Main Article:

Constructing Meaning from Letterforms: Reflections on the Development of a Practice-Based Research Proposal

Phil Jones
The Arts Institute at Bournemouth, Wallisdown, Poole, Dorset, BH12 5HH, UK
pjones@aib.ac.uk

Abstract

Research paradigms are only starting to emerge in relation to art and design practice. Consequently, research design in this domain often employs perspectives and methods developed in other disciplines. This paper traces the development of a proposal that combines theories from cognitive linguistics with graphic design practice. It describes the resulting challenges to and transformations of my long-held assumptions and understanding about graphic design and the communication process. It also outlines the way in which semantic analysis (a method from cognitive linguistics) will be used in conjunction with different forms of visualisation--with visualisation used as a method to generate data for analysis as well as to present findings. Finally, it argues for an engagement by designers with conceptual metaphor theory and conceptual blending theory, as a way to facilitate reflection on design practice.

> [A]s we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns--the ones we don't know we don't know. (Donald Rumsfeld, cited in BBC, 2003)

1. Introduction

My master's project seeks to identify ways in which we use the domain of the body (i.e., a network of concepts relating to the body) to understand letters and the use of letters in typography. It explores the linkages between *lexical concepts* (word meanings) and meanings emerging from typographical choices such as the choice of typeface and the visual arrangement of letters. This focus developed from interests arising from my practice as a designer and lecturer, and was further refined when I took up the opportunity to undertake a research project as a mature student. It is at once exciting and intimidating to be working as a novice researcher in the domain of art and design (where research paradigms are only starting to emerge) and the following text is a personal reflection on the experience of preparing a project proposal for a master's degree in graphic design.

2. Beginnings: Conceptual Metaphor Theory

The interdisciplinary nature of the project established boundaries that encompassed considerable voids in terms of personal knowledge, voids reminiscent of the "unknowns" in Rumsfeld's famous quote above. Although his statement may have won an award for "the most nonsensical remark made by a public figure" (BBC, 2003), it somehow resonates in relation to the author's experience of developing a research proposal. Possibly inelegantly expressed for some, yet it does identify different types of ignorance, all too familiar to the experience of developing a research focus. Perhaps a case of oratory gone wrong, or alternatively, suggestive of someone struggling to come to terms with an unfamiliar situation. As a mature student, I anticipated such a struggle. Partly because of established ways of thinking about my subject, fixed through experience, but also because to someone exploring the field of graphic design as a researcher for the first time, there appeared to be fewer answers, more unanswered questions, and even more questions that have not even been asked yet, than in other more mature fields of research. In visual research, it is harder to find territory akin to Kuhnian "normal science" or to find books outlining research protocol for art and design practice. Some are however, beginning to appear (Gray & Malins, 2004; Noble & Bestley, 2005; see the review of titles in Sullivan, 2005; see also the *Working Papers in Art and Design,* n.d., from the University of Hertfordshire, UK) there are also visual research titles for design related disciplines (such as Rose, 2001; van Leeuwen & Jewitt, 2001).

The proposal began with a recognition of the relevance of recent developments in cognitive linguistics to the activity of designing. After reading the book, *Metaphors We Live By* (Lakoff & Johnson, 1980/2003), I became interested in the idea of *conceptual metaphors,* which according to Lakoff and Johnson, structure our thoughts and understanding about large areas of human experience. Conceptual metaphors are manifested in everyday metaphorical expressions which might not even strike us as being metaphorical at all. For example, we might use metaphorical expressions such as *she is coming into view*. The *into* here, providing the clue that the statement is metaphorical, that someone has entered the container that is our visual field. So, here, the underlying conceptual metaphor is visual fields are containers. As a graphic designer, I was curious

as to the ways that these metaphorical expressions might be realised by visual, rather than verbal means. Also, by the question of whether underlying conceptual metaphors could account for patterns of *typographic expression* (i.e., the use of visual qualities of typography, such as shape, to make meanings additional to the representation of verbal information). I was also exercised by the idea that such knowledge might facilitate reflection on design thinking.

Metaphors We Live By also introduced me to the idea of *experientialism*--an alternative to subjectivism and objectivism that provides an account of the nature of knowledge based on our embodied understanding of a real and existing world. This seemed to be an interesting philosophical position and I was aware that this was likely to have implications for the underlying assumptions guiding the study, but I did not appreciate the extent that this would challenge my own view of the world.

At this stage I developed a proposal for a master's degree at the London College of Communication. During the interview one of my supervisors, focusing on one aspect of my proposal, suggested an interesting metaphor to study: letter is body. So at the start of the project I had a field of study identified, based on the relationship of letter and body, some developing methodological assumptions, but only vague ideas about methods, or how the research might involve design practice. Such practice taking the form of an investigative process leading to graphic outcomes in which information is recorded, structured, and visualised to facilitate understanding or achieve some rhetorical purpose.

3. Conceptual Blending Theory

Around the same time I also began reading about conceptual blending theory, which is concerned with the ways that meaning is constructed on-line in cognition (Fauconnier & Turner, 2002; Coulson, 2001). According to this theory, meaning is established via a *conceptual integration network* which, in its simplest form, consists of four linked *mental spaces*. Two of these mental spaces are *input spaces*, each containing information about a different aspect of knowledge or experience. Another of these spaces is a *generic space,* which contains elements common to both input spaces. The fourth space is the *blend,* which contains information selectively projected from both of the inputs which is usually compressed, fused together, or otherwise transformed to make it comprehensible at human scale. The blend therefore provides a focus which generates meaning through linking different elements of this projected information inside the blend. Other spaces within the network however remain active and participate in making meaning too. The blend may also contain *emergent structure* which is new meaning, not found in the inputs. This new meaning arises from the operation of the network, especially "running" the blend; imagining it as a situation that can be activated and inhabited in order to simulate experience. As an example, Fauconnier and Turner (2002) describe an advertisement with the headline: Joey, Katie, and Todd will be performing your bypass. The image in the advertisement shows Joey, Katie, and Todd in an operating theatre, depicted as surgeons, looking out at the viewer. These three surgeons are however, only 7 years old. The purpose of the advertisement is to bring home the importance of raising educational standards. In the conceptual integration network constructed from this

advertisement, the 7-year old, yet to be trained, children are in one input space and the trained and educated adult surgeons are in another. Elements from both of these input spaces are projected onto the blend where we are faced with the frightening prospect of untrained child surgeons. But new meaning emerges in the blend if we conclude that the way we educate these children now will have implications for their future competence as surgeons. The blend here is not the advertisement itself; blends are not speech, writing, or imagery, but these things can be material anchors that provide cues for the construction of blends in cognition. This configuration of mental spaces is frequently mapped diagrammatically in conceptual blending theory, and the use of this graphic device to analyse meanings constructed from material anchors, made it appealing for a project related to graphic design (see Figure 1). What is more, despite their differences (Coulson, 2001), conceptual blending theory and conceptual metaphor theory are viewed as being complementary (Grady, Oakley, & Coulson, 1999).
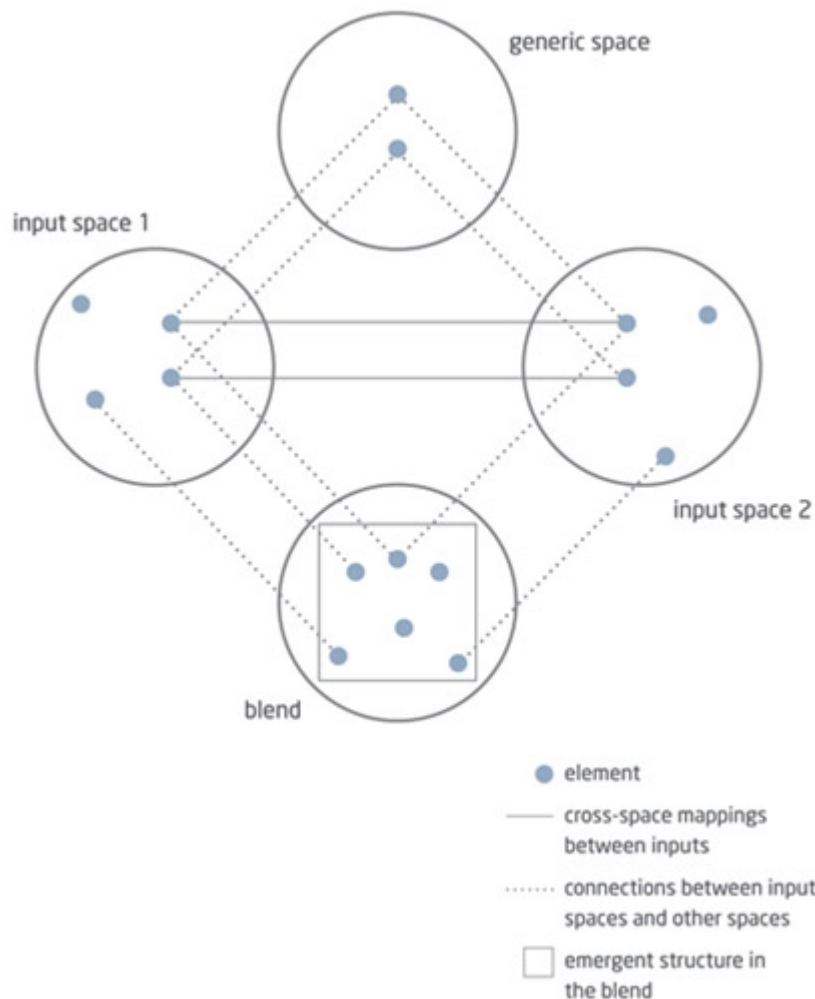

Figure 1. The basic features of a conceptual integration network (after Fauconnier & Turner, 2002).

4. Challenges: Epistemological and Ontological

Engaging with these theories from cognitive linguistics proved to be challenging. Not only because I had little prior knowledge about this field, but also because it forced me to reevaluate my understanding of the way design communicates. As a designer, my conceptions about meaning had arisen through working with artifacts, through shaping and refining them. This engagement with visual form led towards an understanding whereby the form itself contains the meaning, viewers or readers taking meaning from the visual material that they encounter. Or, alternatively, that the artifact is a conduit through which meaning can pass (Reddy, 1979). The impression was that there are simple correspondences between visual representations and objects in the real world. This understanding was largely intuitive, and I was probably not inclined to reflect on it so explicitly until the literature made me aware of the particular outlook I held (Fauconnier & Turner, 2002; Lakoff & Johnson, 1980/2003).

My old worldview has now been replaced with one that aligns more closely with *cognitive semantics* and the *embodied realist* position of Lakoff and Johnson (1999). In cognitive semantics, the impression that meaning is contained in forms is an illusion arising from the largely unconscious mental activity that transforms sensorimotor data (an array of data that we receive from our sense organs) into people, objects, activities, emotions, and so forth (Fauconnier & Turner, 2002). Accordingly, meaning is not given by, or taken from, forms, but is constructed by the viewer, in real-time. Meaning is not in the form; the form simply provides cues for cognitive work to take place, and it is this work that builds meaning. The fact that our mental constructions are often similar with regard to the same objects in the world, derives from our similarities as embodied minds and through common experiences in the details of our interactions with the world.

The ontological stance of embodied, or experiential, realism advanced by Lakoff and Johnson (1999) is that there is a structured world "out there," external to the mind. In terms of epistemology, we can know about this world, but this knowledge is always contingent on the ways that our brains and our bodies experience and conceive it. Concepts and truths about this world are therefore constructions of this embodied mind and consequently not universal and independent of our understanding. In terms of my study, this experiential view of knowledge raised a question: How is our knowledge about graphic design embodied?

5. Relevance of Methodological Assumptions to Research Issues

The above issues concerning form, meaning, knowledge, and so forth seemed relevant to my research question, which investigates ways in which concepts relating to the body are linked metaphorically to concepts relating to letterforms. According to experiential realism therefore, these concepts, and links do not exist as form, but occur in cognition, while the typographic designs that are cues for them exist as artifacts in the world. Interpretation of these artifacts is somewhat subjective, and conceptual blending theory recognises that different conceptual integration networks can legitimately be constructed for the same artifact (or material anchor). Yet conceptual blending theory avoids extreme

forms of relativism, where any meaning could be attributed to a given material anchor by recognising certain constraints on the ways that meaning is constructed (Fauconnier & Turner, 2002). Consequently blends can be handed on, to be understood and further developed by other individuals and communities, and this dissemination of blends is achieved through the cues provided by language and other forms, which prompt for the construction of blends and integration networks.

In terms of design practice this felt quite liberating. Rather than thinking about a visual element as having a fixed number of lexical meanings, where a particular reading is foregrounded by the context in which the element is placed, such elements became cues for conceptual blends out of which new meanings could emerge in cognition. Additionally, conceptual blending theory provided a way to analyse and map conceptual integration networks constructed from designs featuring letter and body (which could be either found, or produced through practice).

In relation to the research design this construction of meaning from both visual and verbal cues suggested a focus on what van Leeuwen (2005) calls the "communicative act" where different modes of communication participate in a single communicative event. So in the case of the advertisement involving the under-age surgeons discussed above, this focus on the communicative act requires a consideration of the advertisement as a whole rather than a separate individual analysis of the elements that comprise the advertisement (such as, written text, typographic styling, image, etc.).

By now, I was beginning to feel that perhaps I was losing focus, that the project was too broad, encompassing a wide and diverse range of visual material incorporating letter and body, and also, that different theories and the field of study were all becoming tangled up together. My supervisor however encouraged me to put my increasingly verbose proposal to one side, and write a skeleton outline. This need to be concise helped me to resolve the study into different component parts, including the rationale, research question, conceptual framework, methodology, and methods. Once I had provisional ideas about what each of these might be, it was easier to appreciate where the enquiry would take place (the field of study), what it was I hoped to find out (answers to the research question), why it was worthwhile (the rationale), which concepts and theories would be utilised (the conceptual framework), which principles and viewpoints would guide the research (the methodology), and which methods would be used to collect and analyse data (the research methods). The question remained however as to how to include practice as an important element of the research design.

6. Research Methods: Integrating Practice

I had hoped to find examples of practice based design research utilising conceptual blending theory and conceptual metaphor theory--these might then have been adapted to fit my field of study and research question. Unfortunately, I was unsuccessful in this search, especially relating to my field of study, which is primarily concerned with typographic communication.

However, conceptual blending, though not practice based, has been used to analyse advertising (Fauconnier & Turner, 2002; Oakley, 2005). I was already familiar with references to cognitive metaphor theory made by Forceville (1996) in relation to advertising, as well as those made within social semiotics (Kress & van Leeuwen, 1996; van Leeuwen, 2005). Another real confidence booster was Carita Lundmark's 2005 doctoral thesis, which used both conceptual metaphor theory and conceptual blending theory to analyse advertisements. Encouraged by this, and by Gray and Malins' description of the use of multiple methods, which advocates mixing visual methods with some "adapted from other research paradigms" (2004, p. 31), I set about finding which visual methods might be appropriate, and which methods used within cognitive linguistics might be applied to a project involving practice.

One of my options for the integration of practice into the research design seemed to be to use practice as a way to reflect on, and to bring into resolution, the cognitive processes and structures involved in designing. These processes and structures could be identified and described using conceptual metaphor theory and conceptual blending theory. This did, however, raise a question about what aspects of design practice to interrogate in order to make such thought processes available for scrutiny. My first step here was to try and determine the site/s (such as audience, artifact, etc.) that would form the primary focus for the project. Both Rose (2001) and Sullivan (2005) provide frameworks relating to visual research that identify different sites onto which methods or practices are mapped. Rose's framework helped me to appreciate the scope of enquiry related to the visual. Unfortunately it seemed to come from a perspective linked more to the reading, than the making, of visual images. Sullivan's framework identifies four different sites, that relate to the artist, viewer, artwork, and setting. While all four sites are relevant to the research question and theoretical framework, two sites appeared to be of particular importance: the site of the artwork (as material anchor) and the site of the artist/designer (as a site of both cognitive processing and reflection on design practice).

For Sullivan the visualisation of texts, ideas, data, and objects can be processes of enquiry that involve "various visual strategies and methods" (2005, p. 193). From all the strategies and methods listed by Sullivan, three were chosen: (a) *conceptualising* provided a way of generating starting points for analysis through the making of visual representations that suggest concepts, (b) *modelling* described the way that conceptual integration networks are visualised by representing conceptual structures and the relationships between them, and (c) *indexing* provided a way of presenting findings through the use of a typology (see also Noble & Bestley, 2005).

This seems remarkably simple in hindsight, although arriving at these choices was difficult for me. For one, many different things could have been visualised, including the process of conceptual integration, self-reflection, interview data, or observations of designers at work. Also there was the issue of whether to try and capture the cognitive processes as designers design, or whether to identify and highlight them after the fact using existing designed artifacts. Related to this is the question of whether to adopt a *synchronic* or *diachronic* perspective, presenting either a snapshot of typographic designs at a point in time (i.e., synchronic) or alternatively the evolution of a blend through a

succession of material anchors (i.e., diachronic). To begin with all of these dimensions were nebulous "unknowns" to me which had to be identified as issues before they could be addressed.

Although satisfied that Sullivan's strategies of conceptualising, modelling, and indexing were appropriate tools for exploring the metaphoric associations between letter and body in typographic design, I was not yet convinced that it was sufficient as a means to collect and analyse data. I had two concerns at this stage: (a) the historically reduced status (within higher education) of the artifact as a means to embody knowledge and develop argument (Gray & Malins, 2004) and (b) the extent to which I would be able to analyse cognitive processes using visualisation alone, in a way that reflected the theoretical framework.

These concerns led me toward considering methods used within cognitive linguistics. These include: brain imaging (Coulson, 2001), behavioural experiments (Coulson, 2001), cognitive ethnography (Williams, 2004), and semantic analysis (Coulson, 2001; Fauconnier & Turner, 2002; Lundmark, 2005; Williams, 2004). Of these methods, semantic analysis (which concerns the construction of a conceptual integration network in relation to a particular material anchor) seemed particularly appropriate to a practice based project investigating typographic communication. Not only could semantic analysis be used to analyse visual material, but the method itself also involves visualising cognitive processes through the designing of diagrams. The study could also incorporate visualisation in a more exploratory way, through the design of alternative visual statements which might bring out different facets of conceptual integration. These alternatives might then become candidates for further semantic analysis. Furthermore, at a more practical level this analysis does not demand specialised scientific equipment, although it does require the skills and knowledge necessary to perform the analysis (things which I am currently trying to acquire).

The approach adopted in the proposal therefore follows two interrelated and concurrent activities: (a) the development of a typology, based provisionally on categories identified through contextual review (categories which might be modified in accordance with discoveries made in the semantic analysis) and (b) the semantic analysis (of typographic designs included in the typology) enhanced by further visualisation intended to explore alternative, but related, blends, and material anchors.

7. Lessons Learned

One lesson learned during this process is that drawing on theory from a different discipline provided many benefits for the design of the study, providing a coherent theoretical framework for the research, a related ontology and epistemology, and a range of methods from which to select. It perhaps provided a way of avoiding many of the unknowns and uncertainties associated with graphic design practice. This engagement with theory also prompted the initial search for examples of typography that suggested an underlying conceptual metaphor was at work.

Another lesson learned, somewhat paradoxically, is not to ignore the research frameworks developed within one's own discipline. Initially perhaps, my study relied almost exclusively on cognitive linguistics, which presented me with the problem of introducing some practice based element later on. The project now involves practice however, as a way of generating data, as a method of presenting findings, and furthermore, as an enquiry into typographic expression and the cognitive processes that make meaning from visual forms. Theory has consequently not displaced design practice, but rather, is intended highlight the value of design practice to enquiry and understanding, as described by Sullivan (2005):

> Central to my argument is the premise that to better appreciate how visual arts can contribute to human understanding, there is the need to ground visual arts research within the theories and practices that surround art making. . . . This notion is a far cry from the stereotype that sees visual arts as a warm, fuzzy, and essentially private experience. Rather, it acknowledges the cognitive capacities that inform artistic making and thinking . . . (p. 74)

Taking time to consider theory, research methodology, and methods has provided a starting point, grounded the enquiry, and helped clarify my intentions. It has also changed the way I think about graphic design; I now think less about what a piece of design means (in the sense that it has a fixed, intended or given meaning) and more about the possibilities arising from the knowledge that it is us, as individuals and communities, who construct meaning from design.

Acknowledgement

References

BBC (2003). *Rum remark wins Rumsfeld an award*. Retrieved April 29, 2006, from
http://news.bbc.co.uk/2/hi/americas/3254852.stm

Coulson, S. (2001). *Semantic leaps: Frame-shifting and conceptual blending in meaning construction*. Cambridge: Cambridge University Press.

Fauconnier, G., & Turner, M. (2002). *The way we think: Conceptual blending and the mind's hidden complexities*. New York: Basic Books.

Forceville, C. (1995). *Pictorial metaphor in advertising*. London: Routledge.

Grady, J., Oakley, T., & Coulson, S. (1999). Blending and metaphor. In G. Steen & R. Gibbs (Eds), *Metaphor in cognitive linguistics* (pp. 101-124). Philadelphia, PA: John Benjamins.

Gray, C., & Malins, J. (2004). *Visualizing research: A guide to the research process in art and design*. Aldershot: Ashgate.

Kress, G., & van Leeuwen, T. (1996). *Reading images: The grammar of visual design*. London: Routledge.

Lakoff, G., & Johnson, M. (1999). *Philosophy of the flesh*. New York: Basic Books.

Lakoff, G., & Johnson, M. (2003). *Metaphors we live by*. Chicago: University of Chicago Press. (Original work published 1980)

Lundmark, C. (2005). *Metaphor and creativity in British magazine advertising*. Doctoral dissertation, Luleå University of Technology, Sweden. Retrieved July 5, 2006, from http://epubl.ltu.se/1402-1544/2005/42/index-en.html

Noble, I., & Bestley, R. (2005). *Visual research: An introduction to research methodologies in graphic design*. Lausanne: AVA Publishing SA.

Oakley, T. (2005). Implied narratives of medical practice in learning-for-doing texts: A simulation semantics approach to rhetorical analysis. *Language and Literature,14,* 295-310. Retrieved June 10, 2006, from http://lal.sagepub.com/cgi/content/abstract/14/3/295

Reddy, M. J. (1979). The conduit metaphor: A case of frame conflict in our language about language. In A. Ortony (Ed.), *Metaphor and thought* (pp. 254-283). Cambridge: Cambridge University Press.

Rose, G. (2001). *Visual methodologies*. London: Sage.

Sullivan, G. (2005). *Art practice as research: Inquiry in the visual arts*. Thousand Oaks: Sage.

van Leeuwen, T. (2005). *Introducing social semiotics*. London: Routledge.

van Leeuwen, T., & Jewitt, C. (2001). *Handbook of visual analysis*. London: Sage.

Williams, R. F. (2004). *Making meaning from a clock: Material artifacts and conceptual blending in time-telling instruction*. Doctoral dissertation, University of California, San Diego, CA. Retrieved April 10, 2006, from http://www.cogsci.ucsd.edu/index.php?cat=research&page=publications-dissertations-rfwilliams

Working Papers in Art and Design. (n.d.). Retrieved January 15, 2007, from
    http://www.herts.ac.uk/artdes1/research/papers/wpades/index.html