionary acts' are not descriptive of an entity which lies outside of the sound; rather such terms actively craft the nature of the environment in which they are uttered. When the words 'I swear' are spoken it is as if the speaker has placed metaphorical hands on the surface of experience and moulded it into the shape of the truth that is being attesting to. The performative knowledge that Perkins invokes is similarly haptic in nature, taking hold of ideas and kneading them into new and interesting shapes.

In terms of the relationship of Perkins taxonomy to the overall image schema that I am describing here, we might say that what he is effectively doing is mapping different types of knowledge across an expanse of metaphorical, phenomenal space. His 'possessive' knowledge is that which appears to have something of the quality of an object, placed at some distance but clearly within the line of sight. Like other 'visual' objects it can be 'seen' simultaneously by a number of different observers and has something of the permanence, fixity, and unchanging nature of prototypical objects in lived experience. In this schema the ideal object of possessive knowledge may be the empirical fact, established through deduction, built on firm foundations of scientific research, and unwavering in its resistance to the attacks of falsification. It is a noun in the sentences of meaningful discourse.

Performative knowledge does not have this object status but, as the term implies in Austin, rather adopts the position of an action. Here is knowledge, or perhaps 'knowing', which engages as physical action, or which moves nomadically through space. Performative knowledge functions as a verb, or as many verbs, and its role is to pick, to pack, to grasp, to fold, to tear, to chop, to walk, to talk, to write, to run, and to never set itself into stone and never to stand still. Its space of operation is not out in the open where it can be skewered in the triangulating gaze of multiple I's, but at the limin between body and world. It lives in the interstices between the muscles of the arm and the bark of the tree, and it is also in the swing of the axe. It is motile, ductile, flowing, flowering, and possibly shimmering but it is never caught motionless between the pages of a book.

Proactive knowledge is closer yet. As Perkins says, it is ultimately dispositional, and has none of the qualities of an object or of an action. This is the knowledge or the knowing

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which is inseparable from ‘being’ and therefore is the subject of the sentence. Proactive knowledge swings the axe.

This explication of Perkins’ model demonstrates that, whilst the model contains three types of knowing against Polanyi’s two, and whilst attention is drawn to different aspects, qualities, and interactions, the same broad schema is in place. Different types of knowledge are conceptualised, and thereby distinguished, using an overall metaphorical schema which arranges these ‘knowings’ across an imaginary space, with the features of this knowledge determined by the entailments of the metaphor. Just as the ontology of entities and relationships across actual space is dependent upon certain embodied inevitabilities; objects which are close can be touched whereas objects which are distant can only be seen, for example; so these inevitabilities are carried over as entailments of the overall metaphor.

In order to bring out in more detail the nature of these entailments I would like to consider one further example of knowledge organization.

### **The Data-Information-Knowledge-Wisdom Hierarchy**

Where is the Life we have lost in living?  
Where is the wisdom we have lost in knowledge?  
Where is the knowledge we have lost in information?  
(Eliot, 1934)

The third example of the organisation of knowledge that I would like to hold up is the ‘Data Information Knowledge Wisdom Hierarchy’ associated with Russell Ackoff (1989) although elements of it are prefigured in Milan Zeleny (1987), and in more poetic form in T.S. Eliot (above) and in the lyrics of a song by Frank Zappa<sup>45</sup>. A full and highly effective metaphorical analysis of this model, bringing out the schematic assumptions which

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<sup>45</sup> The 1979 song ‘Packard’s Goose’ by Frank Zappa, on the Album ‘Joe’s Garage Act II and III’ contains the lines: *Information is not knowledge/Knowledge is not wisdom/Wisdom is not truth/Truth is not beauty/Beauty is not love/Love is not music/and Music is THE BEST.*(Tower Records, 1979).

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underpin understanding is to be found in Jonathan Hey's essay *The Data, Information, Knowledge, Wisdom Chain: The Metaphorical Link* (2004). Here I propose merely to reiterate some of the main points of Hey's work and relate them to the overall schema that I am offering, as well as cross-referencing them to parallels within the models suggested by Polanyi and Perkins.

To introduce this model, a brief description of what is meant by the 'Data Information Knowledge Wisdom Hierarchy' is in order. As indicated in the name, the model organises the range of epistemological phenomena into four categories, these are:

- *Data* – this indicates the set of individual facts, figures, sensory impressions, etc pertinent to the situation. Data is regarded as essentially meaningless, although it is the raw material from which meaning is derived.
- *Information* - is regarded as data which has undergone some kind of organisation. Data sets may be divided into categories according to some criteria; individual data items may be linked together according to some salient feature.
- *Knowledge* – this is, essentially, *information* which has been internalised by the person such that they might put it to use. An important feature of knowledge is that, whereas information and data may reside in texts, objects, and events, knowledge acquisition, ownership, and transfer can only be effected by human agents. Such acquisition and transfer will necessarily involve the use of information and data however.
- *Wisdom*<sup>46</sup> - this is seen as the possession of knowledge such that one is able not only to observe patterns of information within data and make intelligent connections between different patterns, but also to feel the principles which underlie the patterns themselves. Wisdom allows one to see these various patterns in their contexts and to be able to remain independent of immersion in that context oneself.

The analysis that Hey conducts focuses exclusively on the first three elements of the hierarchy, and points out how common understandings of the model draw on certain key

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<sup>46</sup> Hey does not address *wisdom* in the cited paper, although I will be referring to it below.

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metaphors. These are primarily *substance* metaphors, in which *data* is conceived as having a different substantive quality to *information* etc. There are, in addition, a number of spatial metaphors at play in Hey's analysis, and in the model more generally, which I will address below. He goes on to discuss how transformations between the different elements in the model, or 'links' in the 'chain', are conceptualised. Here I will briefly summarise Hey's analysis in these areas.

### **Data**

*Data* is understood primarily as a physical resource, and the metaphorical form of this resource has a number of properties which distinguish it from *information* and *knowledge*. Firstly it is conceptualised as a large number of individual, separate, atomistic, entities, like an aggregate of small stones, or a pile of leaves blown by the wind. Items of data have an ontological irreducibility which prevents their being understood as composites themselves; just as when one is collecting pebbles from the beach one would not think to increase one's collection by splitting each pebble in half, so individual datum cannot be divided. Data is also understood as pre-existing any efforts to effect its collection; we conceive it as simply 'out there' waiting for some kind of exploratory practice to discover it. Such entities might be 'collected', 'mined', 'gathered', or 'stored'; on the other hand, because items of data are unconnected to every other item, they might also easily be lost, fall away from one another, disaggregate, or slip through the cracks.

### **Information**

Moving up the hierarchy to *information*, Hey notes that metaphorical concepts of it show significant overlap with those of *data*. It is also conceived as being 'corpuscular' and 'discreet' with each item of information being imaginable as distinct from every other. There is also a shared sense of its being 'out there', pre-existing our efforts to acquire it. Hey also notes that with both *data* and *information*, when the volume of either is large, we



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begin to think of this in terms not of a collection of discreet particulate objects but as a kind of liquid. We might talk of the ‘flow’ of information, or of ‘drowning’ in an excess of it. In this sense it retains some of the properties of the corpuscular but also, like sand through an hour glass, can pass like a liquid. Hey goes on to locate this metaphor of liquidity in relation to its possible origins in the affordances it presents to the body, and this starts to become significant in distinguishing data from information. As Hey explains, affordance is the term that Gibson (1977, 1979) gives to the properties of (physical) entities that we perceive and to which we respond in an embodied way. So for example, the handle of a tool presents itself to the body in such a way that its ‘handleability’ is experienced as a part of the perception of that object, in fact the primary perception. As part of a metaphor of *information* then, if we are looking for a substance metaphor which embodies this sense of there being ‘too much for us to grasp’, then a substance which offers no such affordance would be appropriate. In this regard, such a metaphorical substance acquires the properties of a liquid. An excess of information is therefore understood as being ‘impossible to get a handle on’, ‘hard to grasp’, or ‘slippery’, and we run the risk of ‘drowning’ in it.

It might be intuited from this use of the language of affordance that there is, in the distinguishing of *information* from *data*, the beginnings of an implied human agent figuring in the ground of the epistemology. Even though we have conceived of *data* in substantive terms, the presence of the body as the provider of an affordance to that substance is minimal. As we begin to consider the organisation of *information* however there is a tacit understanding that such substance is under the approach of an intentional agent; the provider of significant form. There is the feeling that what was previously inert *data* is beginning to lean in our direction and organise itself into structures of *information* which at least have the possibility of purchase, even if our grasp is inadequate and the structure too frail.

Hey draws out this epistemological distinction in the metaphor, suggesting that the point at which *information* parts company with *data* is in the sense of what Hey calls ‘attributes’. He draws our attention to the idea that information can be ‘sensitive’ or ‘pertinent’. It can be more or less ‘salient’ or ‘valuable’ in a way that ‘raw’ data cannot. These attributes,

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which are awarded to the information in such a way that they seem to be part of its ontology, are inevitably actually derived from the relationship established between such potential information and the origin of this potential, which is the purposive human user.

## **Knowledge**

Hey's account of *knowledge* metaphors draws a partial distinction in its conception as a substance but more extensively in terms of its assumed *location*. He notes that the substantiality of *knowledge* is variable across the liquid/solid boundary, with *knowledge* being variously expressed as *hard, slippery, well (or ill) formed, bounded, robust*, etc. as well as possibly being *fluid, slippery, sticky, or amorphous, or dry*. Similarly it might be 'hard to grasp' or 'difficult to pin down'. In this regard it can be seen as contiguous with, or possibly overlapping, the substance metaphors used for *data* or *information*, which, as we have already noted, make extensive use of liquid metaphor, simply moving this metaphor in the direction of a possible solidity. The more notable distinction is that, whilst both *data* and *information* are placed entirely outside of the subject (at various degrees of remove or affordance) *knowledge* takes up residence inside the body of the knower. Hey refers here to a conceptualisation in which *knowledge* is thought of as being *internalised*, 'found within the heads of employees'. There is also a strong suggestion of possible ownership with regard to *knowledge* which features much less in understandings of *data* or *information*. We might say we 'have' knowledge, or that we 'possess' it; we might also 'gain', 'acquire', 'own', 'share', or otherwise 'benefit from' knowledge. The closeness of ownership, to the extent where we might even begin to consider our belongings as extensions of our self, is seen here to be an entailment of this metaphor, giving *knowledge* the quality not of a dispossessed and distant object, but as a member of the society of our being; an occupant of the sovereign state of self.

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### **Wisdom (Beyond Understanding)**

It is at this point that I have to abandon Hey's excellent analysis as he confined himself to only the first three links in what he refers to as the 'Data Information Knowledge Wisdom Chain'. The reason he gives for his decision to not continue his analysis into the area of *wisdom* is intriguing; he writes that; 'there already appears to be enough confusion regarding Data, Information and Knowledge without heading into considerably less well-defined territory' (2004: 3). Considering the efficiency of the metaphorical analysis he has carried out so far it would be surprising if this choice of words did not reflect a certain perception of what was understood by *wisdom*<sup>47</sup>. Hey here makes use of an unacknowledged 'territory' metaphor in which the location for the metaphorical ontological status of this wisdom is a place which is 'less well-defined'. This territory toward which Hey seems to be pointing is, apparently, a place of possible confusion, where figure and ground become difficult to distinguish, and where the stuff of thought and the thoughts of stuff are in a state of rarified mutual diffusion. *Wisdom*, as Hey seems to imply through the expression of his refusal to 'go there', is located at no remove from the body of the knower and is almost entirely pro-active, dispositional, and unextended. It avoids categorisation as a kind of 'substance' because it takes part in the stance itself.

### **Beyond Wisdom**

Although Ackoff and others terminate the ascent up the hierarchy of knowing at the point of *wisdom*, others make the leap from the summit into the clear air above. Zeleny, who borrowed from Eliot and Zappa to make management out of poetry, included an additional realm above and beyond the grip of *understanding* and the call of *wisdom*. He referred to this type of knowing as *enlightenment* and described it as 'not only answering or

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<sup>47</sup> Ackoff's original version of the DIKW hierarchy (1989) actually contained an additional layer between *knowledge* and *wisdom* which he called *understanding*. He distinguished these three layers temporarily, suggesting that whilst *knowledge* tended to age rapidly, *understanding* had an aura of permanence about it. However, only *wisdom* was, he felt, truly permanent.

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understanding why (wisdom), but attaining the sense of truth, the sense of right and wrong, and having it socially accepted, respected and sanctioned' (Zeleny, in Sharma, 2004).

As is possibly evident from this account, the major aspect of the metaphorical analysis that Hey carries out of the DIKW hierarchy is in terms of what kind of *substance* the various understanding of knowing are conceived as. Our attention is drawn to these metaphorical substantive distinctions and the various entailments of such distinctions. It is demonstrated that the allusions to the various grades of knowing as solid or liquid or (possibly) evanescent gas are not made randomly but indicate the consistent application of a metaphorical dimension of substantiality. Hardness and softness, resilience and fluidity, robustness and 'airiness' are measurements on a coherent scale of imagined 'objectified' knowing. The *harder* the knowing the easier it is to grasp, the more *gaseous* that knowing the more likely it is to rise and disperse. Allied to this is a consistent pattern of transformation between one substantial form and another. Atomistic grains of hard data become liquid in large quantity, which can in turn be meaningfully pooled into information. Such information might then be alchemically transformed through human agency into the poetic solidity of knowledge. These transformations, familiar to us from the real world of physical embodied experience, have an intuitive structure, and it is the metaphorical application of this structure which, as Hey demonstrates, gives structure to the otherwise inconceivable relations between these different knowledge forms.

This concept of *substance* as both a metaphor for types of knowing and as offering a metaphor for structured transformation, is also a feature of my analysis of knowledge, to be developed below, but here it is insightful to pull out other aspects of the DIKW model which Hey makes more fleeting reference to, or which do not form part of his analysis.

In common with most metaphorical structures, the DIKW model makes use of a number of spatialising metaphors. The first of these is one which I have already indicated and unpacked in the discussions of Polanyi's tacit/explicit dimension and Perkins' remapping of this dimension around the landmarks of the proactive/performative/possessive. As noted above, both of those models make use of this horizontal spatial extension which

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distinguishes the proximal from the distal and allows for different experiences of knowing to be placed, ordered, and moved along that dimension. The *possessive* and the *explicit* are assumed to be at some objective distance, existing apart from and discontinuous with the person. They might be said to represent items of knowing located toward the far end of this horizontal space of knowing. In terms of the other, stickier end, both models also make use of the peculiar logic of this extension in which extreme proximity places the object of knowledge not only close to the body of the subject but possibly inside of that body. Polanyi's *tacit knowledge* and Perkins' *proactive knowledge* are, in different ways, aspects or dispositions of subjectivity, inseparable from the person to whom they are inherent. This horizontal dimension which orders knowing in terms of the proximal and the distal also underpins the DIKW model.

When we treat *data* as something which we might have to seek, gather, or otherwise journey toward, there is the suggestion that it has a place on the landscape of knowing which is distinctly 'over there' and may require some survey or experimental activity to locate. It might even be speculated that this model extends the horizontal dimension beyond where it might commonly terminate toward the distant horizon<sup>48</sup>. As suggested by Hey above, the transformation from *data* to *wisdom* and beyond is metaphorically understood not only as a change in possible form but as a change in the relative location of that knowing. There is the suggestion of movement from its placement outside of and away from the body, through an approach which brings it within the range of haptic affordance culminating in its eventual *internalisation* as knowledge, and possibly its *incorporation* into the structures of *wisdom* and *enlightenment*. The distant object is lost to view as it moves within, and as this objectivity is elided with our approach to the data, or by data's approach to ourselves, the horizontal dimension that stretches to the horizon finds its proximal termination at the core of our self. Far more than the previous examples, the DIKW model maps epistemology's entry into the body. Each link in the chain from *data* to

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<sup>48</sup> An analysis of how the concept of 'horizon' figures within image schema related to knowledge is outside of the focus of this writing. However, it has begun to feature as an element within artworks associated with this research. Documentation of this work, (which I am considering an appendix to the main body of work presented in the blog and discussed in this writing) can be viewed online at <http://theconferencereport.net/exhibition/horizon/> (Accessed 18/06/08).

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*information*, from *information* to *knowledge*, and from *knowledge* to *wisdom*, welds the actor to the act of knowing.

Moreover, there seems to be a clear correspondence in this articulation with the previous two knowledge structure models considered above. In Polanyi and Perkins there is this similar sense that as an understanding of knowledge which arrays different forms of knowing across horizontal space, the ‘tacit dimension’, as Polanyi calls it (Polanyi, 1983), brings with it certain entailments concerning visibility, ‘handleability’, interiority, etc. and these entailments seem to emerge from a common schema which structures that space in terms of the common embodied experience of (apparently) being at the centre of it.

A second dimension which the DIKW model serves to exemplify, and which does not feature overtly in either Polanyi or Perkins, is that of verticality, (this was briefly introduced earlier within the context of a contextual metaphor linking UP with GOOD). In terms of this understanding, it is relevant to note at this point that the model is almost always referred to as a ‘hierarchy’ (or occasionally ‘pyramid’) and the transformations through the various grades of knowing are conceptualised as movement not only from the distal to the proximal, but also vertically through ascending levels toward greater and greater (higher and higher) orders of knowledge. This is also a feature of illustrations of the model, which typically graph the process of knowledge acquisition as a series of upward steps toward the elevated state of *wisdom* or the possibly even more aerial and ascendant rising toward the sunny uplands of enlightenment. This seems to be an example of the relationship introduced earlier between SEEING and KNOWING. Although space does not permit a full analysis of the functioning of the vertical dimension within this epistemological schema it is perhaps relevant to note in passing that there seems to be a consistent correspondence between *height*, *seeing*, and *knowing*. As Isaac Newton reputedly put it ‘If I have seen farther than other men it is because I had stood on the shoulders of giants’<sup>49</sup>.

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<sup>49</sup> Although this quotation is routinely attributed to Newton it is likely to have been in use previously. For a (Tristram) Shandean overview of its usage see MERTON, R. (1965) *On the Shoulders of Giants*, New York, Harcourt.

### **Explicitness Revisited**

In this section I revisit Polanyi's notion of the *explicit*, arguing that the binary division which Polanyi invokes prevents certain subtleties in the idea of the explicit from becoming manifest. As we have seen, other epistemological systems which overlap significantly with Polanyi's in the overall use of a schema based on the spatially-embedded body, carve up this space differently and articulate elements of the schema which are less easy to identify in Polanyi's tacit/explicit divide. The particular structural aspect of this schematic explicitness relevant to this discussion is a distinction between the concept of the explicit *object*, and the metaphorical act of explication through which the object comes into being.

Perkins' model, which marks out a broadly similar territory for experiential knowing, includes the middle term of the *performative*, lying outside of the disposition of the subject but not so far removed that it is only available to the eye as an object of scopic possessibility. Performative knowledge, as we have seen, exists metaphorically in the space between the hands; a space of reciprocation, where the hands can reach out to grasp the stuff of thought, but can also shape that stuff into the form of a new object, rolling it out into interpersonal, intersubjective space. The *performative* of Perkins, therefore, is not radically separate from the *explicit* of Polanyi, but might be seen as constituting the active elements at work in the production of the explicit.

In the terms populating the *Data Information Knowledge Wisdom* Hierarchy of Ackoff, whilst *data* has many of the properties of the *explicit*, so this explicitness is not precisely synonymous with *data*. The *explicit* blends into the definitions of *information* and *knowledge*, incorporating the sense of agency, intentionality, and engagement that these concepts confer.

Additionally, regarding the distinction made earlier between *knowledge* and *knowing*, I suggested that this difference had significance for how an understanding of an epistemology proceeded. In returning to the term *explicit*, this distinction may again be

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relevant. To the extent that an understanding of *explicit knowledge* is predicated on the 'knowledge object' rather than the more processual, intersubjective understanding implied by the term *knowing*, then this aspect of the explicit is likely to be suppressed. Conversely, the use of the verb conveys something of the sense of a performative, and even haptic, understanding. As Catherine Rouby (citing Classen, 1998), puts it in 'Olfaction, Taste, and Cognition' (2002),

In addition to the olfactory and gustatory links to cognition discussed earlier, Classen's archeology of the sensory subconscious of the English language reveals that many English terms for 'thought' are, in fact, tactile or kinaesthetic in origin. These include 'apprehend', 'brood', 'cogitate', 'comprehend', 'conceive', 'grasp', 'mull', 'perceive', 'ponder', 'ruminate', and 'understand'. The predominance of tactile imagery in words dealing with intellectual functions indicates that thought is, or was, experienced primarily in terms of touch. (Rouby, 2002: 70)

### **The Explicit Touch**

The category of the *explicit* is developed particularly elegantly by neurologist Raymond Tallis in *The Explicit Animal* (1991), in which he identifies the ability to be explicit as a defining human feature, linked to consciousness and intentionality. Critiquing both computational views of mind and narrow account from evolutionary psychology, Tallis builds an understanding of human experience in which active and outgoing. He takes particular issue with theories which couch this experience as a kind of linguistic effect, resulting from our embedding within an inert network of language, rather than being active unfoldings of that language into the world. Referring to Structuralist and Poststructuralist understandings of language and thought, he writes that,

Post-Saussurean thinkers for whom even verbal expression, apparently the most deliberate and self-aware form of behaviour, is determined by the structures of the system, so that it seems as if 'language speaks us' rather than that we speak language. For such thinkers, the linguistic decentring of the speaking subject opens the way to a more radical displacement of the self. (1991: 15)



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Rather than this structurally determined, decentred version of being which offers, at best, a ‘view from nowhere’, human being and human expression, he claims, is an active intervention into the space of thought and knowledge. This understanding uses a schema of space in which potential knowledge constitutes an epistemological landscape with the conscious *self* at the centre, mirroring the phenomenological placement of the body within the physical landscape. This is reminiscent of Merleau-Ponty’s claim that,

Our own body is in the world as the heart is in the organism: it keeps the visible spectacle constantly alive, it breathes life into it and sustains it inwardly, and with it forms a system (1962: 203)

When we stand in a field and look around we are not passive recipients of sensory data; undifferentiated figures in the smooth and absolute space of Newton’s, ‘*Absolute space in its own nature, without relation to anything external, remain(ing) always similar and immovable*’. Our sense, including our sense of our selves, is one of activity, invention, and intervention.

Tallis further suggests in his later book *The Kingdom of Infinite Space* (2008) that;

We might imagine the newborn infant simply being its body, in the sense of living its experiences, but not having an explicit relationship to it. It gradually comes to realize that this body is *itself*. A blush of awareness evolves into a many-layered sense ‘That I *am* the body’. At that point a gap opens up between the infant and its own body as it realizes that this body is its own. (Tallis, 2008: p.48).

The *explicitness* of the natural world, including the natural presence of one’s own body in that world, is the phenomenal experience of its being rolled out before us through the agency of our active embodiment, and it is this apparently unique human ability to put ourselves at the centre of an unfurled world that Tallis refers to.

This interpretation of the concept of the *explicit* is notably different from Polanyi’s, discussed above. In Polanyi the explicit has the character of an object or location sited at

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the end of the unrolled process of knowledge acquisition. In Tallis, explicitness is performative, engaging with, and simultaneously co-creating the world in a hands-on way. To this extent, Tallis' rendition of the *explicit* has much in common with idea of the *haptic* noted earlier, a system which Gibson defines as follows:

The haptic system ... is an apparatus by which the individual gets information about both the environment and his body. He feels an object relative to the body and the body relative to an object. It is a perceptual system by which animals and men (humans) are literally in touch with the environment. (1968: 97)

Paul Rodaway in 'Sensuous Geographies' (1994) carries out an extensive survey on the relationships struck between body and world, part of which is negotiated through what he refers to as this 'haptic' sense. Citing Gibson, Rodaway goes on to delineate the various terms through which this negotiation takes place and the apparatus gets information. Focusing particularly on the tactile aspects of this way of knowing, Rodaway point out that touch,

... is more that the action of the fingers feeling the texture of surfaces. Touch involves the whole body reaching out to the things constituting the environment and those things, or that environment, coming into contact with the body.... This is the basic reciprocity of the haptic system: to touch is always to be touched. (1994: 44)

He goes on to suggest four types of 'touch' which he argues as significant for the experience of knowing and being; *Global Touch*, *Reach Touch*, *Extended Touch*, and *Mind Touch*.

*Global Touch* is Rodaway's terms for proprioceptive presence and the sense one has of existing as a body at a certain location in space.

*Reach Touch* is described as a property of the limbs, and is represented by the grasp of the hand and the stretch of the foot.

*Extended Touch* is that which operates through intermediary tools and technologies; the cane of the blind person and axe of the woodcutter.

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*Mind Touch* (which he elsewhere refers to as *Imagined Touch*), perhaps most salient for this analysis, is the mobilization of the felt sense<sup>50</sup> as a means of conceptualizing concepts which would otherwise be inconceivable. As he puts it,

... haptic experience (is) rooted in (the) memory and expectation. This is demonstrated both in our use of touch metaphors to describe other sensuous experiences and the creative recall of haptic experiences, as when reading a description in a novel or when remembering a treasured experience. (Rodaway, 1994: 54)

In developing this use of touch as a source of metaphors, Rodaway cites as an example the common expression ‘to keep in touch’ as an indicator that the tactile reciprocal contact of skin on skin is part of the cognitive poetics of intimacy. Although he makes no reference to the specific theoretical frameworks used here, this metaphor, in which *intimacy* is understood as *closeness*, is well established within the literature on conceptual metaphor (Kovecses, 2001, Lakoff and Johnson, 1981)

The up-close and personal nature of touching and being touched supports the use of this sense as indicative not only of physical proximity but also of emotional contact. To be ‘touched’ is part of a vocabulary of meaningfulness which draws less on scopic detachment (and the bloodless rationalism such objectivity is occasionally accused of) and more on the entertainment of close mutual holding.<sup>51</sup> This intimacy of epistemological relationship is alien to the formal endeavours of science but it is firmly enshrined within the traditions of art and aesthetics. As Suzanne Langer writes,

(A) work of art is an expressive form created for our perception through sense or imagination, and what it expresses is human feeling. The word

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<sup>50</sup> The concept of a ‘felt sense’ has been developed extensively within the context of counseling and ‘self-actualisation’ by Eugene Gendlin through the technique of *focusing*, in which practitioners claim to develop ontological awareness through guided attention to the inner state of the body. Unfortunately, the limits of this writing do not allow an extensive analysis of this usage. GENDLIN, E. T. (1996) *Focusing-oriented psychotherapy: a manual of the experiential method*, New York; London, Guilford Press.

<sup>51</sup> Entertain - [Origin: 1425–75; late ME *entertenen* to hold mutually < MF *entretenir* □ VL *\*intertenere*, equiv. to L *inter-* INTER- + *tenere* to hold] entertain. Dictionary.com. *Dictionary.com Unabridged* (v 1.1). Random House, Inc. <http://dictionary.reference.com/browse/entertain> (accessed: August 05, 2008).

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“feeling” must be taken here in its broadest sense, meaning everything that can be felt, from physical sensation, pain and comfort, excitement and repose, to the most complex emotions, intellectual tensions, or the steady feeling-tones of a conscious human life (Langer, 1957: 15).

This understanding of the *explicit* in which it is intimately related to activity and to the haptic; in which we shape the physical world even as it shapes us through this intentional touch of the hand, is developed by Max Frisch and Michael Bullock (1959) under the designation *homo faber*, according to the rubric of which we again find ourselves partly defined by this haptic, manual, shaping ability.

A more active mobilization of the use of *touch* is found in ‘The Human Condition’ by Hannah Arendt (1974), in which she distinguishes *homo faber* from *animal laborans*, describing the activity of the latter, (which she associates with ‘animal being’), as being confined to the intimate and the domestic<sup>52</sup>. *Homo Faber*, on the other hand, in Arendt’s formulation, moves out of the personal sphere and into the world, or as Lewis Hinchman describes it in an analysis of Arendt,

In contrast to labor, work (*homo faber*) is the activity that corresponds to the ‘unnaturalness’ of human existence. If ‘life’ and the private realm locate the activity of *animal laborans*, then ‘the world’ locates *homo faber*. Work is, literally, the working up of the world, the production of things-in-the-world. If *animal laborans* is caught up in nature and in the cyclical movement of the body’s life processes, then *homo faber* is, as Arendt puts it in *The Human Condition*, ‘free to produce and free to destroy.’ (1994: 234)

In these descriptions, the explicatory advance made by our body into the world allows the body to shape the world that it touches, (even as it leaves the *self* behind in the gap that Tallis indicates above). There is a sense that our hands and feet precede our occupation of the space toward which we are reaching and moving, and that these corporeal extensions prepare the ground for our arrival. Feet stretch forward and pull the earth toward us, bringing our desires and our selves together into the here and now of where we want to be.

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<sup>52</sup> Arendt works up this distinction into a critique of certain aspects of modernity (reminiscent of Benjamin). She claims the focus on individual prosperity, production and consumption, has diminished the intersubjective world of *homo faber* in favour of the alienating, simply social being of *animal laborans*.

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Hands reach out and open doors at exactly the right moment for us to walk through. As Drew Leder (1990) describes it, the world is ecstatically thrown out by the onrush of our senses, and the sense of self recedes in the wake of this explicit forward march<sup>53</sup>.

As suggested in Rodaway, above, this reaching and probing and shaping of the world is not only physical, but is also conceptual. The active interventions which define us are not only excursions into physical nature but also incursions into conceptual culture, including those aspects of culture which might variously be understood as *knowledge*.

In terms of the analytic framework presented earlier, this suggests the development of a conceptual metaphor or schema in which the fully embodied physical action of shaping the physical environment with the hands (and shaping one's location in that environment with the feet through walking) is transformed into an understanding of *sapience*. To reiterate Pinker, who describes the cognitive process of metaphor construction as involving 'scaffolding whose slots are filled with symbols for more abstract concerns like states, possessions, ideas, and desires' (1997: 355), in this case the slots in the scaffolding originally reserved for touching and walking are filled with symbols for thinking and knowing. As Andre Leroi-Gourhan puts it:

Originally, our hands were nothing but pincers used to hold stones; Man's genius has been to turn them into the daily more sophisticated servants of his thoughts as a *homo faber* and as a *homo sapiens* (Leroi-Gourhan, in Nespoulous et al., 1986: 49).

An epistemology incorporating this understanding is markedly different from one which is primarily *scopic*. In this interpretation of the *haptic*<sup>54</sup>, the *performative*, and the *explicit*, knowledge is less an object that pre-exists one's attempts to 'find it', but rather resides within the active process of cognitive shaping itself.

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<sup>53</sup> Mark Johnson in 'The Meaning of the Body' (2007) draws on Leder's description of the ecstatic and recessive body to stage a convincing narrative of the phenomenological mind/body dualism which haunts much philosophy.

<sup>54</sup> A detailed analysis of the anatomical development of 'haptic knowledge' in infants can be found in HATWELL, Y., STRERI, A. & GENTAZ, E. (2003) *Touching for knowing: cognitive psychology of haptic manual perception*, Amsterdam, John Benjamins.

### **Ongoing – Walking and Thinking**

I have made several references in the passages above concerning a perceived parallel between the explicitly haptic and the act of moving through a space. In the first there is the sense of the hands flowing out into the space in front of the body to craft the state of that space, and in the second there is the suggested possibility of the feet proceeding into that space and enacting the establishment of such a state. Here I would like to advance this connection a little further, and explore how this connection plays itself out within the conceptual metaphor of epistemology I have offered so far.

The relationship between walking and thinking has already been alluded to in the earlier discussion of the idea of ‘procedural knowledge’. In that section I introduced the notion that the concept of ‘procedural’ rests on a metaphorical schema in which the acquisition of knowledge is understood as progress along a path to a goal or destination. Some writers have suggested that this connection is not only metaphorical but is also actively instantiated as actual practice, shaped by and shaping of experience and knowing (see Careri, 2002; Adams et al., 2001; Seamon and Buttimer, 1980; De Certeau, 1984; Gregory, 1994; Solnit, 2001).

In *Wanderlust – a history of walking* Rebecca Solnit (2001) writes about the extensive historical connection between perambulation and cogitation. Tracing a lineage from the peripatetic philosophers of Ancient Greece, the ambulatory Paris of Rousseau and Baudelaire, and Charles Darwin’s famous ‘sandwalk’, she identifies the close relationships that are suggested, both literally and metaphorically, when we consider the operation of ‘the mind at three miles an hour’ (2001: 14). She goes on to link the contact of foot with ground to that haptic contact through which the hand engages with the world. Connecting walking and working, Solnit draws on the language of affordances, and refers to the extension of the body through tools, and their increasing detachment such that these tools take the body into the world but are disconnected from that body.

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Walking returns the body to its original limits again, to something supple, sensitive, and vulnerable, but walking itself extends into the world as do those tools that augment the body. The path is an extension of walking, the places set aside for walking are monuments to that pursuit, and walking is a mode of making the world as well as being in it. Thus the walking body can be traced in the places it has made, paths, parks, and sidewalks are traces of the acting out of imagination and desire; walking sticks, shoes, maps, canteens, and backpacks are further material results of that desire. Walking shares with making and working that crucial element of engagement of the body and the mind with the world, of knowing the world through the body and the body through the world. (Solnit, 2001: 29)

This engagement is not the static rapture of the empirical objectifying gaze, a situated but stationary viewpoint which is also critiqued by Steven Braddon (1986) in relation to the knowing associated with cognitive psychology. In 'Thinking on Your Feet: the consequences of action for the relation of perception and cognition', Braddon makes a case for the more active, ambulatory, advance suggested by the knowing walk.

Thinking ordinarily differs from active perceiving but the two must mesh to yield creative accomplishments. By keeping subjects stationary, experimenters treat passive observation as the paradigmatic case of information acquisition and treat action as an influence on performance better minimized than explored. The data and theory presented (here) suggest that if subjects spent more time thinking on their feet, cognitive psychology would be more firmly grounded in reality. (1986: 148)

Michel De Certeau makes overt these connections between spatialised epistemological relations and whether the occupation of that space is static or mobile.

The long poem of walking manipulates spatial organizations, no matter how panoptic they may be: it is neither foreign to them (it can take place only within them) nor in conformity with them (it does not receive its identity from them). It creates shadows and ambiguities within them. It inserts its multitudinous references and citations into them (social models, cultural mores, personal factors). Within them it is itself the effect of successive encounters and occasions that constantly alter it and make it the other's blazon: in other words, it is like a peddler, carrying something surprising, transverse or attractive compared with the usual choice. These diverse aspects provide the basis of a rhetoric. They can even be said to define it.

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(De Certeau, 1984: 101)

The suggestion that De Certeau makes of a metaphorical link not only between walking and knowing but also between walking and language is usefully compared to the critique Tallis makes of 'Post-Saussurian' theories above. In this passage *meaning* and *meaningfulness* are not deferred across a tissue of signifiers with the person constructed arbitrarily and passively within that discourse. Rather, the person is set in motion such that their experience of the space of knowing and being is shaped by the moving centre. Walking, and by implication knowing, are considered psychogeographic acts of poetic engagement. The act of walking, which is used here as both a metaphor for thinking and as a prop and accompaniment to thought and knowledge acquisition, suggests a different relationship to the space of epistemology than the transparent vacuum traditionally (if unconsciously) associated with scientific endeavour, and like the intimacy of touch, one more easily associated perhaps with art activity.

In 'Walkscapes: Walking as an Aesthetic Practice', Francesca Careri indicates the extensive crossover that has taken place between the practice of walking and the practice of art. Taking in Dada, Surrealism, Lettrism, Situationism, Minimalism and Land Art, Careri (2002) shows how such pedestrianism transforms the conceptual space through which the artist/researcher moves. Referring particularly, but not exclusively, to urban rambling, Careri mixes in the metaphor of the sea to describe the transformed experience of the city realized by such experiments in human drift. 'What the roving of the artists discover', he suggests, 'is a liquid city, an amniotic fluid where the spaces of the elsewhere take spontaneous form, an urban archipelago in which to navigate by drifting. A city in which the spaces of staying are the islands in the great sea formed by the spaces of going.' (Careri, 2002: 21). In this quotation, Careri is also employing the metaphor of *substance*, discussed above, in which the 'hard' space of knowledge is transformed into something 'soft' and 'flowing' through which knowing might proceed.

Rebecca Solnit also explores this connection between walking and aesthetic knowing, incorporating in her analysis the works of walking artists Richard Long, Hamish Fulton,



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and the Marina Abramovic/Ulay collaboration *Great Wall Walk* (1988). In addition to these literal walks, Solnit also points out works which allude to walking, such as Robert Smithson's *Spiral Jetty* and some of Carl Andre's large-scale sculptural work. Solnit quotes Andre as saying,

My idea of a piece of sculpture is a road.... That is, a road doesn't reveal itself at any particular point or from any particular point. Roads appear and disappear ... We don't have a single point of view for a road at all, except for a moving one, moving along it (Solnit, 2001: 269).

Solnit goes on to compare Andre's sculptures to 'Chinese scrolls, (which) reveal themselves over time in response to the movements of the looker; they incorporate travel into their form' (2001: 269). The suggestion is that in order for the looker(?) to truly 'get to know' the artwork they must engage in the explicatory act of walking up to, around, and past it.

From this it can be noted that certain forms of knowing, particularly those associated with practices that are not empirical or which make no claim to 'objectivity', respond better to an approach which relies on metaphors of *walking* than those of *seeing*. In this regard they share certain elements of the overall schema with the metaphors of *touch* and *making explicit* that are discussed above.

### **Before and After Physics**<sup>55</sup>

This brief overview indicates something of the rich relationships that arise between the sensory metaphors of *walking* and *touching*, and the abstract categories of *thinking* and *knowing*, in all its forms. The history is too engagingly complex to enter into in more detail here, so in order to bring out some specific points salient to this writing I would like to take two brief slices through that history; the first at a point some time in the early Middle Ages,

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<sup>55</sup> I hope I might be forgiven the indulgence in calling this section 'Before and After Physics'. This is the name of a gallery exhibition I held in February 2008 featuring artworks which arose from some of the ideas in this section. Documentation of this exhibition is available at <http://theconferencereport.net/exhibition/> (Accessed 25/06/08)

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and the second around 2005.<sup>56</sup> Particular attention will be paid to the metaphor of *walking* as it will be shown that this is the most salient with regard to the activity of blogging.

### **Before Physics**

Certain forms of knowledge gathering rely on this cognitive act being organised through its accompanying a real physical journey: a physicalisation of the mobile act of learning. The orthopractic methodologies associated with medieval scholars, in which the initiate would be required to make a significant journey, passing particular waystations and perhaps overcoming difficulties, are built into the logic of some religious training regimes, and are preserved in rituals such as the ‘stations of the cross’. Often associated with the acquisition of spiritual or religious knowledge, this ambulatory epistemology is distinct from a form of learning based on the consumption of object-like facts. Mary Carruthers, writing in ‘The Craft of Thought’ (1998), draws the lines of this distinction through the terms ‘orthodoxy’ and ‘orthopraxis’.

Orthodoxy explicates canonical texts, whereas orthopraxis emphasises a set of experiences and techniques, conceived as a ‘way’ to be followed, leading one to relive the founder’s path to enlightenment (Carruthers, 1998: 1).

These ‘canonical texts’ are here portrayed as artifacts which are pushed out and away into scopical space through some kind of explicatory process carried out by orthodoxy. Once there they could only presumably be treated as possessive data, which is exactly not the point of this kind of knowledge. Instead, what is desired is a means of embodying knowing which does not keep it at a remove but which brings it into the body. The orthopractic journey is aimed at carrying out this progressive embodiment. The ‘way’ that is referred to here is not only metaphorical, suggesting the procedural knowledge gained through

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<sup>56</sup> The connections between walking and knowing, and indeed the haptic practice of ‘making’ were extensively examined in the 2005 conference *Walking as Knowing as Making: a peripatetic investigation of place*, hosted by the University of Illinois. Abstracts and synopses pertaining to this conference are available at <http://www.walkinginplace.org/converge/intro.htm> (Accessed 25/06/08)

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spiritual craft.<sup>57</sup> It is also made concrete and literal in, for example, the architecture of some medieval churches, about which John Onians suggests,

Every step taken in a Christian church, every passage in liturgy, potentially involved psychological transformations and the dramatic realisation of some bold metaphor such as rebirth or salvation. (1988: 60)

This particular passage is revealing in that it points up the parallel between not only space and knowing, but also between space, and knowing, and liturgy or language. The explicatory space into which the walker is progressively stepping is not only a space of *techne* but also of *langue*. There is the sense that the unrolling of the scroll toward the revealed *explicitus* is simultaneously narrated.

This metaphorical connection between moving, knowing, and language is carried by the term *ductus* which features in historical rhetoric. Carruthers describes this concept as;

... flow and movement, as through an aqueduct – we can think of the ornaments in a composition as causing varieties of movement: steady, slow, fast, turn, back up. They not only signal how something is to be “taken” (like a pathway) – whether straight on (literally) or obliquely (metaphorically or ironically) – but can also give an indication of temporal movement, like time signatures in written musical composition. Compositional *ductus*, moving in colors and modes, varies both in direction and in pace, after it takes off from its particular beginning (the all-important point “where” one starts) toward its target (1998: 116).

This literal walking and its alternation with metaphors for thinking and reading is developed further in Carruthers (1998). Referring to the 12<sup>th</sup> Century Benedictine, Peter of Celle, she cites him as giving this advice for reading biblical scripture;

In this book (of Genesis) journey through the greater part of your reading, coming to paradise... Walk with God, like Enoch ... Enter the Ark at the time of the Flood ... So go with a deliberate but light step through the contents of this book ... interpreting what is obscure, retaining and

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<sup>57</sup> The ‘spiritual exercises’ of Loyola may serve as an example of this ‘way to knowledge’. Originally written around 1522, the exercises are available online at <http://www.fordham.edu/halsall/source/loyola-spirex.html> (Accessed 25/06/08).

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memorizing what is straightforward. Whenever you enter a pleasant meadow of prophetic blessings, loosen the fold of your garment, stretch your belly, open your mouth and extend your hand ... Then come to Exodus (grieving for) the entry in Egypt ... Then admire the foreshadowing of our redemption in the blood of the sacrificial lamb. Observe how the law was given on Mt. Sinai and how it is open to spiritual understanding. By progressions of virtues run through the forty-two stopping places (in the Sinai) with what they signify. With an Angelic mind construct within yourself the Tabernacle and its ceremonies. (1998: 109)

It seems to be suggested that the knowledge to be gained from this scripture cannot be acquired if the scripture is thought of as a single, solid object, remotely observable through the distanced and empirical eye. Rather it should be considered as a space into which the reader enters with all of their senses intact. The reader may be invited to employ their scopical, fog-dispelling intellect to 'interpret what is obscure' or to 'observe how the law was given', but they are also directed to 'stretch the belly, open the mouth, and extend the hand'. The injunction here is to employ not only the metaphorical sense of sight but also the haptic feeling touch of the hand and body. This is in marked contrast to the examples of 'clean language' that were introduced earlier in which such non-visual allusions were suppressed as needlessly poetic. This mobilisation of multiple sensory modes as means of conceptualising knowledge, and the understanding of knowledge space not as optically translucent and smoothly Newtonian is typical of pre-Enlightenment modes of thought (see Ball, 2008, Manchester, 1992). This rich epistemology was largely refined out of approved discourse, and it is perhaps only through recent developments such as *écriture féminine*, the various 'geographies' (sensuous, situated, viewpointed etc.) and, particularly with regard to this writing, the argument that all discourse, and all thought, may be ultimately metaphorical and poetic, that this knowing through *sensus communis* is staging something of a return. This passage above from Peter of Celle primarily draws upon the logic of movement and different types of walking (running, going with a deliberate but light step) to conceptualise what he regards as appropriate types of reading. In other words, it may not be enough simply to present the space and allow the reader to walk through it. They may choose to wander aimlessly in circles and so gain nothing; or they may execute a militarily precise, but possibly inappropriate, frontal assault on the text, rushing through it from beginning to end along the shortest possible route. Peter suggests that neither of these

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would effect the desired result, which can only be achieved by proceeding carefully and with awareness of the landscape of ideas through which one is moving; this passage requires careful scrutiny; this benefits from a more relaxed handling; here is a place to catch one's breath<sup>58</sup>.

### **After Physics**

Jasminko Novak of the Information Management Research Group at the University of Zurich, who works and writes extensively on the impact of new technologies on knowledge management, has referred to certain practices as requiring 'nomadic knowledge'. His use of this term acknowledges that users of, particularly, the Web 2.0 environment tend to access this space in a wide variety of different ways, and each access point brings with it its own context, protocols, limitations, and conventions. As he indicates,

People are becoming more and more nomadic in respect of using ICT services. Nomadic means that users frequently change between different settings that include both desktop and mobile devices, in very different spatial and social contexts (office, home, on the road, public spaces, events, communication and socializing). They need to use different devices, platforms and different kinds of knowledge and communication (explicit, implicit, formal, informal) (Novak, 2005).<sup>59</sup>

Novak is a director of The MARS Interactive Experience Lab at the Fraunhofer Institute of Media Communications, and the mission statement of this organization contains this, possibly illuminating, ambition.

The research staff works in the field of eCulture on new forms of communication and interaction among the human body, art, and technology,

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<sup>58</sup> This kind of 'directed' reading reminds me of the work of artists Wrights and Sites, whose practice include the so-called 'Mis-guides'. These works tend to involve walks through re-imagined spaces in which participants are offered ways of engaging with these places in new and revealing ways. <http://www.mis-guide.com>

<sup>59</sup> Available online at [ftp://ftp.cordis.europa.eu/pub/ist/docs/so/collab-work/prop\\_fraunhofer\\_media\\_commu.doc](ftp://ftp.cordis.europa.eu/pub/ist/docs/so/collab-work/prop_fraunhofer_media_commu.doc) (Accessed 5/08/08)

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as a means of developing multi-modal interfaces as “tools for the art of tomorrow” and as the cultural technology of mobile life. On the basis of its core competency in the design of interactive systems, the lab’s staff carries out R&D projects focusing on processual environments, at the center of which are human beings with their sensory capacities and cultural qualities. Artistic strategies and scientific experimentation engender new concepts. Research is currently concentrated on “knowledge-based arts—knowledge-based media” and “nomadic knowledge computing,” which deal with the perception and design of intermedial spaces of knowledge and communication<sup>60</sup>.

The term ‘intermedial’ which Novak introduces in the final sentence of this quotation has become something of a buzz word over the last two to three years, with a large number of publications entering the market claiming to describe, define, critique, or otherwise engage with the concept it may be suggestive of. A recent call for papers for an academic conference in the area of intermediality described the theme of intermediality as follows:

Intermediality is associated with the blurring of traditionally ascribed generic and formal boundaries through the incorporation of digital media into all forms of cultural practice, and the presence of one or more media in the space and form of another medium. This has led to the creation of intermedial spaces in-between media and a proliferation of texts, inter-texts, hyper-texts, hyper-fictions, and acts of remediation, transmediality, multimediality, hypermediality and a bewildering blur of associated realities. We live in an increasingly intermedial world where the human-computer interface places us in the position of being in-between media and the different realities they create. Intermediality is the modern way to experience life; where reality is glimpsed through computer screens and reached through fingers tapping mobile phone touch pads. In this screen-saving world we are not sure what is ‘live’ and what is ‘mediatized’ and if we can differentiate between them anymore. Through digital technology, intermediality has become part of the global phenomenon that has the ability to link cultural communities in cyberspace. However, intermediality may also operate at the level of the individual artist as a medium using their body, voice and mind to inter-act with other media, and crucially, in the perception of the receiver/critic who interprets the intermedial scene.<sup>61</sup>

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[http://www.aec.at/en/archives/festival\\_archive/festival\\_catalogs/festival\\_artikel.asp?iProjectID=13370](http://www.aec.at/en/archives/festival_archive/festival_catalogs/festival_artikel.asp?iProjectID=13370)

<sup>61</sup> This is the text of a call for papers for *The Journal of Culture, Language, and Representation*. Vol. 5 (2008) distributed on academic mailing lists, including the GMANE Cultural Studies list, archived at <http://article.gmane.org/gmane.culture.studies.general/7164> (Accessed 29/07/09).

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In its extensive invocation of borders, boundaries, intermediate spaces and liminal zones it seems to want to partake of the logic of territoriality (albeit as heckler on the margins). At the same time the gesturing toward blurring and confusion, the inability to differentiate, the bewilderment and the plain ‘not being sure’ smacks of someone claiming the high ground of the panoptic whilst simultaneously making a virtue of their own myopia. As a term I personally find it unhelpful because of the inherent lack of any metaphorical schema through which it might operate.

The use that Novak is making of the term is, I suspect, much more grounded in the mechanics of digital communication and the bottom line of Knowledge Management than adrift between metaphors of liminality and obfuscation. The intermedial space that Novak is referring to is a consequence of life on the move between one media point and another, in which the type of knowledge one might access, and the way that knowledge might present itself, varies from point to point. This kind of nomadism is the result of a proliferation of media and is the logical response to that proliferation. To return briefly to the point at which this writing began, the possibilities of delivering knowledge in other formats than the traditional doctoral thesis, hard bound and superlatively objective, may also be a natural consequence of the nomadic possibilities of ‘intermediality’.

What is particularly significant is that both these approaches to the text require the embodied sense-making presence of the guided reader. In the case of the Medieval text there is the necessary metaphorical engagement of the different senses as the script varies in tone and *ductus*; in the latter example there is the active negotiation of differing information sources tied to different media access points. In neither case is the text a smooth network of connections spread across the vacuum of an optically transparent space, ‘the centre of which is everywhere and the circumference nowhere’, (to paraphrase Pascal<sup>62</sup>). Nor is it a featureless fabric; the ‘tissue of quotations drawn from the innumerable centres of culture’, which Roland Barthes describes (1977: 146). There is no sense of the disembodied space

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<sup>62</sup> Pascal used this image to describe a cosmology poised between the Divinely created, human-centered universe of Ptolemy and the featureless infinity offered by Copernicus and mapped by Newton. An excellent imaginative account of the provenance of this image can be found in the short story by Borges *The Fearful Sphere of Pascal* in BORGES, J. L. (1962) *Labyrinths: Selected Stories and Other Writings*, New York, Grove Weidenfeld.

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in which meaning is inevitably endlessly deferred into the nowhere of the objective view. The space narrated by Peter of Celle has a centre of narrative gravity out of which protrude not only the eyes but also the hands and feet of the reader.<sup>63</sup> It is a space which takes its measure from the man and is meaningless without this meditation. The intermedial space suggested by Novak, even though it is separated from Peter's by 600 years and the migratory movement of script to screen, is similarly inhabited. Unlike the 'multidimensional space in which a number of writings, none of them original, blend and clash' (Barthes, 1977: 146); a space essentially devoid of *being*, the practices of both occupy the three-dimensional space of human being-in-the-world. As Heidegger describes it,

What is meant by "Being-in"? Our proximal reaction is to round out this expression to "Being-in" 'in the world', and we are inclined to understand this Being-in as 'Being in something' ....as the water is 'in' the glass, or the garment is 'in' the cupboard. By this 'in' we mean the relationship of Being which two entities extended 'in' space have to each other with regard to their location in that space (Heidegger et al., 1962: 69).

The space in which this embodiment is most at home provides the schema for the organization of this epistemology.

### **Conclusion - Walking and Talking and Feeling and Writing and Blogging**

The general paradigm which underpins this research has perhaps best been summarised by Mark Johnson when he wrote that; 'Meaning and thought emerge from our capacities for perception, object manipulation, and bodily movement'. (2007: 113)

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<sup>63</sup> Polanyi also invokes the Copernican/Newtonian paradigm to critique the application of reason over sense; he writes 'Thus, when we claim greater objectivity for Copernican theory, we do imply that its excellence is, not a matter of personal taste on our part, but an inherent quality deserving universal acceptance by rational creatures. We abandon the cruder anthropocentrism of our senses, but only favor in of a more ambitious anthropocentrism of our reason'  
POLANYI, M. (1958) *Personal knowledge: towards a post-critical philosophy*, Chicago, University of Chicago Press. 4-5.



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Knowledge, in all its forms, is a category of meaning and thought, and therefore also figures within these capacities. The main aim of this writing has been the detailed unpacking of this central idea with particular reference to the blog *The Conference Report*.

A major argument that has been developed is that the particular form of knowledge that we think of as 'objective' is thought of in that way for specific reasons, and that these reasons appear through the embodied capacities that Johnson specifies, particularly the sensory mode of *seeing* and the spatial properties of *distance* and *detachment*. It has been demonstrated that this set of capacities operates within a metaphorical space in which objective and other forms of knowledge are distinguished from one another according to a logic grounded in the schematic consistency of the body's physical engagement with the actual space of lived experience and *being-in-the-world*. It has further been shown that the phenomenological notion of the 'object', which underpins the abstract concept of 'objectivity', is more complex than might be immediately apparent, as are its relations with 'perception' and 'bodily movement', and indeed 'space'. Whilst offering appropriate respect for scientific empiricism and logical deduction, it has been shown that the structure of these schema render certain aspirations toward the formulation of 'objective knowledge' problematic, particularly with regard to forms of knowing which function according to different entailments of the spatial and sensory spectrum. Possible alternative metaphors for forms of knowing which avoid the misleading objectivity of inappropriate visuality have been offered, primarily those of *touch* and *walking*.

By placing objective knowledge in the wider conceptual framework of embodied cognition through the application of a theoretical line which runs through phenomenology, cognitive poetics, conceptual metaphor, and image schema; a framework has been provided that allows for the organised consideration of forms of knowing which do not aspire to the condition of the object. These forms of knowing may be instantiated and expressed through the medium of certain Web 2.0 technologies, particularly the blog, which is disposed, it is argued, to a breaking down of the subject/object binary.

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Although this analysis is not intended to be a comprehensive examination of the changes apparently wrought on knowledge by the development of new media technologies, it has been shown that much of the language and explanatory frameworks associated with these changes employs the same metaphors and schematic images as those under discussion here. Spatial, geographical, and sensorimotor metaphors abound, with the descriptions of new media epistemologies typically invoking conceptual image schemas which reframe knowledge in terms of these alternative conceptual metaphors. To this extent, blogging serves to exemplify the use of these metaphors.

In summation, what this writing indicates, and what is made manifest within the blog *The Conference Report*, are the following.

- The rules of form through which blogs are composed offer an approach to the acquisition, development, and sharing of knowledge which, although contested, is gaining increasing validity in the academy. To the extent that such contestation is a result of inarticulacy in the expression of how this knowledge is constructed, this writing contributes toward the development of an appropriate epistemology.
- A metaphorical analysis of the different epistemological systems presented here demonstrates that there is coherence amongst them which suggests that they are grounded in shared conceptual metaphors and common image schema.
- Practice-based research, including screen-based digital practices such as blogging, tends to be difficult to express using the objectifying language of empirical discourse because it relies on different elements of the metaphorical schemas through which knowledge is made coherent. It has been shown that metaphors for types of knowing which draw on *touch* and *movement* have particular application to practice-based research.
- New media technologies give concrete form to concepts which would otherwise be difficult to grasp. Just as the development of hypertext and hypermedia transformed

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the poststructuralism of Barthes and Derrida from opaque theorization into the (literally) digitally-embodied practice of link-clicking, so Web 2.0, and particularly blogging, makes manifest the orthopractic acquisition of haptic and ambulatory knowledge.

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### **Post Script**

This document began with a preamble, a moment of pause before setting out on this guided tour through *The Conference Report*. During the course of the tour the going has been joined by knowing, and speaking, and thinking, and writing, and it seems fitting that what began as an amble ends as a script. The walks that I take with my dogs in the morning, which seem immaterial and irrecoverable at the time of their execution, have somehow left their muddy footprints all over the internet and are now preserved for all time in electronic aspic. All that was air has congealed into writing, to which writing this is the post script. And in this writing and in this epistemology, and in repetition of repetition of quotation and in the fabric of quotation, it is easy to forget the pleasure of the blog and the pleasures of the flesh. So let me just say this; I have had a great time writing *The Conference Report*. I love walking my dogs, Phoebe and Guy, by the canal, along the Salt Line, through the field with the white horse, talking to myself and remembering as much as I can. I love getting home with the dogs wet and smelly from their swimming in the stream that runs through the field where I lost my mobile phone. I love sitting down at my laptop when the dogs are reasonably dry; it is now 6.45 a.m. and the children aren't up for another fifteen minutes. I love the coffee steaming beside my laptop, in the mug that used to say 'Twin Palms' on the side. I love the Windows XP startup fanfare. I love the tiny bumps on the 'F' and 'J' keys on the keyboard, which tell me where my index fingers are. I love my children and my dogs and my wife, and I love the feel of the words rolling out across the screen and across the world, starting nowhere and ending everywhere, each entry marked with the time and the date.

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