

RESISTING METAPHORS

A metonymic approach to the study of creativity
and cognition in art analysis and practice

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ABSTRACT

We know from Aristotle that metaphor is a cognitive process that enables a rich and rapid understanding of new ideas. Its cognitive partner metonymy, however, has received significantly less attention.

This research addresses two fundamental elements of metonymy in thought: firstly its definition, and secondly its function in creativity. It is a first foray into non-verbal metonymic creative thought, taken from an art practice perspective. This viewpoint offers access to how metonymy functions in material processes, and how it draws meaning from proximal contexts. With reference to cognitive linguistics, art philosophy and complexity theory, it uses case-study analysis and art practice to consider where and how meaning is held within processes, materials, objects, language and context, and the relationship between metonymy, metaphor, literality, salience and novelty. It suggests a new, pragmatic definition of metonymy for use in non-verbal communication analysis, including visual art, sound art and music. It finds that metonymy is a highly dynamic domain-internal process of meaning expansion, which uses proximity and adjacency to draw in meaning.

In art practice, this research has identified four of an unknown number of types of proximal relations: co-present relations, whereby a set or grouping of related elements are displayed together; elements that have a presence-absence dynamic using PART-FOR-WHOLE relations; artworks with an ambiguous context that shifts between perceptions and expectations, and perceptual illusion, whereby sounds or images are generated in the mind of the beholder, through idiosyncrasies of our human perceptual system. It provides the basis from which artists can theorise about their practice, and art historians can review works through the lens of metonymy. Cognitive linguistics can draw on these visual art references to further inform debates on creativity and cognition. In time, metonymy theory may be integrated into the teaching of art theory and of discourse in a wider sense across the humanities, science and technology.

Creative thought is not the exclusive domain of artists; it is rather a basic and essential function of the human brain that enables us to solve problems and see the familiar in new and enlightening ways. In this process of re-viewing we might claim to be in not only a visual but also a metonymic age, one in which meaning expansion through proximal relations is understood as a significant force for creativity, and one in which metonymy and metaphor are appreciated as cognitive equals.

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LEPORELLOS

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To my mother, Ursula Ryland, with love

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Declaration

I declare that the research contained in this thesis, unless otherwise formally indicated within the text, is the original work of the author. The thesis has not been previously submitted to this or any other university for a degree, and does not incorporate any material already submitted for a degree.

Signed

Dated

INTRODUCTION

I began this research wanting to understand my thinking processes when creating an artwork. I knew intuitively that it was not all about metaphor. For me, and I suspected for some other artists, metaphor had very little to do with the creative process or even, in many instances, with the final artwork. Though metaphor and metonymy both involve meaning expansion, metaphor requires a cognitive 'leap' across distant and distinct domains of knowledge or experience, whilst metonymy enables us to understand one idea or entity in terms of another, closely related, one.

Though there were tantalising references to metonymy in psychoanalysis, (Lacan, 2002: 25), there were few or none in literature concerned with creativity (Pope, 2005); (Goodman, 1976); (Carroll, 1999) and (Danto, 1981). This might prompt the conclusion that creativity is all about metaphor and that metonymy plays no part in the creative process. In this research, I aim to bring to the 'creativity and cognition' debate the suggestion that metonymic thought is a crucial yet under-discussed process which, in order to exploit its potential and facilitate the necessary attentional shift, requires a degree of resistance to metaphor. This does not challenge the importance of metaphor in creative thought, but rather suggests that metonymy is at least as important as metaphor; that it is time to bring it to the forefront of interdisciplinary discussions, and to ask what its role is in creativity.

This practice-based research navigates the complex relationship between the artist as subject, observer, commentator, and mediator. It emerges in an environment, and at a time, in which significant numbers of artists are reflecting critically and theoretically on their practice, moving freely across the former boundaries of Modernism and Postmodernism and increasingly, across disciplines, to form allegiances between art and science, system theory, politics and other apparently disparate concerns. This has prompted discussion on how meaning is produced within processes, materials and objects, and how access might be gained to those meanings.

A dialogue has been generated between my own art practice and that of three artists whose work resonates with my own in its exploration and reference to the illuminating capacity of metonymic operations: Cornelia Parker, Susan Hiller and Ceal Floyer. Like myself, all three women have personal relationships to British culture: Susan Hiller is American but has lived in Britain for more than forty years; Cornelia Parker, though apparently so quintessentially British, is half-German; Ceal Floyer is of Austro-Canadian descent, trained in Britain, and now lives in Berlin. I identify with my Welsh, Scottish and Irish heritage,

and a connection to China, where several generations of my family worked as missionary-doctors. Each case-study artist was born in a different decade: Hiller in 1940; Ceal Floyer in 1968 and Cornelia Parker, like myself, in the mid-1950s.

In the task of doing intellectual work grounded in practice, each artist has developed personal iconography from the quotidian and mundane, employing what might be termed 'the domestic gaze'. Thus, for example, Parker has polished silver (the *Stolen Thunder* series) to expose meaning held in residues; Floyer has drawn ink from felt pens (*Ink on Paper*) in an act of role reversal; Hiller has assembled ephemera (*After the Freud Museum*) from the margins of society, and I have interrogated electric lighting (*Light:Strip*) to undermine the dominance of the LIGHT IS KNOWLEDGE metaphor. Via this domestic gaze each artist addresses political issues: Parker's interest in environmental catastrophe, Hiller's concern with diaspora and identity and Floyer's with ontological anxiety. I share with these artists an anxiety associated with identity, place and purpose. Each artist's approach reveals possibilities and frameworks for recategorizing and contextualizing, and stimulates a re-viewing of the literature on material art practice and creativity.

Theory in art practice is a project inherently capable of creative development and change, as it encounters different objects and ideas. The mutually transformative possibilities of practice and theory offer a dynamic 'in-betweenness' or 'other-placeness' that navigates social, psychological, political, gendered and aesthetic concerns. This in turn determines an artist's practice and informs and enriches the interpretation of that practice.

Metonymy theory offers an aesthetic of the dynamic in-between, deploying connective, sensory knowledge across material and discursive conventions, in which one thing becomes another, moving through histories, myths, images, practices and politics. Metonymy theory can be used to examine the detail of difference, thereby providing access to knowledge previously hidden or unattainable, and as a means by which to consider the constituents and implications of loss and unattainability. This approach not only enables boundaries to shift, but has movement as its *raison d'être*.

The project is set out in three chapters, each beginning with a leporello print of my artwork. Chapter One begins with *Words Articulated* (2008) which comprises a flow of word-relations related to the metaphoric soundtrack, interspersed with computer-generated formatting 'noise'. This chapter provides definitions of metaphor, metonymy and related terms, and highlights discrepancies between general knowledge dictionaries and cognitive linguistic literature. It considers a number of key texts on figurative thought in art

philosophy and finds that metonymy has largely been neglected, whether marginalised, concealed within other terms, absorbed into metaphor or entirely excluded. Over the past thirty years cognitive linguistics has undertaken research into metaphor and more recently, into metonymy. The cognitive linguistic definition of metonymy, however, as a 'stands for' relation within a domain or domain matrix, does not translate well into non-verbal forms of communication such as static and moving images, sound works and music. This has, as a consequence, limited understanding of how metonymy functions in creativity.

A new, pragmatic definition of metonymy is proposed that, via a process of drawing together observations from a number of sources, will aid the application of metonymy theory across a range of disciplines. Both visual art examples and a non-art specific example using butter beans will clarify how metonymy functions in non-verbal media, and demonstrate that this definition will serve a range of non-verbal environments. The manner in which metonymy creates new meaning is discussed in relation to Complexity Theory and Optimal Innovation Theory.

In Chapter Two the leporello *Light:Strip*, a highly magnified study of a fluorescent strip light, opens discussion on my art practice. This includes prints, sound and video works, in which I 'interrogate' lights to extract meaning from the source of light, rather than what the light illuminates. The use of metaphor and metonymy as devices for the generation and development of ideas will be shown, as well as how the process of creating these artworks gave insights into the function of metonymy in creative thought.

At the start of Chapter Three, the leporello *Labyrinth* refers to the mind-set required for the navigation of the complex and dynamic relations between art practice and theory, and how ideas are approached from a number of directions. This chapter focuses on the three case-study artists, identifying where metonymy is located in their work, and the relations between language, context and material. It suggests reasons why metonymic relations might be lost or hidden from the observer in the process of interpretation, and the importance of the 'trace'.

Finally, my findings are brought together, conclusions drawn, and suggestions for some areas of further research made.

CHAPTER ONE

Defining Terms

Creative thought forms associative elements into new combinations that are useful to a community. Metaphor and metonymy are the primary mechanisms used: metaphor combines disparate elements, revealing commonalities between them whilst metonymy compares closely related elements, revealing both differences and similarities. Metaphor in language and thought is generally well understood, but a clear understanding of metonymy remains elusive. This chapter will clarify terms; discuss how metonymy functions and what its value is in creative thought.

A clear and useful definition of creativity is given by Arts and Humanities professor Rob Pope in *Creativity: Theory, History, Practice* (Pope, 2005: xvi) in which he states that creativity is ‘the capacity to make, do or become something fresh and valuable with respect to others as well as ourselves.’ Pope clarifies his terms, so that we understand ‘capacity’ as referring to ‘a “potentiality” or “possibility”’ that ‘may or may not be realised in fact, as an act or an achieved state.’ Where ‘make, do or become’ reflects that there is not necessarily an ‘it’ or ‘thing’, and that creativity includes ongoing processes (of becoming), ‘fresh’ means more than just ‘new’ or ‘novel’, in which “refreshing” may involve making strange things familiar as well as familiar things strange’. This suggests a viewing from a different perspective, i.e. one that had not previously been considered in that particular context, which embraces, as Pope proposes, ‘radical forms of re-creation’ through ‘actively engaged kinds of re-vision, re-membering and re-familiarisation’ and thus a resistance to the ‘casual notions of divine creation "from nothing" or of purely spontaneous expression welling up from nowhere.’ Pope’s term ‘valuable’ might be interchanged with the term ‘relevant’, in which ‘transactions nearly always entail processes of change or transformation.’ The term ‘with respect to others’ recognises that we ‘never create anything fresh or valuable in utter isolation; we always create in relation to other people and other things (present or absent, remembered or projected)’. (Pope, 2005: xvi)

More than two millennia ago Aristotle (384–322 BCE) recognised the importance of metaphor as a creative cognitive process revealed in language. Aristotle (Aristotle and Butcher, 1997: 41) defines metaphor as ‘the application to one thing of the name belonging to another.’ The use of the word ‘name’ suggests an entirely linguistic view, but Aristotle

also saw metaphor as aiding ‘understanding’ and ‘reason’. For Aristotle, metaphor and its ‘tropes’ make language colourful, in that it ‘gives style, clearness, charm, and distinction as nothing else can’ (Aristotle, 2004: 122). Interestingly, Aristotle uses ‘clearness’ as one of the virtues of metaphor in language. So, though he sees metaphor as an embellishment or charm, he also acknowledges its power to communicate new ideas efficiently:

Now strange words simply puzzle us; ordinary words convey only what we know already; it is from metaphor that we can best get hold of something fresh. When the poet calls ‘old age a withered stalk’, he conveys a new idea, a new fact, to us by means of the general notion of bloom, which is common to both things. (Aristotle, 2004: 135)

The process of creating a new idea from commonalities between two disparate things captures the significance of metaphor in thought, so in this respect it is true to say that Aristotle’s view remains relevant in the 21st century. This can be demonstrated by a website archive search of the contemporary art magazine *Frieze* (Frieze, 2010) from September 1991 to August 2010, which reveals that references to metaphor outstrip those to metonymy in the rough ratio of 22:1. In articles on artists such as Otto Dix, Thomas Schütte and Mark Wallinger there were 637 references to metaphor, while articles on artists including Marcel Broodthaers, Yinka Shonibare and Meredyth Sparks contained just 29 references to ‘metonymy’, ‘metonymic’ or ‘metonymies’. This would seem to indicate that metaphor is still regarded as the dominant trope, and that metonymy is rarely regarded as a significant factor in thought processes within art.

Aristotle sees metaphor as the process that enables us to understand new ideas quickly; that not only is literal language dull, but it is also inefficient in that it conveys limited information, whereas metaphor can convey a richness of meaning. He warns against using ‘remote’ metaphors, saying that ‘metaphors must not be far-fetched, or they will be difficult to grasp, nor obvious, or they will have no effect.’ (Aristotle, 2004: 136)

Metaphors must be drawn... from things that are related to the original thing, and yet not obviously so related – just as in philosophy also an acute mind will perceive resemblances even in things far apart. (Aristotle, 2004: 138)

He also argues that, in order to be truly effective and affecting, these metaphors, which provide clear and rich meaning, must be aesthetically appealing:

The materials of metaphor must be beautiful to the ear, to the understanding, to the eye or some other physical sense. It is better, for instance, to say ‘rosy-fingered morn’, than ‘crimson-fingered’ or, worse still, ‘red-fingered morn’ (Aristotle, 2004: 124)

And finally, he advocates that there should also be newness, an element of surprise:

Liveliness is specially conveyed by metaphor, and by the further power of surprising the hearer; because the hearer expected something different, his acquisition of the new idea impresses him all the more. His mind seems to say, 'Yes, to be sure; I never thought of that'. (Aristotle, 2004: 139)

At this stage it is useful to provide a definition of metaphor and its main characteristics. Artists wishing to place their practice within a theoretical framework, and who intuitively feel that metaphor or metonymy plays a part in their work, will find the definition in general-purpose English dictionaries of metaphor and metonymy at best partial, and at worst misleading, since current definitions persist in regarding metaphor and metonymy as figures of language rather than a manifestation of thought. Oxford Dictionaries Online (2011) define metaphor as:

- 1. A figure of speech in which a word or phrase is applied to an object or action to which it is not literally applicable: gene mapping is a cartographic metaphor.*
- 2. A thing regarded as representative or symbolic of something else.*

and the Cambridge Dictionaries Online (2011) offers:

An expression which describes a person or object in a literary way by referring to something that is considered to have similar characteristics to the person or object you are trying to describe. 'The mind is an ocean' and 'the city is a jungle' are both metaphors. Metaphor and simile are the most commonly used figures of speech in everyday language.

For metonymy, the Oxford Dictionaries (2011) offer the definition:

A word or expression used as a substitute for something with which it is closely associated, e.g. Washington for the US government.

while the Merriam-Webster Online Dictionary (2011) states that metonymy is:

a figure of speech consisting of the use of the name of one thing for that of another of which it is an attribute or with which it is associated (as "crown" in "lands belonging to the crown").

and the Cambridge Dictionaries Online (2011) offer an even more vague definition:

When something is referred to by a word which describes a quality or feature of that thing.

For a definition of metaphor and metonymy that takes account of cognition as well as language usage, it is necessary to turn to cognitive linguistics, where there has been thorough investigations into the defining features of these thought processes. The cognitive linguist Zoltán Kövecses defines metaphor as:

*Understanding one conceptual domain in terms of another conceptual domain.
A conceptual domain being any coherent organization of experience.*
(Kövecses, 2002: 4)

Cognitive linguist Antonio Barcelona proposes a variation of this definition as:

A cognitive mechanism whereby one experiential domain (the source domain) is partially 'mapped', i.e. projected onto a different experiential domain (the target domain), so that the second domain is partially understood in terms of the first one. Both domains belong to different superordinate domains. (Barcelona, 2003a: 3)

Barcelona emphasises that 'metaphor is a mapping of a domain onto another domain, both being conventionally and consciously classified as separate domains, i.e. not included in the same superordinate domain.' (Barcelona, 2003a: 9). It is important to note the distinction between domains conventionally and consciously classified as separate, and the closely related domains that metonymic relations can expand into, during a process of pragmatic inferencing.

Two other characteristics of metaphor are important. One is that metaphor is unidirectional, which is to say that metaphors map structure from a source domain to a target domain, but not vice versa, so for example love might be conceptualised as a journey, but journeys are not considered in terms of love. The other significant characteristic is that metaphor has a tendency to 'highlight and hide' meaning.

This highlighting-hiding effect of metaphor can be illustrated by the Gestalt figure-ground model, exemplified by visual illusions such as the 'duck-rabbit' image or the 'two profiles: one vase' configuration, known as the Rubin Vase (Figures 1 and 2 below). It is not possible to see both figures at once; as one becomes visible the other disappears.

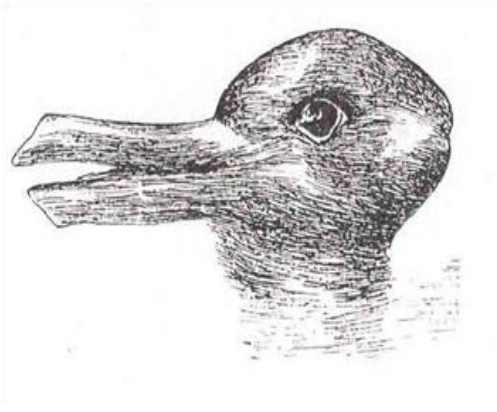


Figure 1: Duck: Rabbit

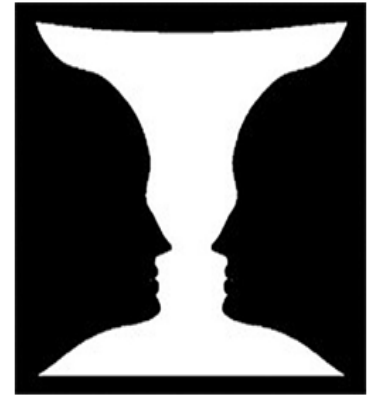


Figure 2: Two Profiles: One Vase

Drama and literature theorist Jon Erickson suggests that the deconstructive ‘hinge’ originally proposed by philosopher Jacques Derrida in *Of Grammatology* (Derrida and Spivak, 1997 [1976]: 65) is a useful device for understanding how metaphor functions:

A figure-ground relation typifies the workings of metaphor: the relation of a formal similarity between two different takes on reality, each of which can be taken literally or used metaphorically according to which constitutes the figure and which is the ground in any context. (Erickson, 1995: 7)

Donald A. Schön (1993: 146) cites the example of considering poor housing as a ‘blight’ on society that needs to be eradicated. The use of the metaphor of ‘blight’ or a ‘disease’ conceals the more positive aspects of the community, such as social cohesion, an attribute that was lost when terraced houses were demolished and replaced by high-rise blocks. Schön refers to metaphor’s hiding and highlighting effect as ‘naming and framing’.

The standard cognitive linguistic view considers metonymy to be a domain-internal mapping whereby an entity stands for another entity that is related to it, in part-whole relationships and salient or related-attribute-for-whole relationships. The view is that in metonymy a familiar or easy-to-perceive aspect of something is used to stand either for the thing as a whole or for some other aspect or part of it. But this ‘stands for’ definition of metonymy still provokes lively discussion within cognitive linguistics. Zoltan Kövecses and Günter Radden propose that:

Metonymy is a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same idealized cognitive model [or ‘domain’ or ‘frame’]. (Radden and Kövecses, 1999: 21)

Barcelona emphasizes the importance of a ‘partial’ understanding drawn from an ‘experiential’ standpoint, and defines it thus:

Metonymy is a conceptual projection whereby one experiential domain (the target) is partially understood in terms of another experiential domain (the source) included in the same common experiential domain. (Barcelona, 2003a: 4)

Like metonymy itself, its definition is dynamic, or in a state of evolution; a state that is set to continue for some time, as its principles are tested across a diverse range of disciplines. It is for this reason that I suggest that a review of the characteristics of metonymy is necessary to understand the applicability of metonymy to the visual arts.

Brigitte Nerlich describes metonymy as ‘a force of conceptual *spreading* inside and across adjacent conceptual domains’, whereas metaphor is ‘a force of conceptual *binding between distant domains*’. (Nerlich and Clarke, 2001: 245–272). Krista Ratcliffe, Professor of English at Marquette University suggests:

The differences between the two figures [metaphor and metonymy] are important. Metaphor foregrounds resemblances based on commonalities, thus backgrounding differences; metonym foregrounds resemblances based on juxtaposed associations, thus foregrounding both commonalities and differences. (Ratcliffe, 2005: 68)

Ratcliffe understands metonymy as being additive and associative; it seeks to find commonalities and differences within a domain or domain matrix, whereas metaphor is a process of seeking resemblances based on commonalities, resulting in a negation of difference. The most important characteristics here are that metonymy reveals difference and metaphor reveals commonalities.

Although there appear to be clear distinctions between metaphor and metonymy, it is increasingly understood that they frequently interact. In fact, Antonio Barcelona suggests that ‘every metaphorical mapping presupposes a prior metonymic mapping’ (Barcelona, 2003b: 31). This is a view firmly supported by Charles Forceville, a linguist who specialises in the study of non-verbal metaphor, who says:

It is impossible to study metaphor without addressing metonymy...Clearly, each property or feature that is mapped from a source to a target must first have been metonymically related to that source. (Forceville and Urios-Aparisi, 2009: 12)

Linguist Ken-ichi Seto suggests that we should consider the ‘stands for’ relationship of metonymy as including two cognitively distinct things: entity relations which he equates with ‘part of’ relations and category relations (‘kind of’ relations). Seto argues that the entity relation (E-relation), which in his terms can be spatial, temporal or abstract, is quite different from the category relation (C-relation), which is the conceptual relation between a more comprehensive (more inclusive) and a less comprehensive (less inclusive) category. While it is true that entity relations and conceptual category relations are cognitively different things, category relations can exist as physical entities (as discussed later in this chapter), so if divisions are to be made between synecdoche and metonymy, they should be between taxonomies and paronomies respectively, and the link between metonymy and entity relations (E-relations) should be set aside.

In his article *Metonymy as a semantic principle* Armin Burkhardt suggests:

Metonymy is a ‘qualitative’ word replacement or rather transfer, which is based on the relationship between the intended object and its associated aspects or elements. This is in contrast to synecdoche, which is based on the ‘quantitative’ principles of set inclusion. (Burkhardt, 2010: 248)

In the same publication, Brigitte Nerlich argues that the boundary between metonymy and synecdoche is at best blurred, and is more probably a moveable feast, with ‘fluctuating boundaries and category memberships,’ (Nerlich, 2010: 316). It seems unlikely that the ‘consistent categories’ so desired by Seto can be achieved in arts practice, so, for the purposes of this research, and at this stage in the understanding of metonymy in visual art, I shall include synecdoche within the term metonymy, as proposed by Lakoff and Johnson. (Lakoff and Johnson, 1980: 36).

Metonymy has a tendency to form ‘chains’, thereby playing a significant role in pragmatic inferencing. Antonio Barcelona, in his article *The multilevel operation of metonymy in grammar and discourse* (Barcelona, 2005: 328), refers to metonymic chaining as a ‘direct or indirect series of conceptual metonymies guiding a series of pragmatic inferences.’ This characteristic of chaining or seriality is crucial in the process of drawing meaning from contextual elements. This can be illustrated by considering the metaphor of ‘chaining’ used to describe serial metonymy within cognitive linguistic literature.



Figure 3. Link

If we consider one instance of metonymy our understanding will be limited, just as if we look at Figure 3 (above), we can say that it is a closed form; we can speculate that its material is metal, and can say that its shape is roughly elliptical. In Figure 4 (below), however it becomes immediately apparent that Figure 3 is one link in a chain. On seeing the chain, we can now speculate on its purpose and function.



Figure 4. Chain

Then, if we look at Figure 5 (below), which provides a context for the chain, we can begin to speculate on specific functions the chain might be used for:



Figure 5. Chain and water

It is interesting to note that ‘the target of a first metonymic extension also serves as the source for a second metonymy, and so on’, is termed as the ‘signifying chain’ by Jacques Lacan in 1957, when he refers to a ‘signifying chain’ that can never be complete, in which meaning ‘insists’ in the movement from one signifier to another.

... we can say that it is in the chain of the signifier that meaning ‘insists’, but that none of the chain’s elements ‘consists’ in the signification it can provide at that very moment. (Lacan, 2002: 145)

We may therefore see serial metonymy as a dynamic process that needs to take into account those elements that contribute to our adaptability and the very individual interpretations of shared experiences, as has been observed within Complexity Theory. I support the view of cognitive linguist Lynne Cameron that researchers should take a holistic approach, or what she calls a ‘discourse dynamics approach to metaphor’, and suggest that it should be extended to include the study of metonymy:

Conventional metaphors can be seen in terms of stabilised ensembles of form, use and meaning, or ‘metaphoremes’. This grounded re-theorising from data has led to what I call the discourse dynamics approach to metaphor.

Returning to data, I describe consistent features of metaphor in the flow of spontaneous talk, and also show how observations of particulars can prompt investigation of larger corpora that contribute to our building understanding of the phenomena of metaphor, both poetic and prosaic. (Cameron, 2010)

At the beginning of her plenary presentation, Cameron noted that researchers should be careful about their terminology; that it is no longer acceptable to use metaphor as a general ‘catch all’ term that implies the inclusion of metonymy, and that we need to use the terms precisely. Taking Cameron’s lead, I suggest that the approach taken in this research may be described as an ‘art discourse dynamics approach to metonymy’. This approach shows how the creative process, viewed from the perspective of the artist, reflecting on their ‘inner discourse’, and a personal interpretation of other artists’ work, seen in a specific context (i.e. the viewer-artwork discourse), can be revealing.

The significance of serial metonymy in discourse is increasingly being recognised and investigated. Cognitive linguists Klaus-Uwe Panther and Linda L Thornburg argue that in meaning construction ‘the dynamic nature of on-line comprehension cannot be based on conscious reasoning, as that would intolerably slow down the interpretation process’. Instead, they suggest that when reasoning, we rely heavily on ‘inferential pathways’ that are mostly metonymic in nature. (Panther and Thornburg, 2005: 353)

This view is supported by the cognitive linguist Kurt Feyaerts. He describes metonymy as ‘a highly dynamic construal mechanism’ and ‘an extension tool par excellence’, and cites metonymic chaining as the central reason for metonymy’s value as a construal mechanism:

[while]...metaphorical mappings, in which image-schematic and logical structures are projected from one domain to another, metonymy allows the construction of conceptual chains, in which the target of a first metonymic extension also serves as the source for a second metonymy, and so on. This results in the processing of a metonymic chain in which the source concept presupposes the mental activation of several ‘intermediate’ steps in order to reach the intended target. (Feyaerts and Brône, 2005)

It is important to note the dynamic nature of metonymy; a point that is particularly apparent when investigating non-verbal metonymies, as these do not conform to the ‘stands for’ relationship which is presented in cognitive linguistic literature with the formula B FOR A. As Charles Forceville points out, metonymy ‘can have a short-lived ephemeral effect’ and has a ‘highly contextualized character’. (Forceville, 2009: 70)

Although Brigitte Nerlich has focused on the linguistic aspects of metaphor and metonymy, her findings are equally applicable to visual art. In her article *Serial Metonymy: A study of reference-based polysemisation*, Nerlich states:

Two central aims of a mind using language are to express new things with old words (via metaphor) and to say in the most efficient way something more about something already well known (via metonymy). Whereas through the use of metaphor we are able to link distant and disparate domains of knowledge and experience, in the use of metonymy we follow referential landmarks picked out by the human visual system as the most salient, most obvious, and most basic to our experience of the world, namely those based on proximity and adjacency. If the mind is a connecting organ, as is widely acknowledged today, metaphor can be regarded as a force of conceptual binding (between distant conceptual domains) and metonymy as a force of conceptual spreading (inside and across adjacent conceptual domains). Both forces together make the human mind and human language what they are.
(Nerlich and Clarke, 2001: 267–268)

Klaus-Uwe Panther claims that the crucial criterion for metonymy is the degree of conceptual prominence of the target meaning. The target meaning is an elaboration of the source meaning, with the source meaning being one conceptual component of the target meaning. Panther has revised his earlier theories to propose that metonymy is a cognitive operation of source meaning elaboration, i.e. an expansion of source meaning into a more complex conceptual structure of which the source meaning is part. Panther claims that there are two advantages to this view:

Firstly, this view acknowledges the dynamic and flexible nature of online meaning construction: A pre-existing frame need not be evoked as a whole in all circumstances but only those subframes that are required for identifying the target meaning in a given context. Second...the processing effort required for identifying target meanings is reduced if the whole frame does not have to be accessed.
(Panther and Thornburg, 2005: 358–359)

Brigitte Nerlich calls for a ‘vague’ definition of metonymy to best express its serial nature, citing Armin Burkhardt’s definition of metonymy as a useful starting point. Burkhardt’s definition proposes that serial metonymy is a process of ‘neighbourly links of aspects and elements inside a network of associations, based on a shared frame of reference’ (Burkhardt, 2010: 249; 1996: 178). If Burkhardt’s definition is set alongside Panther’s view, as expressed in *Metonymy as a usage event* (Panther, 2006: 147–185), namely that metonymy is a ‘device for meaning elaboration where the source of a metonymic relation is expanded into a more complex conceptual structure that ‘contains’ the content of the source’, consistencies can be seen between the two that suggest a useful or pragmatic definition of metonymy as:

a dynamic cognitive process of meaning expansion or elaboration, within a domain or domain matrix; in which a domain is considered to be 'any coherent organization of experience', and 'meaning elaboration' as being 'the accumulation of a network of new senses around the original meaning'. (Ryland, 2009; 2010)

In this research I shall test this definition through my own art practice and through the analysis of a range of contemporary artworks, in order to understand how metonymy functions in art; whether it generates new, 'creative' meaning, and if so, how it does this. To begin, it is worth considering metonymic relations in a well-known and much discussed artwork from the Young British Artists (yBas) of the 1990s: Tracey Emin's *My Bed*.

In *My Bed* (1998) the domains of personal and public life meld to become almost indistinguishable, as the title emphasizes. The viewer sees a grubby bed, in a pool of detritus. This is not a metaphor; this is literally Tracey's bed, presented at a point of crisis in her life. Meaning is held both within the complete work and within each item in the work, including peripheral items that vary from one exhibition to the next. At Lehmann Maupin, New York in 1999 (Figure 6, below), *My Bed* included a hangman's noose, which can be seen to refer metonymically to actual death by hanging, and metaphorically to spiritual death. The suitcase placed on the far side of the bed at London's Saatchi Gallery (Figure 8) seems to offer a sense of hope in its direct metonymic reference to a journey and its metaphoric allusion to the potential for 'moving on'.

The bed itself stands metaphorically for birth, sleep, procreation and death. The complete work metonymically represents the artist: until it became an artwork the bed was an integral part of her life.



Figure 6. Tracey Emin, *My Bed* (1998) Lehmann Maupin, New York, 1999

Figure 7. Tracey Emin, *My Bed and Sobasex* (1998) Scottish National Gallery of Modern Art, Edinburgh 2008



Figure 8. Tracey Emin, *My Bed* (1998) Saatchi Gallery, London

Figure 9. Tracey Emin together with *My Bed* at Contemporary Art Centre of Malaga in 2008



Figure 10. Tracey Emin, *My Bed* Tate Britain, London, 1999

Figure 11. Yuan Cai and JJ Xi *Two Artists Jump on Tracey's Bed*, Tate Britain 24th October 1999

As *My Bed* toured around the world, it became a personification of the artist, taking on different moods according to locations. The Saatchi Gallery installation seems natural and domestic, while at the Scottish National Gallery (Figure 7) the bed seems ‘disco’ sultry, with the neon work *Sobasex* set behind it. At the Contemporary Art Centre of Malaga (Figure 9), Emin is photographed standing by the bed, apparently defending her territory as spectators gather. For the Turner Prize exhibition at *Tate Britain* (Figure 10) the bed is harshly illuminated and appears exposed, vulnerable and lost, and when the Chinese artists Yuan Cai and JJ Xi perform *Two Artists Jump on Tracey’s Bed* (Figure 11) the act seems to suggest desecration, a personal attack on the artist, with echoes of abuse and even rape.

Figure 12 (below) is a diagram showing the items on and around *My Bed* creating serial metonymic relations: leading to metaphoric associations, while Figure 13 shows how metonymic meaning spreads outwards leading to metaphoric associations.



Figure 12. Items on an around *My Bed* (1998) creating serial metonymic relations



Figure 13. Diagram of metaphor from metonymy in *My Bed* (1998) by Tracey Emin. The seven outer circles represent any number of metaphoric domains that meaning can expand into, such as DEATH IS NOOSE

Antonio Barcelona (2003a: 31) has undertaken a number of case studies to consider how metonymy and metaphor interact in language, particularly when it is part of the architecture of the metaphor and provides a vital supporting role for metaphor either through domain expansion or by directing the interpreter's attention to a domain's most significant part through domain reduction. Barcelona suggests that this is because metonymy is a domain-internal mapping, which allows either expansion or reduction of the amount of conceptual material that is brought to bear upon the cognitive process. Panther views this meaning expansion or reduction as an operation of 'source meaning elaboration', which is to say that both focusing in on a particular aspect of conceptual material or widening the area under consideration are processes of elaboration; of exploring further meaning.

Cognitive linguist Louis Goossens (2003: 367) has carried out detailed analysis of the interplay between metaphor and metonymy in conventionalised expressions such as ‘to catch someone’s ear’, meaning to gain their sympathetic attention. Goossens offers the term metaphonymy as a ‘cover term’ to increase awareness that metaphor and metonymy are often intertwined. His research found that the most frequently observed relationship between metaphor and metonymy was *metaphor from metonymy*. An example of this can be seen in *Sea of Time* '98 by Tatsuo Miyajima (Figure 14, below), in which Miyajima submerged several hundred light-emitting diode (LED) counting units, in a large pool of water. Each unit in the system pulsed at a different speed, providing a sense of the particular within the universal.



Figure 14. Tatsuo Miyajima, *Sea of Time* '98. Plastic-coated LED integrated circuit; plastic-coated wire in FRP water pool

In the catalogue for the *Big Time* exhibition at the Hayward Gallery, London (1996–97), art critic Michael Auping discusses the earlier version, *Sea of Time* '88, noting that 'the metaphoric attributes of these counting machines is their sly humanness.' (Auping, 1996: 20). This 'sly humanness' comes from our willingness to measure the world against ourselves, and our sense of embodiment, in which we readily find a wealth of metonymic associations. Auping explains:

Like the human body, they operate on electrical impulse. The fluid, relentless counting mesmerizes, while certain rhythmic sequences parallel one's own breathing or heartbeat...Each gadget is a surrogate human presence; larger groupings can be imagined as families, communities and worlds. (Auping, 1996: 20)

The relationship between these rhythmic sequences and one's own breathing or heartbeat is metonymic, and provides access to the metaphor LIGHT IS LIFE. The diagram below (Figure 15) is an analysis of the metaphor LIGHT IS LIFE, which may be considered an overarching metaphor for the artwork *Sea of Time* '98, (as against an analysis of the title). The cognitive movement begins with the initial observation of a mass of small pulsing lights, through to an array of relations that traverse the literal (observed) and figurative (metonymic) zone. This in turn enables us to personify the light/counter units into life forms, leading to the metaphor LIGHT IS LIFE.



Figure 15. Metonymy within metaphor in *Sea of Time* '98 by Tatsuo Miyajima

Antonio Barcelona's view is that conceptual metaphors may be motivated by or even reducible to conceptual metonymies. (Barcelona, 2003b: 31)

An example of a metaphor that can also be viewed as metonymic is Bruce Nauman's *Coffee Thrown Away Because It Was Too Cold* from his series *Eleven Colour Photographs 1966–70* (Figure 16, below). The image can be read simultaneously as the metaphor: CUP IS LIFE, relating to idioms such as 'glass half full' meaning optimism; it could equally be seen as having sexual connotations, as the liquid is spilt on what appears to be a pristine white sheet. But it is also metonymically a gestural act by Naumann, who is reflecting on his role as an artist:

If you see yourself as an artist and you function in a studio ... you sit in a chair or pace around. And then the question goes back to what is art? And art is what an artist does, just sitting around the studio. ... I didn't know what to do with all that time. There was nothing in the studio because I didn't have much money for materials. So I was forced to examine myself and what I was doing there. I was drinking a lot of coffee, that's what I was doing. (Nauman, 2005: 118)



Figure 16. Bruce Nauman, *Coffee Thrown Away Because It Was Too Cold* from *Eleven Colour Photographs 1966–70*. Printed image 50cm high x 60cm wide

This gestural act captures a recurring theme in Nauman's work, that of 'failure' or 'unattainability'. Metonymic relations are particularly effective and affective in capturing notions of failure, because failure, in psychoanalytical terms, is tied to desire. Lacan describes desire as the same never-ending process of continual deferral: because desire is always 'desire for something else' (Lacan, 2002: 158), as soon as the object of desire is attained it is no longer desirable, and the subject's desire fixes on another object. Thus, Lacan asserts: 'desire is a metonymy'. (Lacan, 2002: 166)

In addition to examples of metaphor formed from metonymy, Goossens also identified examples of metonymic relations within metaphor, whereby metaphoric meaning is expanded via metonymy. He found, however, that metaphor within metonymy is extremely rare, probably because when a metaphor is embedded within a metonymy, this tends to 'metaphorise' it. Goossens also found evidence of 'demetonymisation' in a metaphorical context. This equally-rare occurrence in which, for example, the expression 'pay lip service to', might carry a metonymic reading ('lip' for dishonest speech), but at the same time the overall metaphorical context seems to favour an interpretation in which the metonymic extension is abandoned (service by means of the lips only).

Goossens had difficulty in finding examples of the mirror image of this relationship, i.e. metonymy from metaphor. He suggests that it may be because metonymy seems to lack the power to metonymise the metaphor. He suggests two types of 'metaphtonymies', one which he calls 'integrated metaphtonymy [synchronic]' and the other which he terms 'cumulative metaphtonymy' [diachronic]'. In integrated metaphtonymy, metonymy and metaphor are combined in the same expression, whereas in cumulative metaphtonymy the metaphor is derived from metonymy or *vice versa*. Goossens concludes that these findings 'will have to be verified with figurative expressions for other domains than linguistic action' (Goossens, 2003: 369). This has, in part, motivated my research into the interaction of metaphor and metonymy in art practice and analysis.

Another relationship that occurs is between figurative elements and literality for which a neat dividing line between literal and figurative meaning is hard to establish. In his paper *How metonymic are metaphors?* Günter Radden (Radden, 2003: 409) illustrates the transformative nature of language along the literalness-metonymy-metaphor continuum.

In this (Figure 17, below), meaning shifts from the concrete (high tower) to the abstract (high quality). If the movement of meaning is from the metaphorical towards the metonymic and literal, there is an effect of ‘grounding’ meaning in people’s experience.

LITERAL		METONYMIC		METAPHORIC
(A) HIGH TOWER	(B) HIGH TIDE	(C) HIGH TEMPERATURE	(D) HIGH PRICES	(E) HIGH QUALITY

Figure 17. Literalness-metonymy-metaphor continuum

Both metaphor and metonymy are, to a greater or lesser extent, grounded in sensory experience, the relationship between ‘truth’ and ‘literality’ is more complex. According to Lakoff and Johnson, truth is relative to understanding. It is:

relative to our conceptual system, which is grounded in, and constantly tested by, our experiences and those of other members of our culture in our daily interactions with other people and with our physical and cultural environments.
(Lakoff and Johnson, 1980: 159–184)

Scientists work on the basis of constantly testing and revising their work, in order to identify trends that provide temporary ‘truths’.

Generally, the term ‘literal’ is regarded as ‘a fact or idea stated directly’. It might therefore be imagined that literal language is pervasive and figurative language exceptional or an embellishment. In fact, literal language is highly elusive and, in the field of cognitive linguistics, the definition of ‘literal’ is a contentious issue. In *The Poetics of Mind* (Gibbs, 1994: 26–27), cognitive scientist Raymond Gibbs points out that ‘the idealized, mythical view of literal meaning as being well specified and easily identifiable in thought and language is incorrect.’

It is worth considering one or two examples that demonstrate both the absence of a clear distinction between the literal and the figurative, and the way in which figurative language permeates speech and thought. In the examples: *Christmas is approaching* and

Christmas is not very far away each phrase relies on motion or space to convey the concept that Christmas is imminent. They are clearly not literal statements because Christmas is not a moving object, but an individual would not normally be consciously aware that such phrasing was metaphoric.

Gibbs identifies three phenomena that challenge the literal properties of words and concepts: ambiguity, polysemy and lexical innovations. Ambiguous words have more than one *unrelated* meaning, such as ‘bank’, which may be a financial institution or the edge of a river. Polysemic words have more than one *related* meaning, as in ‘bug’, which may be an insect, a viral illness, a computer error or a covert listening device; all these meanings relate to a more abstract idea of ‘a small annoying thing that is difficult to get rid of.’ (Gibbs, 1994: 40)

According to Gibbs, most words are to some degree polysemous; he suggests that this is true of 98 of the 100 words most frequently used in English. Even the word ‘literal’ is polysemous, as illustrated by phrases such as, ‘during Wimbledon, our eyes were literally glued to the television’, which is also an example of hyperbole. Literal meaning may be disrupted by lexical innovation, in which the novel use of a word creates a new meaning, as in ‘the delivery boy is “porching” the newspaper.’ Though ‘porching’ is not a proper word, it is easily understood in context, particularly in the US.

Gibbs proposes that the mind is ‘fundamentally constituted by various figurative processes’. However, it is still interesting to attempt to distinguish the literal from the figurative. Gibbs identified a number of these attempts within the cognitive sciences (Gibbs, 1994: 75):

***Conventional literality**, in which literal usage is contrasted with poetic usage, exaggeration, embellishment, indirectness, and so on.*

***Nonmetaphorical literality**, or directly meaningful language, in which one word (concept) is never understood in terms of a second word (or concept).*

***Truth conditional literality**, or language that is capable of ‘fitting the world’ (that is, referring to objectively existing objects or of being objectively true or false).*

***Context-free literality**, in which the literal meaning of an expression is its meaning, apart from any situation or its meaning in a null context.*

Cognitive linguists take the view that there is no stable and unambiguous notion of literality, and refute the idea that there might be a clear distinction between literal and non-literal or figurative language. In *The Poetics of Mind: Figurative Thought, Language and Understanding*, Raymond Gibbs says:

*Most traditional accounts of figurative language use suggest that nonliteral speech [that is, irony, zeugma and metonymy] violates widespread communicative norms of speaking truthfully and unambiguously. This pragmatic view of figurative language understanding follows the centuries-old belief that literal language **Error! Bookmark not defined.** is a veridical reflection of thought and the external world, whereas figurative language distorts reality and only serves special rhetorical purposes.* (Gibbs, 1994: 20)

Gibbs (1994: 10) does not accept Lakoff and Johnson's view that literality involves only conventionalized or 'dead' metaphors, such as *foot of the mountain* or *falling in love*, in which the metaphoric mapping between distinct domains has been almost completely lost. Gibbs argues that these apparently dead metaphors have 'vitaly alive metaphorical roots', which can be analysed through the history of meaning change of Indo-European languages. Gibbs does accept that there is a need to find a stable definition of literal meaning, in order to distinguish it from various types of non-literal or figurative meaning.

Artists have exploited the ambiguity between literal and figurative elements, thereby drawing attention to notions of 'truth'. Mel Bochner created a series of works exploring measurements. (Figure 18 below)



Figure 18. Mel Bochner, *Measurement: From the Space of Statements to the Space of Events* (with Piet Mondrian, *Fox Trot B*, 1929) 1969. Black tape and Letraset on wall, as installed at the Yale University Art Gallery, New Haven, 1995, 2009

In *Measurement: From the Space of Statements to the Space of Events* (with Piet Mondrian, 'Fox Trot B', 1929), Bochner literally measures the distance between the painting and the gallery statement about it. The surprising distance between the two, seventeen feet and six inches, raises the question of the conceptual distance between the artwork itself and what is written about it, and comments directly on the relationship between the concrete world as experienced through our sensory perceptions and the interpreted world that has been conceptualised for us by others.

For artists, one obstacle to the enmeshment of visual arts practice with theory has been the distance between what artists directly experience in the process of creating an artwork, and the theoretical frameworks available to artists in which to position and discuss their work. Metaphor and metonymy theory can be a useful resource for artists, but finding where they fit within the literature available can be challenging because of inconsistent use of terms. For example, can the term 'allegory' be aligned with metaphor and the term 'symbol' with metonymy?

In the *Encyclopedia of Aesthetics*, Stephen Melville writes:

Metonymy sometimes appears as a piece of linguistic terminology, sometimes as the name of a trope among other tropes, sometimes as a switch point between the literal and the rhetorical, and sometimes as a switch point between the discursive and the visible. (Melville, 1998: Vol 3.226)

There is particular difficulty around the transference of the terms 'paradigm' and 'syntagm' to those of metaphor and metonymy respectively. Drawing on the linguist Ferdinand de Saussure's seminal work *Course in General Linguistics*, Roman Jakobson proposed that metaphor is a paradigmatic dimension: vertical, and based on selection, substitution and similarity. Metonymy, he claimed, was a syntagmatic dimension: horizontal, and based on combination, contexture and contiguity (Jakobson and Halle, 2002 [1956]: 95)

Jakobson related metonymy and metaphor to Freud's dreamwork processes, regarding Freud's 'condensation' as synecdochic and his 'displacement' as metonymic. But the notion of 'combination' as metonymic and 'condensation' as synecdochic was problematic. Jacques Lacan subsequently refined Jakobson's work to link metaphor with condensation and metonymy with displacement. (Lacan, 2002: 152)

The horizontal and vertical axis of language and communication (Figure 19, below) is an attempt to form clear distinctions between elements. However, there is little evidence of support such divisions; the notion of a continuum from literal through to metaphoric seems to be a better expression of the relationship and interaction between metonymy and metaphor. (Dirven, 2003: 106–9)



Figure 19. Syntagmatic and paradigmatic axes
(from *Semiotics: the basics*, Chandler, 2002)

If we accept Barcelona's view that every metaphorical mapping presupposes a prior metonymic mapping (Barcelona, 2003b: 31), we can expect to find metonymic relations wherever there are metaphoric relations; the reverse, however, is not necessarily true since we can only say that we may find metaphors where there is metonymy.

As discussed, metaphor has a tendency both to hide and to highlight meaning through perspectivalisation. To access meaning hidden by metaphor, we need either to gain access to meaning through metonymic relations, or to find a new metaphor that offers a fresh perspective. Creating new metaphors may involve significant cognitive effort: thus, the metaphor argument is war may be used metonymically to expand the source domain of war that is commonly understood as 'attack and defend' and provide access to additional meanings such as planning, strategy, observation, retreat, sacrifice, reconciliation, diplomacy, reconnaissance, tactics, operations, drills, exercises and manoeuvres. The notion of 'manoeuvres', i.e. 'movements or actions requiring dexterity and skill', may then be associated with dance, as 'prescribed or improvised movements or actions, usually performed to music', leading to a novel metaphor of argument is dance. But uncovering this alternative metaphor requires effort, in order to reveal elements hidden by the first

metaphor, and feels awkward and laboured. If we accept Barcelona's view that 'every metaphorical mapping presupposes a prior metonymic mapping' (Barcelona, 2003b: 31), we can use metonymic relations to give access to an array of previously hidden meanings. We cannot, however, presume that every metonymic relation will lead to metaphor.

Metonymy as a creative force

Philosopher Carl R. Hausman believes that we need to study metaphor in order to understand creativity, because some metaphors seem to express insights or creative thought. In his book *Metaphor and Art* (1989), Hausman sets out to demonstrate that linguistic, music and visual art metaphors are functionally comparable:

the ways that words and larger linguistic verbal units function within metaphors, and in turn, within the contexts of metaphors, are comparable to the functions of the components of works of the visual arts and music. (Hausman, 1989: preface ix)

These insightful 'creative' or 'novel' metaphors refer to Max Black's initial proposal 'that metaphors may sometimes be said to create rather than to discover similarities,' (Black, 1954). This notion of 'creation' rather than 'discovery' is central to Hausman's thesis and also has implications for how metonymy functions with, and without metaphor.

Hausman refers to the evolutionary process of language and thought. Complexity Theory has been useful in explaining how language evolves. In 2009 Simon Kirby and his team at the University of Edinburgh published their findings from what they call the 'Alien Language Experiment'. These laboratory-based studies into language acquisition demonstrated that because language is culturally transmitted, it is an evolutionary system in its own right. It was demonstrated that many of the adaptive features of linguistic structure arise from this evolutionary process rather than having to be encoded specifically in our genes. The human brain provides the essential scaffolding for the cultural evolution of language in the first place, but it need not specify all the details innately, (see *Alien Language Experiment 2009*, Language Evolution and Computation Research Unit, University of Edinburgh (Kirby et al., 2009)¹. Kirby's research concluded:

¹ The experiment used pictures of alien fruit with names in a made-up language which participants were asked to memorise. They were then tested on what they could remember and their answers used with the second group of participants, and so on. The first participants found it very difficult to learn and remember the words, but with each subsequent 'generation' they became easier to learn and developed regularities in their structure. Eventually participants were able to understand words they had never seen before.

Language is unique in being a system that supports unlimited heredity of cultural information, allowing our species to develop a unique kind of open-ended adaptability' in a process of cultural evolution. Language is both a conveyer of cultural information (Maynard Smith and Szathmary, 1997) and is itself culturally transmitted. Crucially, language also represents an excellent test domain for theories of cultural evolution in general, because the acquisition and processing of language are relatively well understood, and because language has an interesting, nontrivial, but well documented structure. Spoken (or signed) language is an outcome of iterated learning. Iterated learning is a process in which an individual acquires a behavior by observing a similar behavior in another individual who acquired it in the same way. [O]ver repeated episodes of transmission, behaviors transmitted by iterated learning tend to become 1) easier to learn, and 2) increasingly structured. Note that this process is cumulative and is not considered to arise from the explicit intentions of the individuals involved. Rather, this type of cultural evolution is an "invisible hand" process leading to phenomena that are the result of human action but are not intentional artifacts.

For Hausman, 'evolutionary realism' stems from his interpretation of Charles S Peirce's philosophy, and the proposal concerning how creative metaphors can generate new referents and meanings, in which chance (or spontaneity) and continuity play their part. All humans are to some degree creative, and all humans use metaphor and metonymy in everyday thought and communication, but some people choose to challenge conventions more overtly than others: some people, according to biological anthropologist Helen Fisher (Fisher, 2009: 8) have the biological constituents to be cognitive 'explorers' or creative thinkers, which has been associated with high dopamine levels in their system; others might be regarded as 'builders', as indicated by a cautious temperament, which corresponds with high levels of serotonin in the brain.

Hausman makes a distinction between metaphors that have 'antecedent rules and conditions' and 'creative metaphors'. He understands creative metaphors as being those that are 'at once nonsensical and meaningful' and present the 'paradox of creativity'.

metaphors are creative because they articulate new insights. Thus, what is puzzling about such metaphors is that they are significant even though what is significant about them is unfamiliar and not readily traceable (if traceable at all) to what is familiar. If metaphors are creative, then they must display at least some of the distinguishing features of achievements that are new and valuable and that contribute to their traditions. As new, they contrast with results that are based solely on antecedent rules and conditions. Presumably this is one reason that Max Black stated that a metaphor may be cognitively significant and may "create the similarity" rather than refer to "some similarity antecedently existing". (Hausman, 1989: 9–10)

Hausman grapples with the idea of an extraconceptual condition necessary for a metaphor to be 'creative' and yet have the feeling of appropriateness. By 'extraconceptual' or

‘extralinguistic’, which are terms that Hausman uses interchangeably, he is trying to capture the idea of ‘independently functioning conditions’; a notion of ‘something more’:

A metaphorical expression functions so that it creates its significance, thus providing new insight, through designating a unique, extralinguistic and extraconceptual referent that had no place in the intelligible world before the metaphor was articulated. (Hausman, 1989: 94)

Extralinguisticity, Hausman explains, is necessary to justify saying that a creative metaphor is ‘appropriate’ or ‘faithful’ or ‘fits the world’, which is to say, ‘there is something to which the expression is appropriate, some resistant or constraining condition: yet this condition is new’. So, what Hausman sees as extraconceptuality adding to uniqueness is:

a controlling factor, a locus for the senses. It is a focus for influences on the range of senses relevant to it. Its function is to constrain certain senses and resist others. (Hausman, 1989: 108)

Cognitive linguists have subsequently added to this understanding of creative metaphor; these processes of on the one hand ‘constraining’ and on the other hand accessing ‘something more’.

In his article *THEORIES ARE BUILDINGS Revisited* cognitive linguist Joseph Grady (1997), makes the distinction between primary and compound metaphors. Primary metaphors emerge directly from correlations in experience, for example more implies up as in ‘high prices’, and similarity implies nearness, as in ‘that colour is close to the one in the dining room.’ They tend, therefore, not to be so culturally specific, require little conscious awareness and can be traced through metonymic relations to human sensory-perceptual experience. Compound metaphors are constructed from the unification of primary (basic) metaphors, such as *THEORIES ARE BUILDINGS*.

George Lakoff largely explains the apparent paradox of metaphor through the relationship between image schemas and primary metaphors. Lakoff (1987: 267) contends that people use these pre-conceptual experiences to construct and understand more complex abstract concepts and conceptual domains. This enables them to generate ‘image schemas’ or ‘schemata’; fundamental concepts derived from sensory-perceptual experiences in early childhood, prior to and during the acquisition of first language, such as ‘up-down’; ‘front-back’; ‘light-dark’; ‘warm-cold’ and surface and containment, which gives insight into concepts such as the mind as a container, evidenced in phrases such as ‘out of his mind’, or ‘being in trouble’.

Image schemas are drawn from recurring patterns of experience as ‘embodied’ beings and contribute to the domain matrices of a wide range of concepts, the network of domains that underlie a concept (Evans and Green, 2006: 230–235). Image schemas are multi-modal because they derive experience across different modalities or different types of sensory experience, and are buried ‘deeper’ within the cognitive system, as abstract patterns arising from a vast range of perceptual experience; as such, they are not available to conscious introspection.

On this understanding ‘newness’ draws on our subconscious sensory-perceptual, pre-language ‘image schema’. These image schemas in turn can be linked to ordinary or conventional conceptual metaphors, such as LIFE IS A JOURNEY. What the poet or artist does, according to Zoltan Kövecses (2002: 47–49) is a process of *extending, elaboration, questioning and combining*. Kövecses gives these examples:

Extending a conventional metaphor, as in:

*In the middle of life’s road
I found myself in a dark wood.* (Dante)

Elaborating on a conventional metaphor such as ANGER IS A HOT FLUID IN A CONTAINER, as in the phrase ‘boiling mad’ or Adrienne Rich’s poem *The Phenomenology of Anger*:

*Not enough. When I dream of meeting
the enemy, this is my dream:
white acetylene
ripples from my body
effortlessly released
perfectly trained
on the true enemy*

*raking his body down to the thread
of existence
burning away his lie
leaving him in a new
world; a changed
man.*

Questioning, whereby poets call into question the very appropriateness of our common everyday metaphors, is a ploy favoured by Emily Dickinson. She took the dominant conventional metaphor LIFE IS A JOURNEY through time and replaced it with LIFE IS A VOYAGE through space. According to Margaret H. Freeman, a specialist in cognitive poetics: ‘Poets, then, in their metaphor making, serve as arbiters of and commentators on the way humans understand and interpret their world.’ (Freeman, 1995: 643)

Finally, Kövecses cites *combining* as ‘possibly the most powerful mechanism to go beyond our everyday conceptual system (but still using the materials of everyday conventional thought). He offers one of Shakespeare’s sonnets as an example:

*In me thou seest the twilight of such day
As after sunset fadeth in the west;
Which by and by black night doth take away,
Death’s second self that seals up all in rest.*

In the case of meaning *extension* and *elaboration*, metonymic thought is used and in the case of Kövecses’ example of *questioning* old metaphors are replaced with new metaphors that seem more culturally relevant. Finally, in the process of *combining*, new complex metaphors are constructed from a number of conventional metaphors.

The ‘newness’ in creative metaphors is therefore achieved through a process of re-assembling and re-visioning conventional thoughts in novel ways to facilitate new perspectives and new possible meanings. In this process we bring together new metaphoric combinations that ‘create the similarity’, and, new extensions and elaborations that ‘create the difference’. We can say, therefore, that both metaphor and metonymy are processes that can enable creative thought and generate new knowledge.

The cognitive linguistic view is that metonymy ‘gives access to’ and ‘highlights’ meaning within a cognitive domain or domain matrix. This, however, implies a return to something already known. But metonymy has the capacity to offer new connections within a domain, and expansions into related domains not previously regarded as contiguous. When we draw on our personal experiences, we generate *ad hoc* categories that group in a domain elements that may not previously or conventionally have formed groups. The act of forming an unconventional cognitive domain and identifying things that might be contained within, and related to it is an act of creativity.

For example, Ceal Floyer's *Helix* series (2001 onwards) creates a 'still-life' or 'conceptual domain' based on everyday items that fit exactly into the various-sized holes in a circle template tool manufactured by Helix (Figures 20–23, below).



Figure 20. Ceal Floyer *Helix* 2001

Figure 21. Ceal Floyer *Helix* 2002



Figure 22. Ceal Floyer *Helix*, 2003

Figure 23. Ceal Floyer *Helix (2)* 2002

The *Helix* template provides a new conceptual domain for these otherwise disparate but ubiquitous objects. Floyer's approach challenges the classical view of 'genus–species' categorization which holds that categories are defined only by properties shared by all the members. (Lakoff, 1987: 5–11)

In *Helix*, the original meaning and purpose of each item is disrupted by their perfect fit in this very specific categorization of circles. The *Helix* circle template acts as a frame that neatly transforms disparate entities into a functional whole, i.e. 'objects whose purpose is to fit perfectly into the circles of a *Helix* template.' We could speculate that such a template was used in the original design of these objects, since it offers a standardization of

components suitable for ease of manufacture. But we also sense that these objects are very personal, acting as a thumbnail sketch of the artist, or a more rigorous equivalent of Tracey Emin's *My Bed*. The subtlety of the pieces comes from their particularity and universality; ubiquitous, everyday objects could represent each and every one of us, as if each *Helix* were a model or prototype of any city in the world. Each incarnation of *Helix* offers a novel and inventive grouping of familiar objects: it is the differences between *Helix* 2001, 2002 and 2003 that add to the viewer's delight.

The study of language acquisition in young children has informed our understanding of how we organise and structure cognitive processes. Cognitive linguists Margarita Correa-Beningfield, Gitte Kristiansen, Ignasi Navarro-Ferrando and Claude Vandeloise point out: 'Experientially, the physical and emotional world we encounter as infants is characterized by gradable dimensions: cold-hot, light-dark, softness-roughness' and that we also have 'very early experience with "up-down", "front-back", orientations, and crucially with functional dimensions such as "constraint", "containment", or "support"'. (Correa-Beningfield, (2005: 344)

In *Philosophy in the Flesh*, George Lakoff (1999) has drawn together studies on neural computational models of thought and language, neural theory of primary metaphor, and language acquisition, undertaken by cognitive scientists Srini Narayanan, Lokendra Shastri and the linguist, Christopher Johnson, respectively. In an online discussion group Lakoff summarised their work thus:

Christopher Johnson pointed out that children go through a 'conflation' stage where source and target domains are experienced together and not experienced as different. In Narayanan's neural theory of metaphor, 'conflation' is the simultaneous activation of two distinct (and sometimes widely separated) parts of the brain. 'Experienced together' means neurally bound temporarily – in Shastri's computational neural model that means they are firing in synch. An example might be MORE IS UP, where quantity and verticality are computed in different brain regions – physically distinct – but experienced together temporarily if firing in synch...When two neural structures are regularly co-activated, activation flows along neural connections between them. As activation regularly occurs, the synapses chemically change to grow stronger. The slogan in neuroscience is: Neurons that fire together wire together...In Narayanan's theory of metaphor, primary metaphors develop when there is co-activation. Thus, the regular co-activation of quantity (More) and Verticality (Up) naturally results in the MORE IS UP metaphor; the metaphorical 'mapping' consists of the neural circuitry strengthened and thus made permanently functional...Metonymy occurs within a single conventionalized frame in a single conceptual domain. It is a mapping from ONE role in the frame to another role in the same frame. (Lakoff, 2005)

The study of how young children acquire language has also provided useful data on how and why mental connections are made. Brigitte Nerlich, in her paper "*Mummy, I like being a sandwich*": *Metonymy in Language Acquisition* (Nerlich, 1999: 365), describes how 2½-year-olds will use perceptual similarity to extend meaning from their limited vocabulary to cope with increasing communicative needs. So, for example, the child may use the word ball for all kinds of balls, including round hanging lampshades, doorknobs, and the moon. These analogical over-extensions are based on recognising and construing similarities and can therefore be considered the first indications of metaphorical thinking. As well as analogical over-extensions, Nerlich refers to Eve Clark's (1993: 34) studies of *over-inclusions*, such as *baby* used for self-reference and all children. These over-inclusions are based on both perceptual similarity and conceptual contiguity and can therefore be regarded as early forms of metonymic thinking. Nerlich has also identified pragmatic metonymic overextensions when, for example, a child said *toy* when seeing a certain bag which habitually contained toys. Nerlich suggests that 'even very young children begin seeing similarities, connections and class inclusions, and that with age they gradually adjust to the way the adults categorize and form associations and restructure their linguistic and conceptual systems accordingly'. (Nerlich, 1999: 367)

As Lakoff explains in *Women, fire, and dangerous things: what categories reveal about the mind*: 'human neurophysiology, body movement, sensory perception, the ability to form mental images, to learn and remember, to organize the things learned, and to communicate', all contribute to categorisation. We categorise things on the basis of shared properties, but not all our categories are of 'things'; a large proportion are of abstract entities. We categorise 'events, actions, emotions, spatial relationships, social relationships, and abstract entities of an enormous range: governments, illnesses, and entities in both scientific and folk theories, like electrons and colds.' (Lakoff, 1987: 7)

Eleanor Rosch (1975) challenged the long-held 'classical' view that categories are defined by properties that all members share. She observed that categories, in general, generate best examples or 'prototypes'. Prototype theory states that 'human categorization is essentially a matter of both human experience and imagination – of perception, motor activity, and culture on the one hand, and of metaphor, metonymy, and mental imagery on the other.' We have categories for everything we can think about, including: 'biological species, physical substances, artefacts, colors, kinsmen, and emotions and even categories for sentences, words and meanings.' (Lakoff, 1987: 9)

Categories are not fixed systems outside of ourselves, but are constructed from our own experiences (perceptual and introspective) and may be conventional and mundane (shared with others in, for example, genus – species relationships such as chairs and tables in the category ‘furniture’). They may also be *ad hoc* ‘on the fly’ categories drawn from a particular context, at a particular time.

Although categories have ‘fuzzy’ boundaries, they need some constraints, or systems of management, to be functionally efficient. Not all facets of our knowledge have equal status: some are central and others peripheral. Ronald Langacker (1987: 163) proposes a network model which suggests that each entity designated by a symbolic unit becomes a ‘point of access’ to a network; its semantic value is seen as the open-ended set of relations in which the ‘access node’ participates. He says: ‘This can be used, for example, to explain how we establish a link between *cat* and *cheese* without saying that the concept of ‘cheese’ figures directly in that of ‘cat’: we ascribe to cats the property of chasing mice and to mice that of eating cheese.’ (Ruiz de Mendoza Ibáñez and Aransáez, 1997–1998: 260).

These relations networks can be visualised as ‘scale-free’ networks, as opposed to *random/exponential* networks (see Figures 24 and 25).

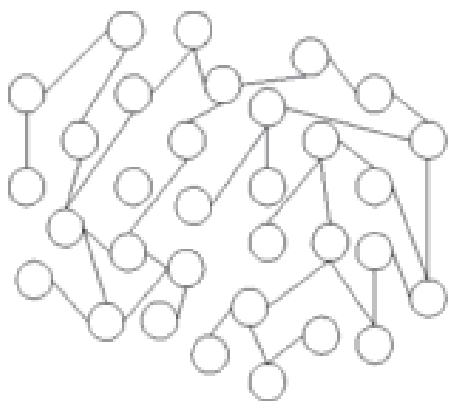


Figure 24. Random network

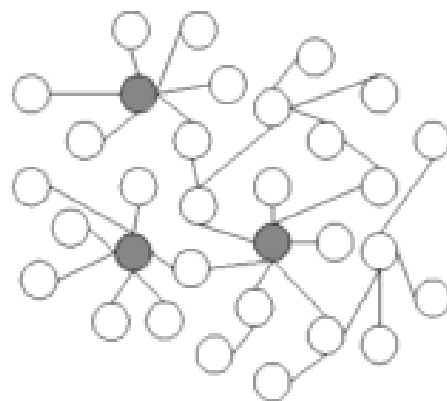


Figure 25. Scale-free network

Note: In the scale-free network diagram, the larger (highly connected) hubs are highlighted.

Physicist Albert-László Barabási and his colleagues at the University of Notre Dame, Indiana, US, found that scale-free networks can be used to explain the behaviours of neural connections, power grids, the stock market and cancerous cells. The nodes of a scale-free network are not randomly or evenly connected, but instead include many ‘very connected’

nodes, referred to as ‘hubs’. These hubs of connectivity shape the way the network operates. In scale-free networks, the ratio of very connected nodes to the number of nodes in the rest of the network remains constant as the network changes in size, whereas random networks have very few well-connected nodes. The two types of networks also behave differently as they break down. The connectedness of a randomly distributed network decays steadily as nodes fail, slowly breaking into smaller, separate domains that are unable to communicate with each other. Scale-free networks, on the other hand, are immensely robust, showing almost no degradation as nodes fail. In Barabasi’s scale-free model, the network operates on a principle of ‘the rich get richer’, a case of preferential attachment, where the highly connected hubs attract more connections. (Barabási, 2009)

This idea of ‘preferential attachment’ applies not only to how neural networks operate, but more generally to how conceptualisations are managed and organised. Practice-based research seeks to disrupt the process of preferential attachment, in order to find new connections and extensions, often through interdisciplinarity; as in this research, philosophy, cognitive linguistics, art practice and art analysis are brought together. In his article, *Inherently interdisciplinary: four perspectives on practice-based research*, art theorist Clive Cazeaux explains how this process might work:

art is uniquely placed to generate research on account of the fact that it is inherently interdisciplinary, that is to say, it involves combining different subjects and methods; for example, the interaction between an artist’s practice specialism and the interest they want to explore through their practice, with the research value lying in the negotiation that takes place between them, and what that negotiation produces.
(Cazeaux, 2008: 108)

For artist and theorist Paul Carter the discourse of creative research, or what Carter calls ‘material thinking’, is ‘likely to be occasional, generically disrespectful and promiscuous, and localised’. Carter points to the word *discourse* as carrying ‘a physical sense of running hither and thither, its first aim [being]...to *materialise discourse itself*.’ (Carter, 2004: 9)

Carter argues that interdisciplinary practice creates a context for exchange between methods and assumptions that generate new discursive knowledge, which, through intersecting and shifting perspectives can be the source of new knowledge. Graeme Sullivan also identifies interdisciplinarity as a key element in the generation of new knowledge. In his book *Art Practice as Research* he uses the term ‘transcognition’ for this process of cross-domain enquiry. He argues that art should be recognised as a form of research because it is ‘a site for knowledge construction and meaning making’ which enables us to witness the processes of transformation taking place (Sullivan, 2005: 86).

Sullivan rails against ‘content analysis’ and states that ‘a central consideration is ...the need to be critical in assessing how the researcher makes meaning,’ and how ‘those who make images – artists and other visual communicators – and those who interpret images – critics and other commentators – construct their meanings as they present them in visual form.’ (Sullivan, 2005: 63)

Cazeaux suggests: ‘theory and practice enjoy a tensile, transcognitive relationship, with the research value of the artwork lying in the interaction that takes place between the two ‘...and the ability to visualize transcognition... which will result in an opening up [of] the interpretive space’ (Cazeaux, 2008: 113). In particular, Cazeaux notes:

transcognition manifests itself as the generation of possibilities. This is possibility in the sense that multiple, rather than singular, meanings are produced, so that we are left in a state of having to consider that something may be this or may be that...
(Cazeaux, 2008: 116–17)

Two metaphors emerge from Cazeaux’s survey of the four books on practice-based research. They are ‘the democracy of experience’ and ‘methodological abundance’. These two ideas recognise value in all forms of experience and present the possibility that any and all forms of experience can be interrogated from any other area of experience.

The difficulty here is that giving equal validity to all forms of experience is hard to achieve, as we tend to filter information on the basis of preconceived notions of relevancy. ‘Relevance’ is a property not only of utterances and other observable phenomena, but also of thoughts, memories and conclusions of inferences. Dan Sperber and Deirdre Wilson, whose work embraces anthropology, linguistics and philosophy, have developed what they call *Relevance Theory* in which they set out (what they claim to be) one of the essential features of human communication – the expression and recognition of intensions. For there to be relevance, there needs to be a ‘positive cognitive effect’. This effect is achieved when an input (a sight, a sound, an utterance, a memory) connects with background information that is relevant to an individual, providing conclusions that matter to them, forming a ‘preferential attachment’ (Wilson and Sperber, 2006: 608). So we need to compensate for positive cognitive effects that form a preferential attachment, through active or conscious resistance to the dominance of some types of experience over others.

Interdisciplinary or ‘multidirectional’ assessment of one form of experience by another is essential to the openness and criticality of practice-based research; by promoting an ‘abundance’ of methods and viewpoints, ‘the many’ can achieve a degree of objectivity by

intersecting with and checking one another. This helps the artist/researcher step back from their own experiences and take a more analytical approach. Most significantly it situates art as a form of knowledge that can engage with and critique other forms on an equal footing. Cazeaux acknowledges that ‘combining the democracy of experience and methodological abundance to arrive at a hermeneutic theory of how artistic knowledge is both *possible and critical* is a particularly inventive move’ (Cazeaux, 2008: 118), and that the proposal that ‘art practice as research generates knowledge in the form of possibilities is an exciting one’. Cazeaux suggests:

If one is in a context where concepts or perspectives shape the contents of experience, then adopting a new perspective means that the contents of your experience will change and change in ways that may be surprising.
(Cazeaux, 2008: 128)

This, Cazeaux argues, will require: ‘New, additional concepts – concepts that fall between the two disciplinary perspectives’ in order to make sense of the transition, and ‘It is what comes to light in the move from one perspective to the other that is the source of new interdisciplinary knowledge. Cazeaux concludes:

it is the tangled network of resistances and new possibilities that emerges from the negotiation [between domains and disciplines], in the form of artefacts and commentary, wherein the value of practice-based research lies.
(Cazeaux, 2008: 129)

The bringing together of philosophy, cognitive linguistics and art practice encourages a shift away from the cognitive linguistic model of metonymy – dominated by analysis of context-free phrases and idioms, towards the study of visual, aural and multimodal works. Brigitte Nerlich’s article *Serial Metonymy: A study of reference-based polysemisation* can be regarded as a pivotal moment when metonymy, in its fragmented state within linguistics, made the transition to its central role in cognition.

Little research has been done into how the cognitive potential of metonymy, as it is understood within cognitive science, draws upon continental philosophy, or how continental philosophy might contribute to our understanding of metonymic cognition. Philosophy can make a contribution to an understanding of metonymy and metaphor, as

there are two characteristics of metonymy which are researched only sparingly within cognitive linguistics, but which have been cited as dominant features by philosophers such as Nietzsche (1844–1900) and Derrida (1930–2004).

In *Truth and Lie in an Extra-Moral Sense* Nietzsche makes no distinction between representation and reality; he takes the view that there is no external, mind-independent world. For Nietzsche, therefore, there is no binary conflict; he suggests instead a movable, dynamic, restless continuum. According to Cazeaux (2000: 14) however, metaphor gives a ‘binary feel’ to our world, through its ability to hide as well as highlight meaning, via the effect of a perceptual and cognitive ‘figure-ground switch’.

Nietzsche states that concepts are metaphors, which we obtain ‘by overlooking what is individual and actual’. Concepts and metaphors are manifestations of our creative minds:

Every concept arises from the equation of unequal things. Just as it is certain that one leaf is never totally the same as another, so it is certain that the concept "leaf" is formed by arbitrarily discarding these individual differences and by forgetting the distinguishing aspects. (Nietzsche, 2000: 55).

Nietzsche extends the German philosopher Schopenhauer’s view that we oscillate between desire and boredom, this drive to learn, expand our understanding, build our skills – the will to power – that Nietzsche sees as a basic drive along with that of reproduction – the will to live and the will to life (Bragg, 2009). From this, we can argue that if desire is metonymic and we are driven by desire, then drive/desire is a metonymic process, and that rationalization, or the process which attempts to order and control our impulses and drives is metaphoric. Concepts, according to Nietzsche, are general ideas, [generated] by subtracting all that is particular and distinctive from individuals.

Nietzsche distinguishes, though not explicitly, between ‘conventional metaphors’ and ‘perceptual metaphors’. Conventional metaphors are ‘metaphors that have become worn out and have been drained of sensuous force, coins which have lost their embossing and are now considered as metal and no longer as coins’, whereas a ‘perceptual metaphor’, in which metonymic relations can also be found, is formed from the process of translation from nerve stimulus into ‘images’ [the signifier is what Saussure calls the ‘image,’ the ‘psychical imprint’ of a material]...and is ‘individual and without equals’ and is therefore at the root of conventional metaphors and the ‘grandmother of every single concept’.

(Nietzsche, 2000: 56)

Of language, Nietzsche says: ‘What is a word?...The various languages placed side by side show that with words it is never...a question of adequate expression; otherwise, there would not be so many languages.’ (Nietzsche, 2000: 55)

As cognitive scientist Mark Turner explains:

Expressions do not mean; they are prompts for us to construct meanings by working with processes we already know. In no sense is the meaning of [an] utterance ‘right there in the words.’ When we understand an utterance, we in no sense are understanding ‘just what the words say’; the words themselves say nothing independent of the richly detailed knowledge and powerful cognitive processes we bring to bear. (Turner, 1993: 206)

Words become concepts because they have to fit any number of similar cases, and gain part of their meaning from the context in which they are used. Nietzsche explains it thus:

Every word instantly becomes a concept precisely insofar as it is not supposed to serve as a reminder of the unique and entirely individual original experience to which it owes its origin; but rather, a word becomes a concept insofar as it simultaneously has to fit countless more or less similar cases – which means, purely and simply, cases which are never equal and thus altogether unequal. (Nietzsche, 2000: 55)

What Nietzsche suggests that we want, and maybe artists in particular want, is to access or move closer to the ‘entirely individual original experience’; an experience, we can, in part, reach through a focus on metonymic relations which are closely drawn from our sensory perceptions and image schema as embodied beings. The ‘original experience’ stimulates the senses and touches the emotions and suggests a re-viewing or reconsideration of the known – seen, as it were, through stranger’s eyes.

Jacques M. Chevalier, a professor of cognitive science at Carleton University, Ottawa, whose research centres on symbolic and semantic analysis and social scientific brain studies, states:

The principal lesson of literality is that all productions of "sense" require some quanta of inattention, measures permitting us to ignore all things that need not be attended. This implies that literal meanings can be obtained through concentrated attentionality and maximum inattention to everything else, hence focusing on the narrowest set of relevant connections. (Chevalier, 2002: 200)

This ‘inattention’ and uneven allocations of attention applies to all meaning construction along the literal to metaphoric continuum.

While differently focused, effects of figuration and literality are not boxes into which signs can be neatly categorized. Semiotic attentions are not quanta of meaning fixed into immutable conventions and codes. Rather, they constitute dynamic measurements that constantly shift and move. Attentional movements can transform figures of speech into highly focused denotations, metaphors that die away but also generate new lexical systems. Shifts of this sort are essential to lexical innovations that deviate from old conventions and create new frames...Violations of established codes engender new codes and connections within and between fields. (Chevalier, 2002: 201)

Artists frequently employ violations of established codes in order to create opportunities for new perspectives to emerge.

Metaphors often feed into this lexical innovations process. However, they can also be used merely to foreground possible linkages, previously unexploited, making them explicit without altering existing codes. The phrase 'old age is a withered stalk' may be poetically new to some, yet the imagery of lost bloom is not an attack against better-known imageries of old age. Just as literal attentions can break new grounds with the help of previous metaphors, so too metaphors deviating from literal meanings can revisit themes built into old codes. (Chevalier, 2002: 201)

Chevalier sees the distinction between figuration and literality as being a difference of focus, but that the effects of figuration and literality are 'dynamic measurements that constantly shift and move.' Attentional movements are transformative, that is, they have the power to establish new codes and connections within and between mental fields.

Nietzsche expresses it thus:

We obtain the concept, as we do the form, by overlooking what is individual and actual; whereas nature is acquainted with no forms and no concepts, and likewise with no species, but only with an X which remains inaccessible and indefinable for us. (Nietzsche, 2000: 56)

Nietzsche notes that our interpretation of the world around us is anthropomorphic, and can never be 'objective':

For even our contrast between individual and species is something anthropomorphic and does not originate in the essence of things; although we should not presume to claim that this contrast does not correspond to the essence of things: that would of course be a dogmatic assertion and, as such, would be just as indemonstrable as its opposite. (Nietzsche, 2000: 56)

Nietzsche describes a process of ‘suggestive transference, a stammering translation’... ‘into a completely foreign tongue [metaphor] – for which there is required, in any case, a freely inventive intermediate sphere and mediating force’. Might this ‘freely inventive intermediate sphere and mediating force’ be the force of metonymic relations? We aspire to ‘resemble [or re-assemble] a product of the imagination...to find ‘some place where the illusion and reality can be divined.’ (Nietzsche, 2000: 56). According to Cazeaux (2007: 104), Nietzsche was the first Western philosopher to define the human as ‘a metaphorical being or that we are in metaphor or we are metaphor’. Thus, if ‘we are metaphor’, on the basis that ‘metonymy is a prerequisite for metaphor’ (Barcelona, 2003b: 31), we can expand Cazeaux’s statement to ‘we are metaphor and metonymy’. It is not possible to use metaphor as an ‘umbrella term’ that includes metonymy because metonymy is a distinct cognitive function that can operate with and without metaphor. Nietzsche clearly states that we understand ourselves and the world we are in through metaphor and metonymy: ‘a movable host of metaphors, metonymies, and anthropomorphisms’ (Nietzsche, 2000: 56). The reference to anthropomorphisms is also crucial and precise; Nietzsche recognised that we understand our world in relation to ourselves. This comes about because the human conceptual system is structured by the features of one’s body, and the functioning of one’s body in everyday life: a species-specific view of the world. As cognitive scientist Mark Johnson explains in *The Body in the Mind*:

[O]ne’s understanding is one’s way of being in, or having, a world. This is very much a matter of one’s embodiment, that is, of perceptual mechanisms, patterns of discrimination, motor programs, and various bodily skills. And it is equally a matter of our embeddedness within culture, language, institutions, and historical traditions. Our understanding is our bodily, cultural, linguistic, historical situatedness in, and toward, our world. (Johnson, 1987: 137)

The language we use to discuss Nietzsche is important. If we use metaphors such as ‘competing’, ‘contest’, ‘asserted against’ which reinforce the notion of binary opposition we risk losing the metonymic relations in Nietzsche’s writing which speak of a ‘network of transpositions’ and ‘the capacity to see other viewpoints’, and ‘a suggestive transference’. (Nietzsche, 2000: 57). Although Nietzsche’s use of terms such as ‘will to power’ imply conflict – a cancelling out of one view in favour of another – he in fact values the ability to see from multiple points of view:

[The philosopher] tries to permit all the sounds of the world to resonate within himself and to present this total sound outside of himself by means of concepts. (Nietzsche and Breazeale, 1979: 22)

Nietzsche also argues against the privileging of vision, and emphasizes the importance of other senses, especially, touch, taste, and smell; stressing the way in which they require intimate involvement with their domains and do not produce the illusion of totalizing comprehension.

As Keith Ansell-Pearson explains in the *Encyclopedia of Aesthetics* (1998: Vol 3. 367) Nietzsche's will to power is not a simple desire 'for' power, but is rather the essence of the activity of willing, which is 'an expansive becoming and an aggressive growing that are endogenously generated'. Nietzsche's formulation of life as will to power is in tune with current Complexity Theory; it builds on Darwinian conceptions in which forms of life adapt to external circumstances and suggests that, as Nietzsche argues, there are also spontaneous and expansive 'form-shaping forces' that work from within and that provide life with new directions and interpretations (*On the Genealogy of Morals*, II, 12). This view has subsequently found support in Complexity Theory, which, over the last two decades or so has recognized an overarching dynamic, non-linear, self-organizing, open, emergent, adaptive evolutionary system permeating all aspects of life, from organisms to business management.

Our notion of knowing, or in Nietzsche's term, 'truthfulness', comes from our embodied, species-specific sense of the world. For us, Nietzsche says: 'to be truthful means to employ the usual metaphors' (Nietzsche, 2000: 56). It is here that the artist can challenge these truths, this set of conventions and metaphors that 'continually confuses the conceptual categories and cells by bringing forward new transferences, metaphors, and metonymies.' (Nietzsche, 2000: 59). For Nietzsche, the familiar or 'everyday' things we are so accustomed to that they appear to us as 'truth' actually represent that which we think we know. What the artist (and the malicious liar) bring to this 'truth' is a misuse of fixed conventions: metaphors and concepts exclude information for the sake of expediency, in which truth becomes 'a regular and rigid new world...constructed as its prison from its own ephemeral products, the concepts'. But to compensate for, or as a consequence of, this striving for order and 'truth', humanity also craves respite from these strictures. Nietzsche suggests that art provides that release: 'It [humanity] seeks a new realm and another channel for its activity, and it finds this in myth and in art generally.'

This drive...continually manifests an ardent desire to refashion the world which presents itself to waking man, so that it will be as colorful, irregular, lacking in results and coherence, charming, and eternally new as the world of dreams. Indeed, it is only by means of the rigid and regular web of concepts that the waking man clearly sees that he is awake; and it is precisely because of this that he sometimes thinks that he must be dreaming when this web of concepts is torn by art.
(Nietzsche, 2000: 59)

Humanity uses art as an evolutionary tool not only to refashion the world, but to open up new perspectives, that in turn can provide new knowledge. Nietzsche points to our delight in being told a story:

man has an invincible inclination to allow himself to be deceived and is, as it were, enchanted with happiness when the rhapsodist tells him epic fables as if they were true, or when the actor in the theater acts more royally than any real king. So long as it is able to deceive without injuring, that master of deception, the intellect, is free; it is released from its former slavery and celebrates its Saturnalia. It is never more luxuriant, richer, prouder, more clever and more daring. With creative pleasure it throws metaphors into confusion and displaces the boundary stones of abstractions, so that, for example, it designates the stream as "the moving path which carries man where he would otherwise walk." The intellect has now thrown the token of bondage from itself. (Nietzsche, 2000: 60)

The American art philosopher Arthur C. Danto continues Nietzsche's view of artistic experience being continuous with reality. In *Transfiguration of the Commonplace*, Danto suggests that the structure of artistic representation is analogous with the structure of rhetoric. Rhetoric does not produce its intended causes by stating explicit facts; instead, the receiver must fill in meaning for themselves. There is an 'open-endedness' in rhetoric and artworks, producing a more powerful effect on an audience than explicit statements could, so that the viewer is 'participating in a process rather than just being encoded as a tabula rasa'. (Danto, 1981: 170)

Danto acknowledges that metaphor is only the most familiar of the rhetorical tropes, 'each of which may with ingenuity be found to have a counterpart in pictorial representation.' For Danto, metaphor has the power to generate emotions, it 'gets you to have that emotion and does not just tell you what you should be feeling' (Danto, 1981: 169). Danto regards explicitness as the 'enemy of this sort of seductive cooptation'. He points out that one of the most familiar occurrences of the adjective 'rhetorical' in common usage is that of a 'rhetorical question, which is not posed to elicit information', but as:

a more striking substitute for a statement...on the plausible psychological assumption that the auditor will span the gap himself and, by an almost inevitable movement of mind, persuade himself more effectively than he could be persuaded by others, the rhetorician himself simply exploiting the auditor's own momentum. (Danto, 1981: 170)

'Perhaps', Danto muses, 'for any pair of terms a third can be found which mediates them into a metaphor, however originally distant they might seem initially to stand from one another on a possible lexical map' because 'the middle term has to be found, the gap has to

be filled in, the mind moved into action.’ (Danto, 1981: 171). This ‘blended’ space that Danto envisions may, according to Barcelona (2003b: 31) and Goossens (2003: 367) be expected to employ, to a lesser or greater extent, metonymic meaning expansion to facilitate access to otherwise distant relations. Danto sees the rhetorical questions as a ‘provocation to participation’, which would be ‘puzzling to a person with insufficient knowledge’.

Danto regards the metaphorical nature of artworks as a cognitive co-operation. For him, the metaphorical structure of artistic representation entails that there can be no substitute for a direct encounter with an artwork because ‘no paraphrase or summary of an artwork can engage the participatory mind in all the ways that it [the directly perceived artwork] can’, (Danto, 1981: 173). The power of [rhetoric and art] is based essentially on something that must be experienced or ‘felt’. (Danto, 1981: 174)

Direct experience of the artwork enables us to draw on sensory perceptual stimuli and the context in which the work is placed. It is in this realm that metonymic relations can give us access to multiple meanings and perspectives, from which some may lead to metaphoric relations. Again, these metaphors may be further expanded metonymically.

According to Danto, metaphor is at the heart of expression and style. The artwork’s ability to be expressive is based on the way in which the work represents its content. Danto suggests that the verticality of Beauvais Cathedral can be considered an ‘artistic property’ until one understands the verticality ‘as a metaphor for the ascent of the soul’. After this realization, the visual form of the cathedral is ‘felt as an expressive property’ (Danto, 1981: 193). In addition, one could say that the spire is ‘felt’, through the experience of standing in front of it. In fact, it is the physical qualities of the cathedral that will lead to this metaphor; our sense of ourselves being diminished by the towering cathedral spire; our line of vision guided by the spire ‘pointing’ upwards. Through this physical experience, we then make connections between our smallness and the greatness of the cathedral, personifying the cathedral to ‘stand for’ God, at whose feet we must therefore be standing: our feeling of awe in front of a towering building is transferred to a feeling of awe at standing in front of God.

For Danto, artistic experience is continuous with reality, not because it produces qualitatively similar experiences to the experiences produced by ordinary, everyday objects, but because artistic experience depends of anticipating our understanding of

reality. There could be no artistic experience without the connection to reality; of being continuous with reality. The artwork, together with rhetoric, can ‘modify the minds and then the actions of men and women by co-opting their feelings.’ (Danto, 1988: 21)

The philosophical point is that the concept of expression can be reduced to the concept of metaphor, when the way in which something is represented is taken in connection with the subject represented. (Danto, 1981: 197)

Danto expands the Peircian thesis that ‘the man is the sum total of his language, because ‘man is a sign’ to propose that ‘we are representational systems, no matter whether these are systems of words or pictures, or more likely, both.’ Danto uses the term ‘style’ to refer to this way of representing what man does. But this drive to find expression for inner-most feelings, cannot be the stuff of metaphor alone.

If a man is a system of representations, his style is the style of these. The style of a man is, to use the beautiful thought of Schopenhauer, "the physiognomy of the soul." And in art particularly, it is this external physiognomy of an inner system of representation that I wish to claim style refers to. (Danto, 1981: 205)

As Danto admits, ‘metaphor is only the most familiar of the rhetorical tropes’, and undoubtedly there are other processes at play, one of which might ‘fill in the gap’ and move the mind into action. (Danto, 1981: 171). It is at this point that French philosopher, Jacques Derrida offers an insight into the relationship between the inner self and the external world.

Where Danto sees metaphor, Derrida sees ‘the play of difference’, (Derrida, 1982: 15). To explore this play of difference, Derrida coins a new word ‘différance’, which aptly captures the qualities of metonymy. Derrida’s reinterpretation of Saussure’s ideas saw association between any signs as being an endless chain of signification.’ For Derrida, owing to the ‘indefinite referral of signified to signifier’ the sign is in a constant state of flux. (Derrida, 1978: 25)

Derrida argued that, since this original signified or ‘true’ meaning’, is not present the chain of signification continues endlessly, in which every signified is also in the position of a signifier. It should be noted that Derrida appropriates Saussure’s terms ‘signifier’ and ‘signified’ which cognitive linguistics refers to as ‘source’ and ‘target’. (Derrida and Spivak, 1997 [1976]: 31).

The French verb ‘differer’ has two meanings, which in English correspond to two distinct terms: ‘differ’ and ‘difer’. I believe that Derrida uses this catalyst to extend Saussure’s notion of ‘difference’, which in its normative form means only ‘to differ from’. He uses his own term, ‘différance’, to encompass the meaning absent from ‘difference’, that is ‘to difer’. Derrida claims:

Now the word difference (with an e) can never refer either to differer as temporisation or to différends as polemos. Thus the word différance (with an a) is to compensate – economically – this loss of meaning, for différance can refer simultaneously to the entire configuration of its meanings. (Derrida, 1982: 8)

In this way, Derrida extends the meaning of differences to indicate the dependence on a chain of linguistic terms, or ‘a field of infinite substitutions’ (Derrida, 1978: 25) that can always be extended, reviewed or recontextualised. Meaning for Derrida is never in the present; it emerges from a play of ‘differences’ between various terms in the text: subject to continuous reframing, within ongoing discursive activity. Derrida says:

this graphic difference (a instead of e), this marked difference between two apparently vocal notations, between two vowels, remains purely graphic: it is read, or it is written, but it cannot be heard. (Derrida, 1982: 3)

It could be argued that linguistic examples in metonymy analysis use a fragment of the cognitive process – the isolated, decontextualized phrase such as ‘hot under the collar’ – fails to capture the essence of metonymic thought. Therefore, for the purposes of understanding cognition we should define metonymy in terms of its serial nature as a dynamic movement of meaning expansion and spreading within a context.

Derrida enforces a way of looking at literature, and indeed life, that sees it as a stream of self-referential structureless awareness. His redefinition of terms extends the notion of text to include all that is humanly perceived and he concludes that truth, meaning and understanding are impossible. The reader is not the ‘creator of meaning’ but a ‘learner being trained in the language of the author’. According to educationalist Olwen McNamara ‘readers are all ‘indoctrinated...by the subtle and innocuous regulating effect of the structures in the text’ upon its interpretation. (McNamara, 2004)

According to the literary theorists Julie Rivkin and Michael Ryan, Derrida looked to so-called ‘pre-Socratic’ philosophers who were interested in the ‘process of space and time that wove together all material objects in a “sumplocke” or confluence, of being’. These philosophers emphasized ‘change over stasis, and the blending together of things over

their discreteness or separable identities' (Rivkin and Ryan, 2004: 257). Derrida challenged the central assumptions of metaphysics, which took the view that fundamental or foundational components of knowledge and that the criteria of truth were presence, substance, essence, and identity, rather than difference:

When you point to a presence (of a thing or of an idea), you are referred to some other from which it differs. Each presence bears the "trace" of its others. When you see the world, what you see is not identities but a network of relations between things whose difference from one another allows them to appear to be separate and identifiable. (Rivkin and Ryan, 2004: 259)

Derrida points out that 'one important implication of this insight is that if all things (all objects, ideas, and words) are produced as identities by their differences from other things, then a complete determination of identity (a statement of what something "is" fully and completely "in itself") would require an endless inventory of relations to other terms in a potentially infinite network of differences. The world is a field of contingency...' (Rivkin and Ryan, 2004: 261). This suggests that we are in a metonymic relation with our world, one that is contingent, on a continuum: Derrida's 'différance'.

Derrida departs from the deconstructionist discourse to advocate the analysis of linguistic form as a system of pure values, in which the value of each sign is entirely dependent upon the system within it is cited. As a consequence, objects, words and their meaning, and indeed the world, are produced in the play of differences:

In the delineation of différance everything is strategic and adventurous...what might be called blind tactics or empirical wandering (Derrida, 1982: 7)

Derrida says that his term différance:

implies an economical calculation, a detour, a delay, a relay, a reserve, a representation – concepts that I would summarize here in a word I have never used but that could be inscribed in this chain: temporization. Differer [from the Latin differrer] in this sense is to temporize, to take recourse consciously or unconsciously, in the temporal and temporizing mediation of a detour that suspends the accomplishment nor fulfilment of "desire" or "will," and equally effects this suspension in a mode that annuls or tempers its own effect. (Derrida, 1982: 8)

This 'detour that suspends the fulfilment of "desire" or "will,"' captures the artistic 'drive', the impulse that takes the artist from one artwork to the next, in the endless pursuit of the unattainable. Différance also captures the other sense of differer which is the more common and identifiable one: to be not identical, to be other, discernible, and so on:

whether it is a question of dissimilar otherness or of allergic and polemical otherness, an interval, a distance, spacing, must be produced between the elements other, and be produced with a certain perseverance in repetition. (Derrida, 1982: 8)

Différance can refer simultaneously to the entire configuration of its meanings. It is immediately and irreducibly polysemic. However, Derrida states:

différance is neither simply active nor simply passive, announcing or rather recalling something like, the middle voice, saying an operation that is not an operation. (Derrida, 1982: 9)

This ‘middle voice’ can be understood as Danto’s elusive, mediating ‘middle term’, (Danto, 1981: 171). Derrida sees *différance* as temporization and *différance* as spacing conjoined. He points out that Saussure was the first thinker to put the arbitrary character of the sign and the differential character of the sign at the very foundation of general semiology, particularly linguistics. Saussure makes a clear distinction between *la langue* and *parole*. *Parole* is the external manifestation of *langue*; an utterance, whereas *la langue* is the whole system of language, in which meaning is created in the arrangements of a large number of elements and their consequent relationships. A sign is a basic unit of *langue*. In Saussure’s view, these two motifs of the sign, arbitrary and differential, are inseparable. There can be arbitrariness only because the system of signs is constituted solely by the differences in terms, and not by their plenitude. Derrida, however, does not make a distinction between *langue* and *parole*:

Now this principle of difference, as the condition for signification, affects the totality of the sign, that is the sign as both signified and signifier. The signified is the concept, the ideal meaning; and the signifier is what Saussure calls the "image," the "psychical imprint" of a material, physical – for example, acoustical – phenomenon. We can say that in language there are only differences. (Derrida, 1982: 10)

It is in this process of drawing referential and inferential meaning from a ‘sumplocke’, or confluence, of contextual elements that we create the possibility of conceptuality:

*The first consequence to be drawn from this is that the signified concept is never present in and of itself, in a sufficient presence that would refer only to itself. Essentially and lawfully, every concept is inscribed in a chain or in a system within which it refers to the other, to other concepts, by means of the systematic play of differences. Such a play, *différance*, is thus no longer simply a concept, but rather the possibility of conceptuality, of a conceptual process and system in general. (Derrida, 1982: 11)*

Derrida suggests the notion of the ‘trace’ to capture the transitory nature of ‘différance’, in the conceptual process, in order to capture ‘presence’ while keeping within it ‘the mark of the past’, and its relation to the future. He invokes the notion of the ‘interval’ that must, in constituting itself dynamically, be called ‘spacing, the becoming-space of time or the becoming-time of space (temporization).’ (Derrida, 1982: 8)

Differences, thus, are "produced" – deferred – by différance. So we can say that ‘différance’ captures the sense of difference and deferral, it carries the trace of the past (its history) and hints at the future, it is productive – in that it gives access to other meanings. It is dynamic in that there is a movement of meaning – a play of differences; a play of retention and protention of differences, of spacing, intervals and temporization, a play of traces. (Derrida, 1982: 15).

With the notion of différance, Derrida eloquently captures the characteristics of metonymy as a dynamic ‘producer’ of difference, in which ‘intervals’ provide the means for distinguishing difference; which, through ‘chaining’ or ‘deferral’ provides access to new meanings, often at a level prior to conceptualisation.

A visual example that goes some way towards capturing the sense of différance can be found in the paintings of Ferdinand Hodler (1853–1918). In his work, Hodler attempts to express the intense emotion of grief through the use of seriality and intervals that require the viewer to move back and forth between closely related elements, in order to identify difference, or different states, in a compressed time frame.

From the mid-1880s Ferdinand Hodler began to break away from his earlier influences of ‘Realism’, Art Nouveau and ‘Impressionism,’ to develop a style that he referred to as ‘Parallelism’. In parallelism, the same figures are repeated in different poses within the same composition, giving the viewer a sense of time, or times, passing. In *The Night* (Figure 26, below), the outer figures, sleeping alone or with a partner, rest peacefully, partially draped in black covers. But the central figure of a man, possibly the artist, is depicted awake, with a horrified expression, as he recoils from a nightmarish black fabric form of death rising from his loins. We ‘read’ the painting through a play of lights and darks that form a visual vortex. The inner figure is terror-stricken by the all-consuming darkness at the centre of the composition, and metaphorically at the centre of the artist’s life: the artist’s parents and five of his siblings died from tuberculosis.



Figure 26. Ferdinand Hodler: *Die Nacht / The Night* (1889)

The canvas format for *The Frustrated Souls* (Figure 27, below) uses similar devices of light and dark contrasts, black drapes, pallid flesh and pale, barren landscape.



Figure 27. *The Frustrated Souls* (1892), oil on canvas, 120 x 299 cm, Bern Museum of Fine Art, Bern

In *The Frustrated Souls*, five male figures are set in a row on a long bench, each bowed in apparent despair and introspection. The figures seem almost entombed in the landscape, buried in their misery. The painting is read as if it is a scale of grief, from the centre to the outer figures and back again, comparing one figure with another. The heads of the outermost figures are bent; those on either side of the central figure hold their heads in their hands, while the central figure and focal point is half-naked, ghostly-pale, emaciated, and deeply bowed in hopeless grief. The figures seem to be clothed as monks, and the central figure is reminiscent of Christ on the cross.

So, what are artists doing, consciously or unconsciously, when creating a work of art, and what mechanisms are at play? Terence Hawkes, Professor of English at Cardiff University suggests that Russian Formalist Viktor Shklovsky, in his 1926 essay *Art as Technique*, provides an insight into this process:

According to Shklovsky, the essential function of poetic art is to counteract the process of habituation encouraged by routine everyday modes of perception. We very readily cease to 'see' the world we live in, and become anaesthetized to its distinctive features. The aim of poetry is to reverse that process, to defamiliarize that with which we are overly familiar, to 'creatively deform' the usual, the normal, and so to inculcate a new, childlike, non-jaded vision in us. The poet thus aims to disrupt 'stock responses', and to generate a heightened awareness: to restructure our ordinary perception of 'reality', so that we end by seeing the world instead of numbly recognising it: or at least so that we end by designing a 'new' reality to replace the (no less fictional) one which we have inherited and become accustomed to.
(Hawkes, 2003: 47)

Shklovsky wanted us to pay closer attention to our sensory perceptions, in order to 'impart the sensation of things as they are perceived and not as they are known.' He saw the role of art as 'to make forms difficult, to increase the difficulty and length of perception because the process of perception is an aesthetic end in itself and must be prolonged' (Shklovsky, 2008 [1916]: 16)

The way in which we (humans and other primates) process our sensory perceptions is deeply rooted in our behavioural tendencies. For example, Gestalt theorists (Christian von Ehrenfels, Max Wertheimer, et al.) identified tendencies towards *proximity grouping*, *closure* (the filling in of 'missing' parts), *similarity* (perceptual or conceptual), and the tendency to create *continuity*. In fact, cognitive psychologists have found that young children (i.e. 2½-year-olds) develop an understanding of their world through identifying Gestalt similarities, connections and groupings. (Nerlich, 1999: 367)

For the artist, Gestalt principles are of considerable importance. The neuroscientist Vilayanur S. Ramachandran suggests that art 'is about producing pleasing effects in the brain'; by "pleasing effects", he is referring to stimulus of the limbic system – the 'pleasure centre' of the brain. Artists, according to Ramachandran, tap into their own, and our, primitive behavioural tendencies to generate "multiple 'Ahas!' – those moments of captivation (delight, entrancement, surprise or shock) that can be experienced with an artwork (Ramachandran, 2003). Thus, the recognition of the unfamiliar within the familiar serves as a prompt to individuals to recognize artistic expression.

Recent studies by Rachel Giora (Figure 28 below), a linguist at Israel's Tel Aviv University, have shown that it is not novel figurativeness that provides 'defamiliarization' but the degree of meaning salience. In her article *Is metaphor special?* (Giora, 2007: 113), she concluded:

The brain is not sensitive to metaphoricity or literalness as such. Instead, it is sensitive to degrees of meaning salience, remoteness of semantic relationships, open-endedness, transparency of stimuli's meanings, and speakers' intention (regardless of contextual appropriateness). (Giora et al., 2004) (Shuval and Giora, 2005)



Figure 28. Rachel Giora, *Optimal Innovation Hypothesis* visual stimulus example

Giora presented ninety linguistics students with sets of images that were *familiar, purely innovative and optimally innovative*. For a stimulus to be optimally innovative it would need to be rated as more pleasurable than either a familiar stimulus or a purely innovative stimulus. Giora determined that a stimulus would be optimally innovative if it involved:

- a) a novel response to a familiar stimulus, but
- b) such that would also allow for automatic recoverability of a salient response related to that stimulus so that the similarity and difference between the novel and salient would be accessible.

For a response (e.g. a meaning) to be salient, it would need to be foremost in our minds because of factors such as experiential familiarity, frequency, conventionality or prototypicality. [Prototypicality in semantics is an instance of a category or a concept that combines its most representative attributes, such as robin being a prototype of bird, unlike penguin]. It follows that nonsalience is novel and inferred, comprising either non-coded or coded meanings that are unconventional, infrequently occurring, unfamiliar, and non-prototypical thereby making them slower to understand.

From this research, Giora has developed her ‘optimal innovation hypothesis’, which has demonstrated that it is some ‘salience imbalance: the surprising discovery of the novel in the salient or the salient in the novel’ (Giora, 2002: 12; Giora et al., 2004: 115–141) that provides the most cognitive pleasure:

Optimal innovations are also more pleasurable than pure innovations. It is the surprise experience in suddenly discovering some novelty where it is least expected, or the gratification in discovering the familiar in the novel...It is not the most familiar, then, that is least enjoyable, but rather the most novel that is least pleasing. Pleasure, however, resides half way between high salience and high novelty.
(Giora, 2002: 14)

Giora concludes: ‘Taken together, our findings support the view that it isn’t non-literariness that is pleasing. It is not metaphor, then, that makes mind and language poetic, but optimal innovativeness.’ The Optimal Innovation hypothesis predicts that optimal innovation – novel stimuli allowing an insight into the familiar will be appreciated as the most pleasurable, regardless of figurativity.

From Giora’s examples we can clearly see how metaphor works. Sarah Lucas’s *Chicken Knickers* (Figure 29, below) puts separately familiar elements together in a novel way, thus generating new meaning. The title adds a comment that further diffuses expectations.



Figure 29. Sarah Lucas,
Chicken Knickers (1997).
Photograph © the artist

Louise Bourgeois's sculpture (Figure 30, below) presents a familiar creature on an unfamiliar scale, juxtaposing it with the title *Maman* so that a familiar concept is applied to an unfamiliar entity, the giant spider.



Figure.30. Louise Bourgeois, *Maman* outside the National Gallery of Canada

In these examples we can clearly see metaphoric relations, but how does metonymy generate new meaning? How is the balance between familiar or salient and novel achieved within same domain relations? Can we create novel metonymies that provide the ‘pleasurable’ stimulus referred to by Giora? The key element here is *relations*; the *serial* relations generated by metonymy, which can best be illustrated by considering serial artworks.

Related elements, that is, domain-internal (metonymic) elements, grouped together may not necessarily seem novel. The very fact that a number of related elements are grouped together would tend to confirm their commonplaceness. But if the quantity of elements is further increased there will come a point, a tipping point or a threshold, at which the differences between these elements begins to outweigh the fact that they are related. At this point, the differences between the elements are foregrounded and their relatedness backgrounded, enabling novel meanings to emerge. In order for new meaning to be discerned, there needs to be sufficient difference within a familiar grouping of entities or ideas. It is likely that this ‘sufficient’ or ‘optimal’ point will vary according to the material being used, and how easily difference may be discerned.

If we look at one image of a ubiquitous watertower, photographed by Hilla and Bernd Becher (Figure 31, below), we primarily name the image, since it is a familiar item, particularly in mainland Europe.

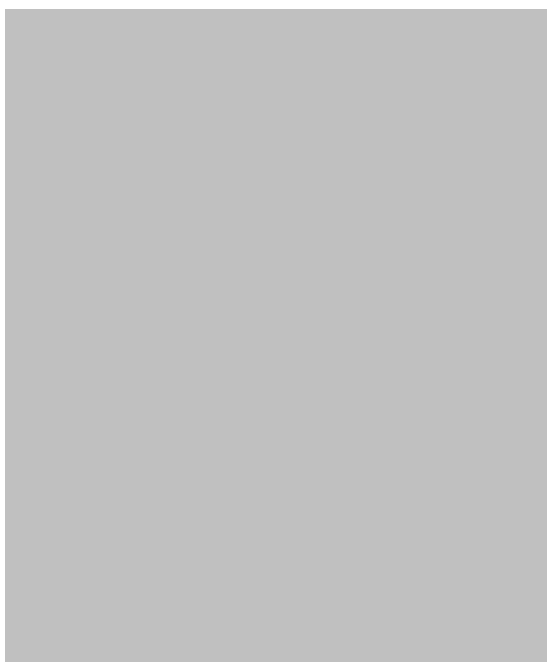


Figure.31 Hilla and Bernd Becher,
Water Towers 1967–80 (detail)

When we view more than one example, however, as in these three images showing different water towers, (Figure 32, below), we begin to make comparisons and to notice the differences between them.



Figure 32. Hilla and Bernd Becher, *Water Towers* 1967–80 (detail)

But if we view *Water Towers* in the way that the Bechers exhibited them, as a set of nine images (Figure 33, below), we find that the differences between the towers starts to raise questions that we might not otherwise have considered, such as: ‘Who designed these towers?’; ‘Why are the structures so varied when they have just one function?’; ‘What has influenced the designs?’ and ‘Do they seem somewhat phallic in form?’

This is an example of something familiar becoming novel through quantity; that is, a set of nine images, which causes a shift from familiar to novel, thereby causing the viewer to undergo a process of ‘defamiliarization’. Can the reverse be also true? Is it possible that we could consider something novel and then, through the weight of evidence (i.e. quantity of instances) undergo a shift to something familiar?

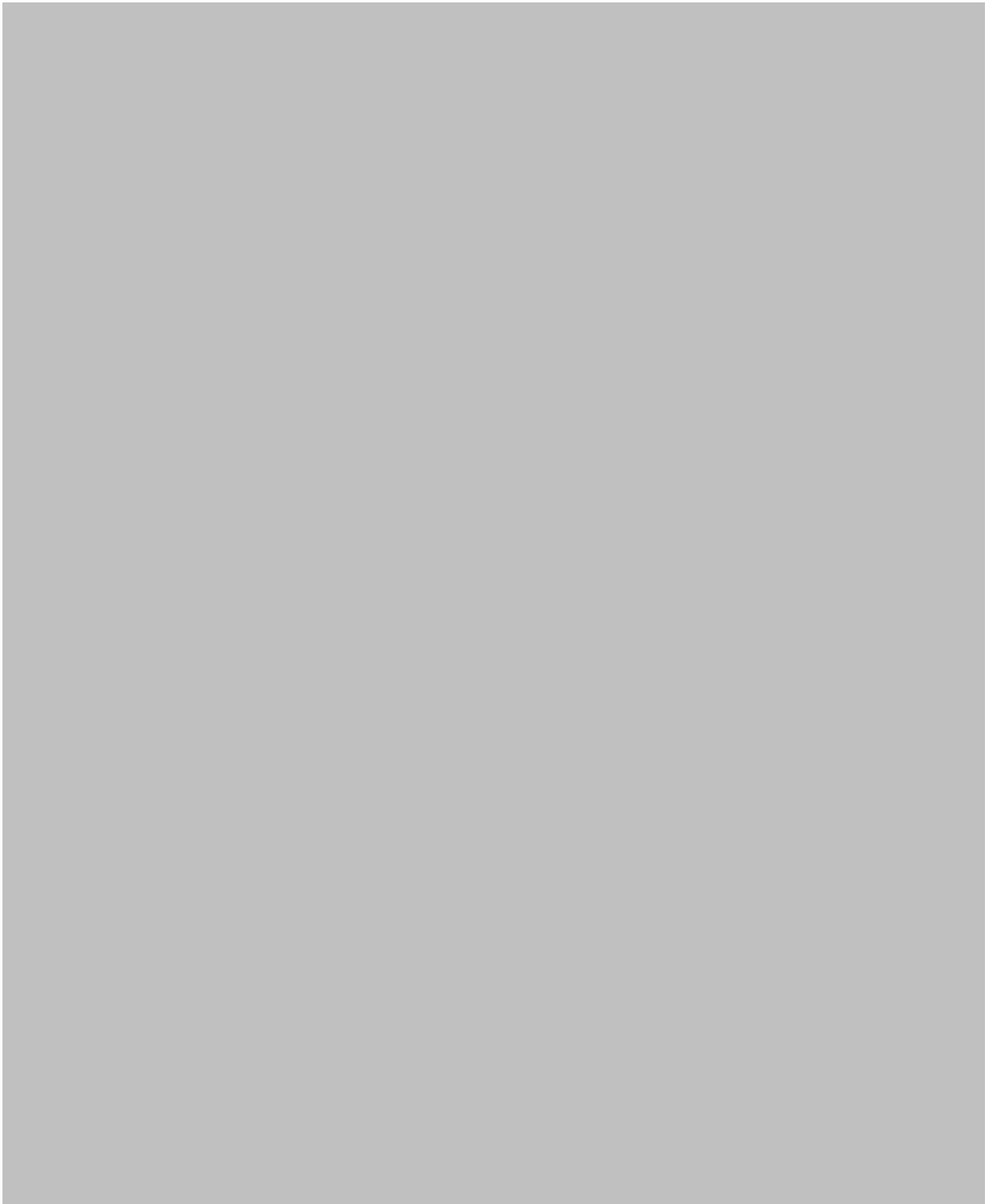


Figure 33. Hilla and Bernd Becher *Water Towers* 1967–80; printed 1980. Gelatin silver prints

This is what Susan Hiller attempts in her work: to consider phenomena that are on the periphery of understanding; the occult, and related fringe phenomena. For example, in her piece *Auras: Homage to Marcel Duchamp*, 2007/8, we are presented with an ambiguous image that we are told is a photograph of a human aura taken with a camera that translates electrical impulses into the visual colour spectrum (Figure 34 below):



Figure 34. Susan Hiller. *Auras: Homage to Marcel Duchamp* 2007/8 (detail)

For most people, this is an unfamiliar concept, as the notion of human auras remains on the fringes of science, along with other paranormal experiences such as apparitions, poltergeists, telepathy, communing with the dead, and foreseeing the future. In order for Hiller to shift the concept of human auras into the ‘possible’ or ‘credible’ she presents fifty examples of human aura, which through sheer quantity make a tenuous shift from unfamiliar or novel to salient and credible (Figure 35, below).



Figure 35. Susan Hiller. *Auras: Homage to Marcel Duchamp* 2007/8 (50 images). Lisson Gallery

Much of Hiller's work is intended to hover on the borderline between credible and incredible, with Hiller's position remaining ambivalent. This level of uncertainty means that the viewer is caught between persuasive 'scientific' evidence on the one hand and on the other the scepticism we bring to the work: the plausible and the implausible. It maintains the artist's position as rather remote and unemotional. The viewer is unable completely to connect or empathize with the artist, and is left with a sense of uncertainty and unease. This in itself raises the question of scientific certainty and the persuasive nature of the scientific approach. We crave rhetoric, delightful metaphors that seem to explain complex ideas, such as the 'greenhouse effect', atoms as planets, yet we find only ambiguity. Hiller unnerves her audience and leaves us in a state of limbo. We may be attracted to the visual delights before us, which Hiller describes as a 'bowl of candies,' enticing but short-lived. The work hovers close to the point of optimal innovation, but does not achieve a point of stability, so that viewers may only agree on doubt and uncertainty. Even when presented with fifty images we cannot quite reach a stable conclusion, particularly as we may also know that Duchamp was an illusionist, fond of faking photographs to present a convincing argument for a surreal (unreal) hypothetical event.



Figure 36. Susan Hiller. *Auras: Homage to Marcel Duchamp*, 2007/8 (detail: 15 images from total of 50 images displayed)

On close inspection of *Auras: Homage to Marcel Duchamp*, we may begin to be persuaded of the notion of auras, since each image is strikingly distinctive, and shows fifty very different but equally ordinary looking people, who could be our father, mother, siblings or children. (Figure 36, above)

I have suggested that creative or novel meaning can emerge from serial metonymic thought, which, at a certain critical point of an accumulation of quantity, undergoes a discernable shift to a qualitative change. This phenomenon was considered by Hegel in what is referred to as his ‘law of the passage of quantitative changes into qualitative changes’. Hegel developed this principle from Aristotle, who in turn drew from the ancient Ionian philosophers, in particular Anaximenes:

we have seen that the alterations of being in general are not only the transition of one magnitude into another, but a transition from quality into quantity and vice versa, a becoming-other which is an interruption of gradualness and the production of something qualitatively different from the reality which preceded it. Water, in cooling, does not gradually harden as if it thickened like porridge, gradually solidifying until it reached the consistency of ice; it suddenly solidifies, all at once. It can remain quite fluid even at freezing point if it is standing undisturbed, and then a slight shock will bring it into the solid state. (Hegel, 2002 [1969]: 370)

Complexity Theory captures this sense of a ‘critical point’ and suggests that complex adaptive systems can be found in natural social, and cultural phenomena, such as the central nervous system, ecologies, economies, immune systems, language, weather, and so on. Complex systems are not chaotic but are poised at the edge of chaos between too much

and too little order. Mark C. Taylor, Chair and Professor at Columbia University's Department of Religion, captures the richness of complexity theory in his book *The Moment of Complexity: emerging network culture*, in which he describes his process of writing. This is a process which many artists will recognize, and is worth quoting at length, to capture the 'flow' of thought:

I, Mark C. Taylor, am not writing this book. Yet the book is being written. ... Words, thoughts, ideas are never precisely my own; they are always borrowed rather than possessed. I am, as it were, their vehicle... Since origins as well as conclusions forever recede, beginnings are inevitably arbitrary and endings repeatedly deferred.... Just as my search is always a re-search, so my writing is always a re-writing... The slate with which re-search begins is not blank, for it is always already inscribed with memorable patterns... These patterns... form a collective memory that both inhabits and surpasses the minds of individuals... As "material" gradually accumulates, ideas and images, concepts and systems jostle with each other in a struggle for recognition... Eventually, the mix swirling in my mind becomes dense and diverse, like some primal soup slowly heating to the boiling point... All of this takes time; thinking has rhythms of its own – it must simmer and cannot be rushed... Much – perhaps most – of what is important in the dynamics of thinking eludes consciousness... The give-and-take of thought stages a struggle for survival in which only the fittest images, concepts, ideas, and schemata survive. Rather than a matter of strength, fitness is measured by the capacity to connect and interrelate effectively and creatively... Though the pieces of the puzzle never fit perfectly, gradually modifications can lead to major changes... When a growing number of experiences and ideas can no longer be adequately processed, thought is pushed far from equilibrium and approaches the tipping point. In this moment, danger and opportunity intersect. Driven to the edge of chaos and sunk in confusion, thinking either dissolves in madness or transforms in unexpected ways. The tipping point is the boiling point, which occurs when simmering ideas reach maximum turbulence. If change occurs, new patterns emerge and organize themselves spontaneously. In this moment when thinking happens, I do not so much write as I am written; creativity and destruction collide in the passion of writing. Though destruction is not always creative, creation is inevitably destructive. (Taylor, 2001: 196–198)

Within Taylor's writing we can see the trace of Derrida's 'différance', Lacan's 'desire', Schopenhauer's 'will to live' and Nietzsche's 'will to power'.

Writers realize that the pleasure of the text is not the satisfaction it provides but the dissatisfaction it engenders. The equilibrium of satisfaction is a symptom of death; the turbulence of dissatisfaction is the pulse of life. If writing has a point, it is to leave everyone and everything forever unsettled. But, he adds wryly, *'these are not my words but are the words of another...'* (Taylor, 2001: 198)

This extraordinary passage by Taylor, who was in turn inspired by the Scottish philosopher-novelist Andrew Crumey's writing in his debut novel *Pfitz*, takes us through the creative process, in which the striving for equilibrium is endlessly deferred. This, I believe, captures the creative impulse and the affective quality of the artwork, when some apparently stable element, is tipped over into a new and unforeseeable realm. It has the characteristics of (serial) metonymy; its tendency to deferral and its function in highlighting differences in domain-internal relations. Metonymic relations are a dynamic process, which may lead to metaphors and concepts that enable conclusions to be reached.

The creative 'moment' in metonymy involves an interruption of continuity or deferral, in which differences between closely related elements become foregrounded. In manufacturing terms a certain amount of deviation is allowed for – known as 'tolerance'. When the tolerance is exceeded the quantity goes over into quality; it has changed into something else. In manufacturing, the item would be rejected. However, in evolutionary or thought processes, it might equally be a useful change that enables an organism to adapt better to its environment, or a new thought to emerge. These subtle changes contribute to the phenomena of 'self-organisation' in bio-chemical transactions and what Taylor alludes to in his writing about the process of writing. In serial metonymic thought, such a shift from quantity to quality enables new meanings to emerge; shifts from background to foreground, or peripherality to centrality.

We can think about serial metonymy in a similar way to Trotsky's explanation of dialectical thinking, in which he relates a motion picture to a still photograph.

The motion picture does not outlaw the still photograph but combines a series of them according to the laws of motion. Dialectics does not deny the syllogism, but teaches us to combine syllogisms in such a way as to bring our understanding closer to the eternally changing reality. (Trotsky, 1939).

Metonymy creates the potential for a difference that makes a difference. Trotsky's explanation of dialectical thinking analyses all things and phenomena in their continuous change, while determining in the material conditions of those changes that critical limit beyond which 'A ceases to be A'...' (Trotsky, 1939). This reference is illustrated by the notion that two bags of sugar ('A'), each weighing a pound, are the same for the purpose of buying and selling, but when weighed on a more delicate scale disclose a difference, thus emphasising the fact that all acquired knowledge is conditioned by the circumstances in which it was acquired.

The creative moment in serial metonymy is an interruption of gradual movement of meaning along a continuum of actual or conceptual contiguity. Hegel describes this phenomenon in *Science of Logic*, under the heading ‘Real Measure’, as being ‘a becoming-other which is an interruption of gradualness and the production of something qualitatively different from the reality which preceded it.’

This research is based within visual art, and uses examples drawn from art practice and analysis, which inevitably raises the question whether serial metonymy is a phenomena of art in particular or of thought in general. Can we widen the question to ask whether all serial relations are metonymic? And how does context affect or contribute meaning? In order to be meaningful, is it dependent on a gallery or ‘art’ context? To answer this, I took a single bean from a packet of butter beans and considered the meaningfulness of this one bean (Figure 36, below).



Figure 37. One butter bean. Photograph Susan Ryland 2010

One bean barely held my attention (Figure 37), it was a bean, pale in colour, and of a smooth, predictable bean shape. However, when I set another butter bean from the same packet, alongside it I was aware that I was starting to make comparisons between them, or looking for difference (Figure 38. below).



Figure 38. Two butter beans. Photograph Susan Ryland 2010

In the process of comparison, I identified differences in size and minor differences in shape and colour. However, when I set out twenty-five beans, something additional occurred, (see Figure 39 below).



Figure 39. Twenty-five butter beans. Photograph by Susan Ryland 2010

The fleshy colour, distinctive shape and orderly arrangement reminded me of medical images: ovaries, kidneys, a foetus. These nascent forms were entirely in keeping with (in the same domain as) bean, since a bean is the basis for the bean plant. One or two beans did not evoke these connections, but twenty-five did. It might not have required as many as twenty-five beans to trigger the mental shift to ‘the beginnings of life’, but there is no question that increasing the quantity of beans generated an attentional shift or cognitive movement into a wider, but related, domain. (Ryland, 2010)

For the artist, this kind of domain expansion has the potential for artistic exploitation i.e. to generate a movement from a smaller to a larger related domain, in which the larger domain had not previously (in that context) been considered related; or as what, in Brigitte Nerlich’s words, could be described as a process of ‘domain annexation’ or ‘micro-domain annexation’. (Nerlich, 2010: 310)

When something is ‘out of place’, it has the potential to generate new meaning. Out-of-placeness is a device commonly used by artists. For example, Marcel Duchamp’s submission of a urinal to the 1917 exhibition of the Society of Independent Artists called into question the conventional view of the art object, and arguably introduced the notion of conceptual art.

Equally, artists exploit ‘overlookedness’, whereby attention is drawn to elements that were previously considered peripheral to give something familiar a feeling of freshness. For example, in *House* (1993), Rachel Whiteread cast in concrete all the spaces within a small East London Victorian terraced house, literally making unseen space concrete.

Out-of-placeness and overlookedness push familiar elements out-of-balance to such an extent that, according to Complexity Theory, a point of bifurcation is generated. In this, either new meanings evolve, or, eventual meaninglessness results. Though artists such as the Surrealists have pushed out-of-placeness to an extreme, as in René Magritte’s painting *The Son of Man* in which a large apple obscures the face of a bowler-hatted man, we persist, and in fact insist, that there is meaning to be found in everything. It would seem that obscurity is a delightful and tantalising intellectual challenge.

Summary

This chapter has shown that little attention has been paid to metonymy as a creative force in art philosophy. Art philosophy has tended to view metaphor as the primary means for creative thought, but there are indirect references to metonymy to be found. For instance, Arthur Danto accepts that ‘metaphor is only the most familiar of the rhetorical tropes’ and hopes to find ‘a middle term’ that ‘mediates metaphor’ (Danto, 1981: 171) and Jacques Derrida constructs a new word ‘différance’ to capture a sense of difference and deferral; two key elements of metonymy that see the unfolding of revelations as a consequence of the close relations between entities.

Two types of metonymic contiguity relations have been identified; they are firstly, category or taxonomic relations and secondly, part-whole or partonomic relations. This is broadly in line with Ken-ichi Seto’s findings although his view is that taxonomic relations are synecdoche and only partonomic relations are metonymic (Seto, 1999: 116). However, I have found that taxonomy and partonomy are subject to fluctuating boundaries and category memberships, so I am minded to share Brigitte Nerlich’s view that the distinctions between them is at best a ‘moveable feast’ (Nerlich 2010: 316). Since both category (taxonomic) and part-whole (partonomic) relations involve contiguity and meaning expansion within a domain or domain matrix, I propose, for this research at least, to use the term metonymy to include both phenomena.

Definitions of metonymy have been confusing and at times contradictory; a deterrent for those who might otherwise find Metonymy Theory useful to them. I therefore offer a trans-disciplinary definition of metonymy as follows:

metonymy is a dynamic cognitive process of meaning expansion or elaboration, within a domain or domain matrix; in which a domain is considered to be ‘any coherent organization of experience’, and ‘meaning expansion or elaboration’ as being ‘the accumulation of a network of new senses around the original meaning’.
(Ryland, 2009; 2010)

Two prominent subtypes of category relations have been identified: the first involves physical entities within a conventional category (in the manner of genus-species or species-species) that are grouped together enabling direct comparisons to take place. When enough category examples are present the differences between the elements become foregrounded,

which at some point triggers an expansion of meaning into a wider category. This can be seen in the examples of Water Towers by the Bechers (Figure 33) and the butter beans (Figures 37–39).

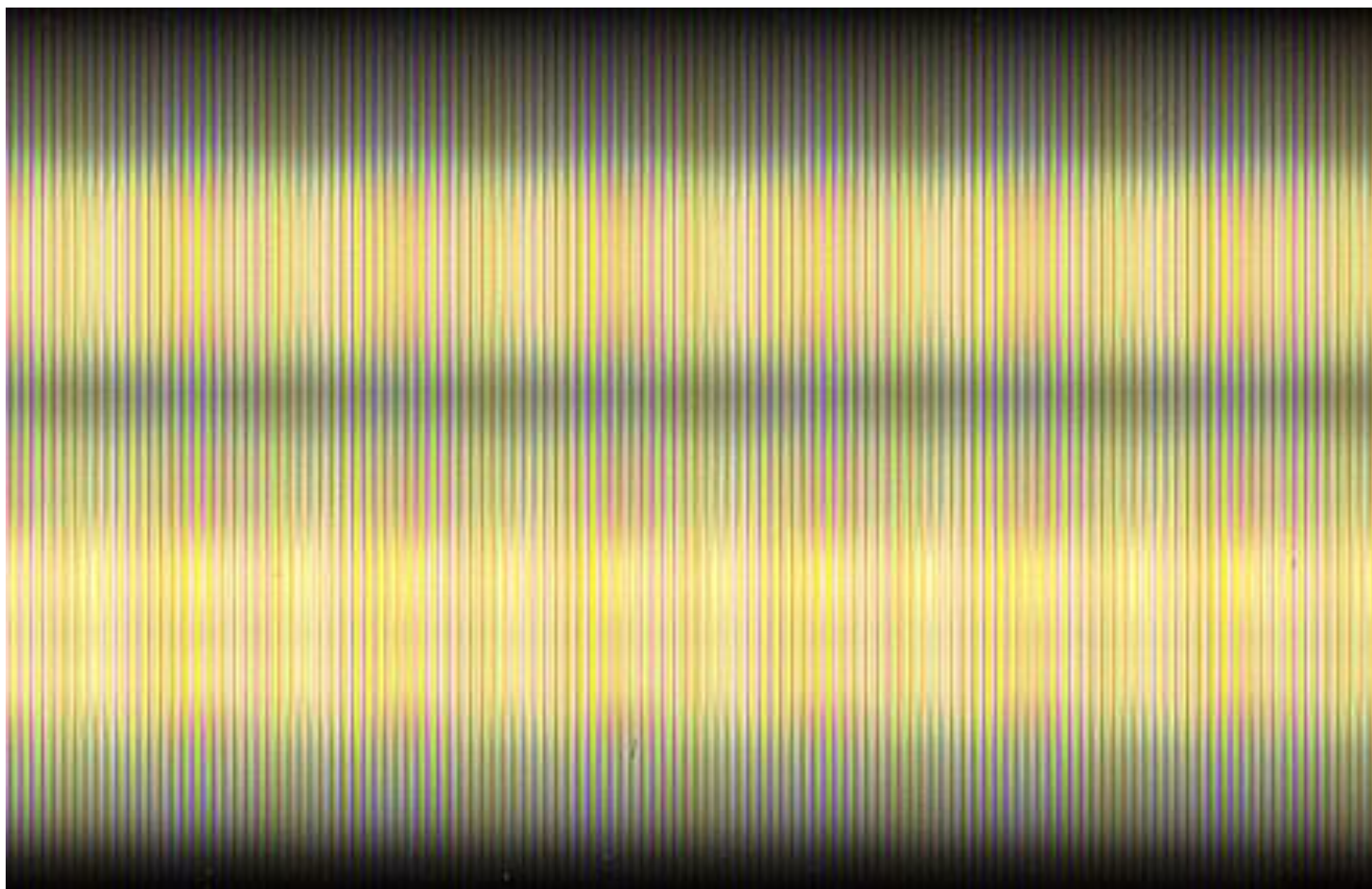
The second taxonomy subtype is ad-hoc groupings. In this case, a number of entities that are meaningful to the artist-presenter are brought together to create a group. The viewer/hearer forms associations between the elements in the group and the context in which they are found. This can be seen in Ceal Floyer's *Helix* series (Figures 20–23) and Tracey Emin's *My Bed* (Figures 6–10).

Taxonomical relations generate creative meaning in a manner that conforms to *Complexity Theory*, in that, at a certain critical point in an accumulation of related items; differences between these elements become foregrounded causing a rapid expansion of meaning into a wider domain or domain matrix.

Since Antonio Barcelona's proposal that 'every metaphorical mapping presupposes a prior metonymic mapping' (Barcelona, 2003b: 31), it seems probable that Rachel Giora's *Optimal Innovation Hypothesis* (that finds that there is a roughly equal balance between novel and familiar elements in a successful creative metaphor), will prove to be equally applicable to metonymy.

Partonomic relations (true metonymy according to Ken-ichi Seto (1999: 116)), remain problematic, raising questions regarding the degree of commonly held relevance the 'part' requires to be cognitively viable in part-whole relations and whether there are circumstances in which context can be regarded as the 'whole' within which a selected entity is a 'part'.

In chapter two I use my art practice to test the limits and conditions necessary for part-whole relations to generate new meaning, from highly magnified fragments, to context dominant paronomies. I consider spatial and temporal serial metonymy and the switching point between category and part-whole relations that occurs when a single channel video is converted to multichannel. I look at the interaction of metonymy with literality and metaphor and the notion of the literality-metonymy-metaphor continuum. Finally, I discuss the apparent theory-practice divide and the value of interdisciplinarity in art practice-based research.



CHAPTER Two

Metonymy in Art Practice

Light, eyes, brain, thinking, mind, thoughts, intelligence: a metonymic chain.



Figure 40. Susan Ryland, *Light-Type* (2009). Digital photograph

This chapter describes how my art practice has been employed to examine the boundaries between part-whole (paratonic) and category (taxonomic) relations and their relationship to metaphor and literality, using devices such as digital image strips and sets, extreme close-up shots, multichannel video, ultra-slow motion video, context-dominant sound interventions, to gain insights into the function of metonymy in creativity.

I began by posing the question: ‘If knowing is seeing and knowledge is a path, what would that path look like? I took these conventional metaphoric statements as the starting point for two projects: the Path Project (LIFE IS A JOURNEY) and the Light Project (LIFE IS LIGHT) (Figure 40, above, shows light and path relations).

There are no rules for describing the process of making art. Each artist thinks in their own way, and much of the decision-making is subconscious or ‘intuitive’. However, Graeme Sullivan, an artist and associate professor of Art Education at Teachers College, Columbia University, in his paper *Artefacts as evidence within changing contexts*, suggests some broad groupings of *process* that can bring some clarity to a convoluted business:

Artists have always been deep thinkers. What has expanded, however, is the range of conceptual tools, creative approaches, and communal contexts, within which art practice takes place. A historical characteristic of this process shows that artists periodically ‘think in a medium’, ‘think in a language’, and ‘think in a context’. (Sullivan, 2006)

This thinking in a medium, language and context is not a logical, sequential event, but rather a ‘messy process that requires the capacity to negotiate between complex and simple realities, often at the same time.’ This messiness ‘rarely achieves an elegant or parsimonious resolution’. Instead, Sullivan concludes, the role of the artist as a theorist and researcher is to:

help argue that art practice as research is based on the assumption that the outcomes of inquiry are focused and open-ended; conclusive and open to conjecture; beyond doubt and open to question (author’s emphasis). (Sullivan, 2006).

At the University of Hertfordshire’s *Art in Practice 2006* conference, Graeme Sullivan described discussing with his research students possible visualisations of metaphor, recounting that he directed them to ‘make it out of cardboard!’ This instruction to use the manipulation of materials – the cardboard – as a means of thinking about an intangible entity ‘metaphor’, resonated with me. My memory of Sullivan’s anecdote may not be completely accurate, but this is what has stayed with me.

In an article in *The International Journal of Art and Design (JADE)*, one of Sullivan’s former students Daniel Serig (Serig et al., 2008: 12) discusses an exhibition that he curated, in which a group of artists responded to Serig’s question: ‘Is there a conceptual structure to the creation of visual metaphors by artists that closely aligns with the cognitive view of metaphoric thinking?’ Through a collaborative process the artists examined the ‘actions, decisions and structures evident in the work of artists’ in order to uncover a conceptual structure of visual metaphor that would provide ‘plausible interpretations of how visual metaphors are developed.’ Not only did these artists actually ‘make it out of cardboard’, but they also, after a process of ‘making, reflecting and acting on reflections’, constructed models for the conceptual structure of visual metaphor that was encapsulated in the Boris Curatolo’s sculpture *Sweet Spot* (2004). This sculpture (Figure 41, below) attempts to capture sensory experience leading to conceptual blending, as an ‘essential ingredient for thinking metaphorically’, and represents ‘mind-body interconnectedness.’ Serig (Serig et al., 2008: 13)



Figure 41. Boris Curatolo, *Sweet Spot* (2004) in Resonance 10/04, Pearl Street Gallery, Brooklyn, New York. Curated by Daniel Serig. © Boris Curatolo

I share Serig's interest in visualising thought, which seems a natural way for an artist to approach theory, and one that is analogous with Paul Carter's notion of 'material thinking'. Though both metaphor and metonymy are, to a greater or lesser extent, grounded in sensory experience, metaphor leads to conceptual blending while metonymy leads to conceptual expansion. Boris Curatolo's *Sweet Spot* captures the sense of metaphorical ideas being folded in on themselves to create a new blended form. If a construction of metonymy were to be envisioned, it would probably need to be constructed using sophisticated 3D software to emulate a network structure, ever-expanding in all directions at such a rate that the starting point would be quickly lost from view, not unlike the worldwide web and scale-free networks generally (Figure 42, below)

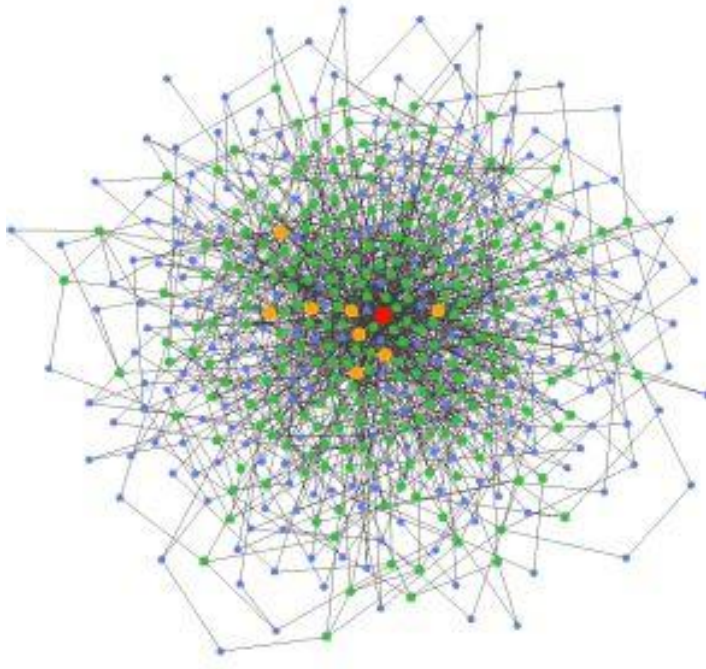


Figure 42. Scale-free network

For me, the ‘messy process’ of thinking in a medium, language and context often begins with free-association and metonymic word lists (Figure 43, below), which are then broken down into mind-maps (Figure 44, below). Through a process of identifying disjuncts between elements as well as the connections between them, I build up layers of words, using self-adhesive notes and clear acetate sheets to address questions such as ‘why is this like that?’; ‘what does it do?’; ‘how does it do it?’ and ‘what would happen if I changed one constituent that imbues it with meaning?’ So, for example, when working on the Path Project mind-map, I made a connection between articulated language, Derrida’s deconstructive hinge, sound waves, soundtracks, continuums and paper folds. I feel that such associations happen quite naturally when the theory and practice occur in the same physical space, (see Figures 45 and 46).



Figure 45. Susan Ryland, studio view: theory and practice together



Figure 46. Susan Ryland, constructing *Words Articulated* 2008

Along with writing words, I may also record sounds drawn from a specific locality; the ‘thinking in a context’ part of the process. My work is often ‘site-specific’; which is to say that it is created from a response to a particular site, is physically located in it, and draws meaning from that site. The intention is to alter understanding of that place and space, through a temporary sense of defamiliarization. To do this, I must first undertake a process of familiarisation: gathering photographs, sound recordings, and making notes, often including emotional reactions to the site and its references to the past. The material gathered is manipulated in a similar way to the mind-maps; sound recordings are layered, amplified and repeated. The editing software enables macro and micro views of the sound and video tracks, so it is possible to move between an overview of the composition, to a view of a particular sound wave (Figures 47 and 48, below). This process reinforces particular connections, so that when working with ‘time-based’ media such as sound and video, the path schema forms metonymic relations such as: journey-path-distance-pace-footsteps.

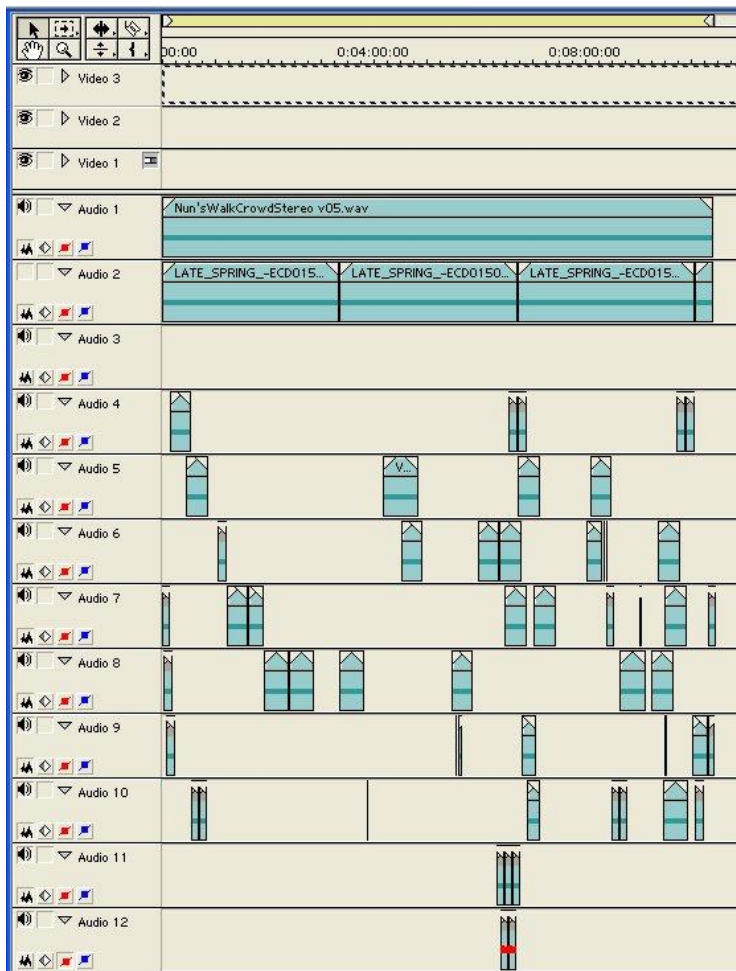


Figure 47: Macro sound editing *Nun's Walk* using Premiere software. Susan Ryland

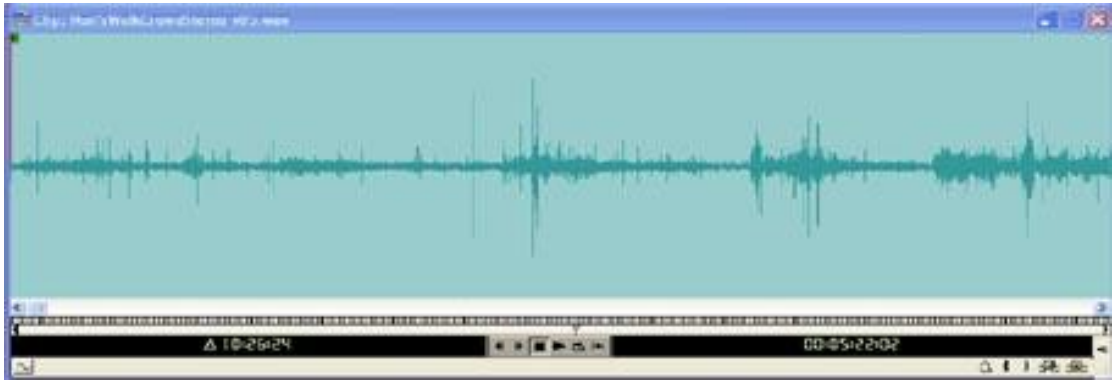


Figure 48. Micro sound-track clip of Nun's Walk using *Premiere* software. Susan Ryland

When I thought about how I might bring ‘material thinking’ to the question of metonymic thinking processes and ‘paths’, I considered the cognitive linguistic literal-metonymy-metaphor *continuum*, and posed the questions: ‘What might that continuum look like?’ and ‘Can I make it out of cardboard?’

Initially, I had imagined a continuum to be a straight line, based on definitions such as: ‘a continuous sequence in which adjacent elements are not perceptibly different from each other, but the extremes are quite distinct’ (*Oxford Dictionaries*, 2005); or as ‘something that changes in character gradually or in very slight stages without any clear dividing points’ (*Cambridge Dictionaries*, 2008). After an internet search, however, I discovered that, in mathematics, continua have been visualised in a vast number of ways and that some of these lend themselves to being made out of cardboard. So, without reference to the mathematics, but with an appreciation of their visual (and undoubted mathematical) beauty, I introduced mathematical continua as a ‘playful intervention’ into this project.

According to mathematicians Janusz J. Charatonik, Pawel Krupski and Pavel Pyrih (Charatonik et al. 2001), who created the website *Examples in Continuum Theory*, one of the simplest ‘arc-like mathematical continua’ is the *sine curve*, a simple wave form commonly associated with a sound wave (see Figures 49 and 50 below). The sound wave was already under consideration because of my video and sound work.

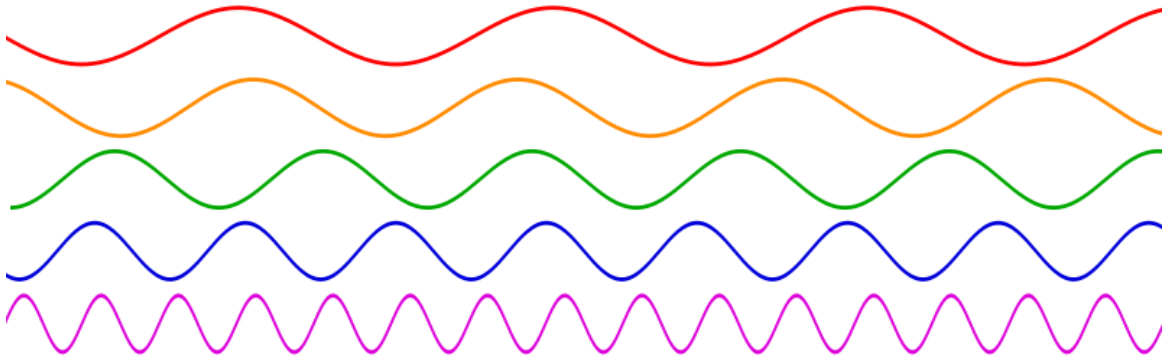


Figure 49. Sine waves of different frequencies

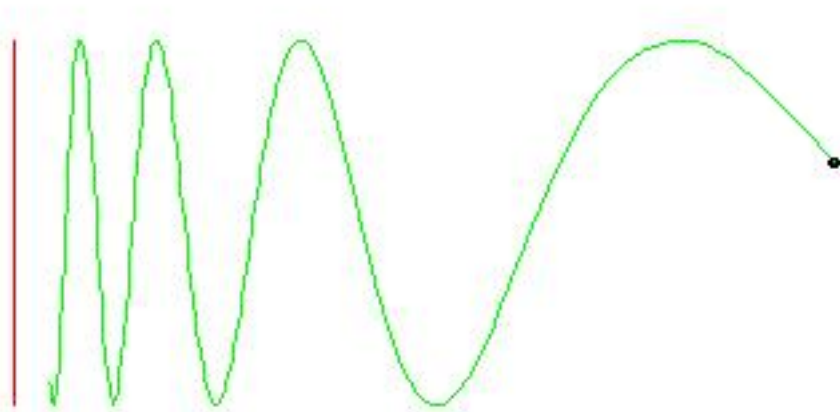


Figure 50. Sine curve continuum

If the continuum diagram of a sine curve is seen as an ‘end on’ view of, for example, folded paper (see Figures 51 and 52 below), then the ‘sine curve’ continuum suggests a method for folding a printed image.



Figure 51. Sine curve paper fold sketch. Susan Ryland

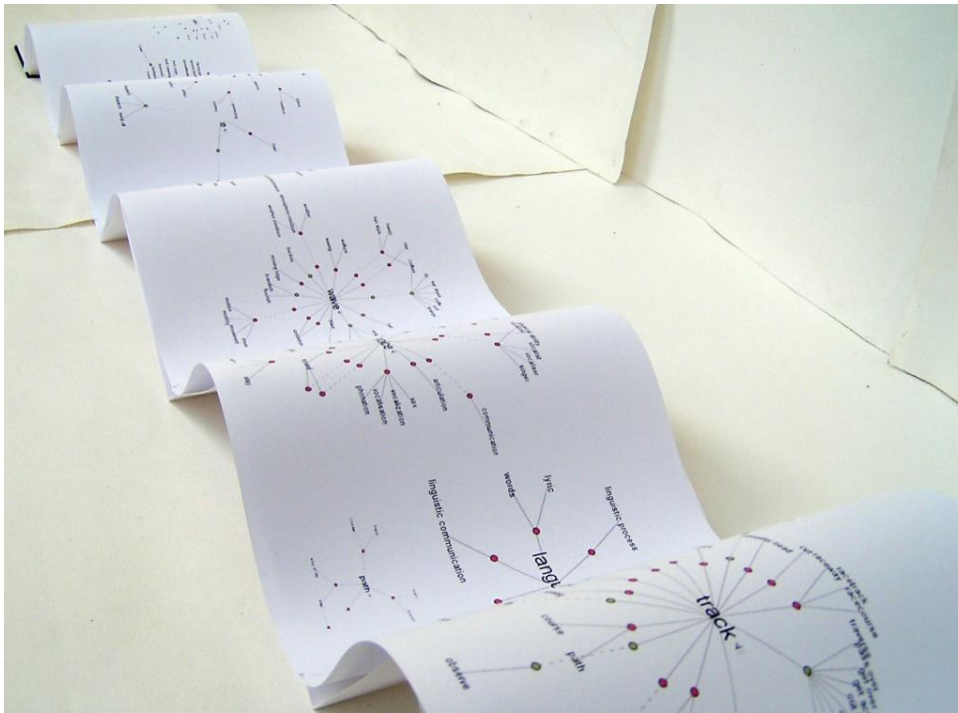


Figure 52. Susan Ryland, *Study for Path (words articulated)*: Linguistic metonymic meaning expansion, (accordion-fold book)

If the wave form is collapsed to a fold, the continuum is not broken but becomes ‘articulated’. Paul Carter suggests that the way artworks communicate, i.e. their discourse, is four-dimensional. They are “‘articulate’ precisely because they are articulated – jointed or joined together – in a variety of ways and dimensions’ (Carter, 2004: XII). With articulation, that is, a hinge or folding of the printed paper continuum, differences become more distinct, enabling cross-referencing between sections of the image (Figure 53).

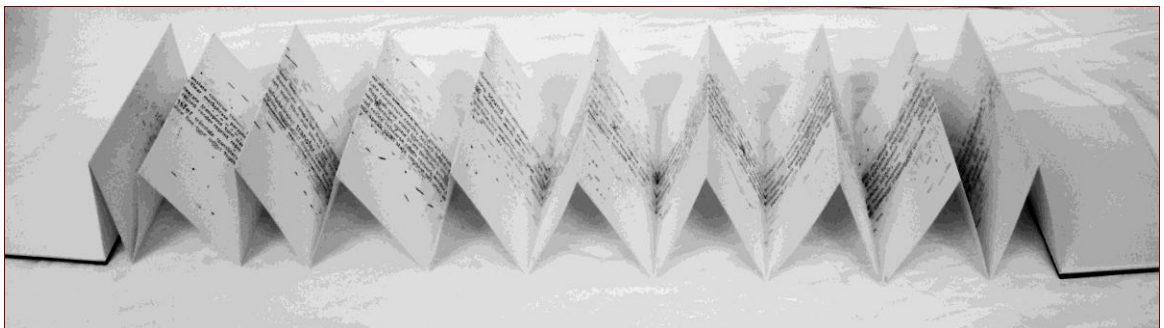


Figure 53. Susan Ryland. *Words Articulated* (2008) accordion fold book, extended view

The accordion-fold book is episodic; each fold creates a new frame and, like the frames of a film or cartoon strip, when viewed fully extended it is understood as a continuous path or narrative. Metonymy can be visualised (that is, ‘made out of cardboard’), through the sine curve format as seen in the study for *Words Articulated* (Figure 52, above) and the accordion-fold format (Figures 53–56, above and below). The fully extended work enables the path of metonymic relations to be identified. The accordion-folded format also allows a dipping in and out of various sections that helps to highlight differences amongst the commonalities (Figure 54).

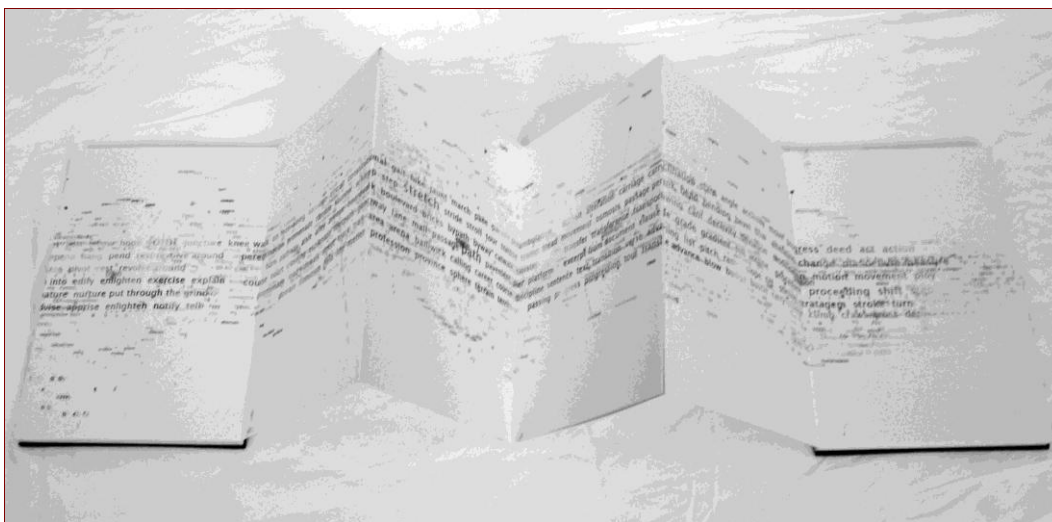


Figure 54. Susan Ryland. *Words Articulated* (2008) accordion fold book, partial extension

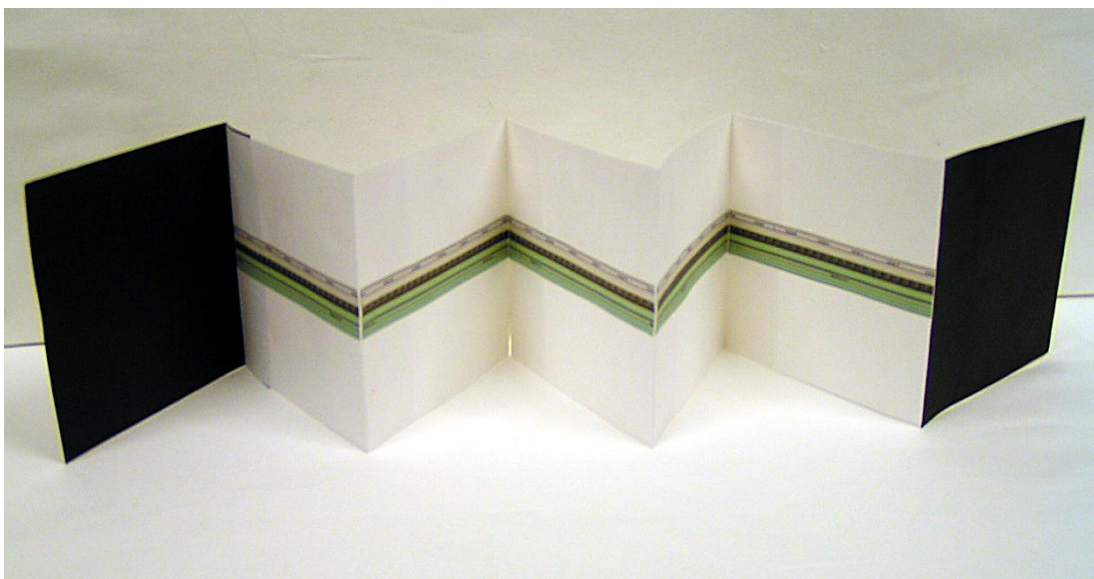


Figure 55. Susan Ryland: *Video Track articulated*. Accordion-fold book



Figure 56. Susan Ryland, study for *Light:Strip*, articulated with narrative thread (left). Accordion-fold booklet

Words Articulated provided a much needed bridge between my theoretical interests and my art practice, offering essential linguistic cues for the ensuing artworks.

With the notion of radiating sound and light, using the semi-circle continuum as a starting point structure, I plotted the sound coverage for *Nun's Walk* (Figure 57). The largest ellipse is the ambient sound and the smallest are the sounds of the visitors' own footsteps. The other semicircles represent the coverage of sound from the speakers located along the pathway. The *semicircle* continuum (see Figure 58) appears to be a more complex development of the sine curve continuum. It has a linear movement across its diameter, formed from a chain of semicircles; these gradually expand to make wider connections. This continuum captures a sense of how metonymy can be contained within a metaphoric relationship. The semicircle continuum is not amenable to being translated into an artist's book fold. However, it is evocative of the distribution of sound in the Path Project *Nun's Walk* (2006), which is discussed later in this chapter.

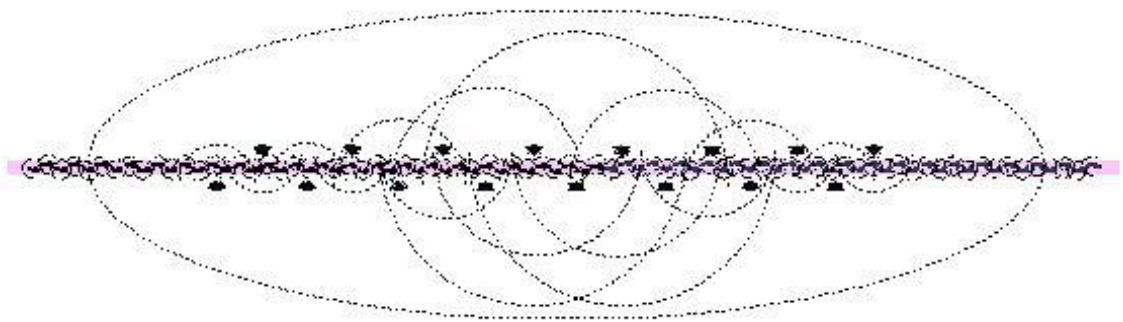


Figure 57. Susan Ryland, *Nun's Walk* sound coverage and speaker layout

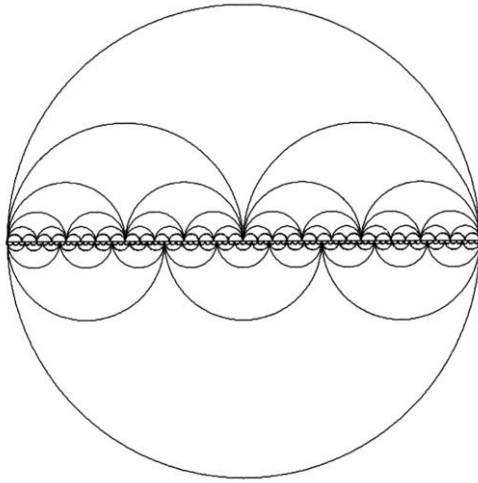


Figure 58. Semicircle mathematical continuum
(Charatonik, Krupski and Pyrih)

The various mathematical continuums provided a playful ‘prompt’ for generating ideas. I translated the sine curve continuum into an accordion-fold book format (also known as a leporello) for my *Light and Path Projects*, because the format references light and sound waves, and has the ability to be both a path, in its fully extended format, and an articulation of difference in its folded form. The accordion-fold format enables Derrida’s notion of the (deconstructive) hinge to become a physical reality. It enables separate sections to be viewed simultaneously, while recognising that parts of the image become hidden in the process. If one page is viewed on its own, we have a part-for-whole metonymy, which may ‘stand for’ the whole book as a prototype. When the whole is presented as a freestanding concertina-folded book, its ‘objectness’ becomes its primary concept, offering a synthesis between thought and the material world.

Both the *Path Project* and the *Light Project* were intended to examine the interaction of metonymy and metaphor, and to exploit metonymic thinking processes in the making of artworks. In each, the context in which the final works were presented was important.

The first work I made prior to the *Light and Path* projects was a set of digital photographs, *Brushes* (2003). The photographs (Figure 59, below) were ‘close-up’ (part-for-whole) images of hairbrushes, garden brooms, a dustpan brush, a washing-up brush, a cat grooming brush and a toilet brush. My intention was to explore the ‘part of’ relations of a mundane entity. I was interested in the relationship between brushes and domesticity, dirt, ‘women’s work’, human/animal bodies and the notion of proximity or intimacy. I wanted to see if close-up images of parts of brushes could stand for ‘brushness’.



Figure 59. Susan Ryland, *Set of Brushes* (2003). Digital photographs

I considered the linguistic connections between ‘a brush’, ‘to brush against, brushwood’ (the sweepings from tree felling) (see Figure 60, below).

The resulting images were abstract and ambiguous; the colours seductive and the contrasts between light and dark, dramatic and evocative. The images focused on the salient aspect of the brushes – that is, their bristles, the part that does the brushing. Considering the images as a set, it seemed that using a metonymic thinking process to direct the process of creating an artwork did not necessarily result in an artwork that could be read metonymically. In order to understand the source of ‘brush’ there would need to be additional information provided in, for example, the title given to the photograph or in the context in which the work was viewed, such as in a hairdresser’s salon. The ambiguity of the final image provides part of the artwork’s interest. If the images are considered individually, however, with knowledge of what type of brush was photographed, then the metonymic associations become clearer. In the case of natural bristle brushes, (made from boar or badger bristle), the close-ups have a ‘fleshiness’ and form associations with skin and hair when they are actually wood and coarse hair. The source (hairbrush) and target ‘human/animal body’ therefore remain intact. The material used in the bristles of the garden broom is a natural plant fibre (see Figure 61, below). In close-up, they generate associations with landscapes – grass, brush and bracken; again, the metonymic link remains NATURAL FIBRE FOR PLACE WHERE FIBRE GROWS.

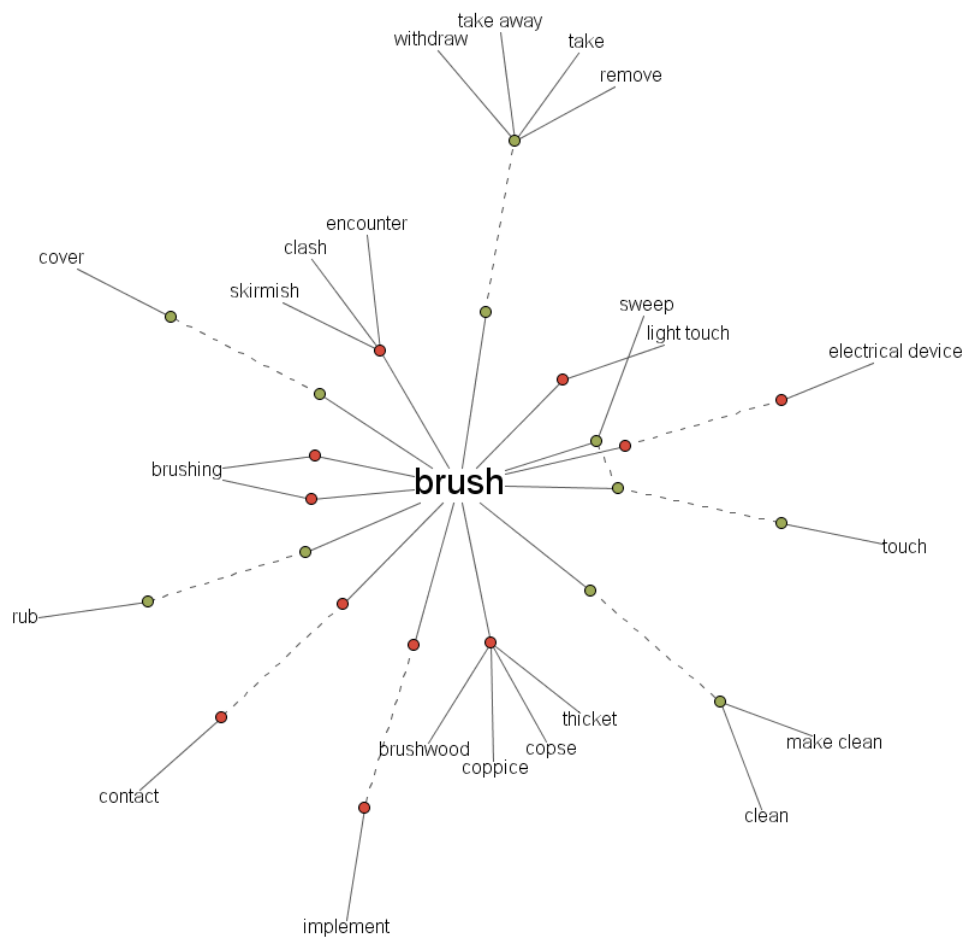


Figure 60. Visual thesaurus diagram of the word 'Brush'



Figure 61. Susan Ryland. Broom Head (2004). Digital photograph

Thus, it emerges that the images could be read metonymically, provided that the artist indicates the precise source of the image: bristle brush, garden broom, and so on. Without this additional information, however, the viewer will not be aware that they are forming metonymic relations from the visual image in front of them. The viewer may therefore consider the associations that they make as being metaphoric, or non-specifically 'evocative', simply because they do not know the source of the image, even though they are in fact reading the image metonymically. Their instincts are correct, but the information necessary to confirm these feelings is not readily available. This opens up the possibility that artworks are less likely to be interpreted metonymically when the artist has withheld information about the process of creating the work, which would have revealed the metonymic thinking processes used.

This (often) intentional withholding of information in an artwork is used to encourage ambiguity, but as a consequence, the work may be interpreted in non-metonymic terms. The result of the artist withholding process information is that metonymic and literal meaning in the work is, to some degree, overlooked, leading spectators to find salience in other aspects of the work. Artists may intentionally withhold meaning derived from the creative process, as they may feel it is 'too obvious' and is therefore thought to undermine the artistic merit of the work. Jon Erickson (1995: 24) considers 'the literal' as being 'for easy consumption and forgetting.' It has been seen, however, that metonymy, with its often literal nature, can generate a complex chain of meanings. Contemporary artists such as Cornelia Parker and Ceal Floyer have made these relations explicit through the use of literal titles.

Although I found the *Brush* work interesting, I felt that it was limiting for the purposes of this research, so I shifted my focus to another mundane entity, the electric light. The electric light gives access to the light-dark schema and the numerous metaphors that stem from it.

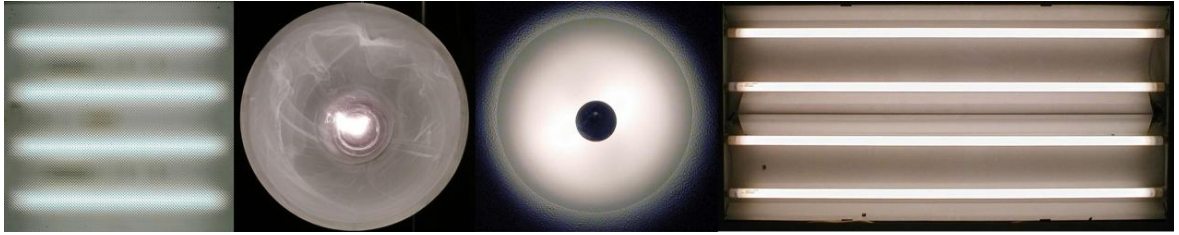


Figure 63. Susan Ryland. *Lights* (2004). Digital photographs

Light is used as a conventional metaphor across cultures, as it is a fundamental requirement for human life. It has generated metaphors such as LIGHT IS LIFE and LIGHT IS KNOWLEDGE. The various electric lights were photographed in isolation, removing their context. This gave them symbolic meaning and opened up metonymic associations with specific, albeit absent, environments. The images of strip lights carried associations with clinical environments and institutions; the spotlights with interrogation, and the domestic lights with warmth and safety. The light images could successfully be read metaphorically and metonymically. *Lights* (2004) was exhibited in the medieval church of St Mary's in Guildford, Surrey, UK. I placed a miniature monitor in a niche and displayed a looped sequence of close-up photographs of electric lights. The niche would normally have housed candles, but the electric light images seemed to provide a strong enough association with spirituality for the church patrons to hold prayers at the niche, without any sense that there had been a notable loss of symbolism between a candle and an electric light.

Light and Breath

I created a video *Light and Breath* to examine the metaphor LIGHT IS LIFE. I selected four types of lights to film: a spotlight, a strip light, an incandescent bulb and a sodium street light. I filmed each of these using a hand-held video camera held against my body, so that it picked up the sound and movement of my breathing. I used the visual thesaurus to give me close associations with the word *Breath* (Figure 64, below). Again, this was presented in St Mary's Church. The video was projected on to the wall beside a stained-glass window with colours and shapes resembling those used in the video. The breathing in the soundtrack became increasingly erratic and distressed as the video progressed, and finally stopped. Viewers reported that their own breathing synchronised with the video soundtrack, and that it had a direct physical effect on them. The images of lights provided metonymic connections with their usual context: SPOTLIGHT FOR EXAMINATION; STRIP-LIGHT FOR INSTITUTION; INCANDESCENT LIGHT FOR PERSONAL/DOMESTIC ENVIRONMENT

and STREET LIGHT FOR OUTDOORS, while the context in which the work was displayed added associations with spirituality and religious ceremonies such as weddings and funerals. The breathing and camera movement placed the viewer in the position of the camera, giving the metonym BREATHING FOR LIFE, leading to LIGHT IS LIFE and, conversely, DARKNESS IS DEATH (see Figure 65, below).

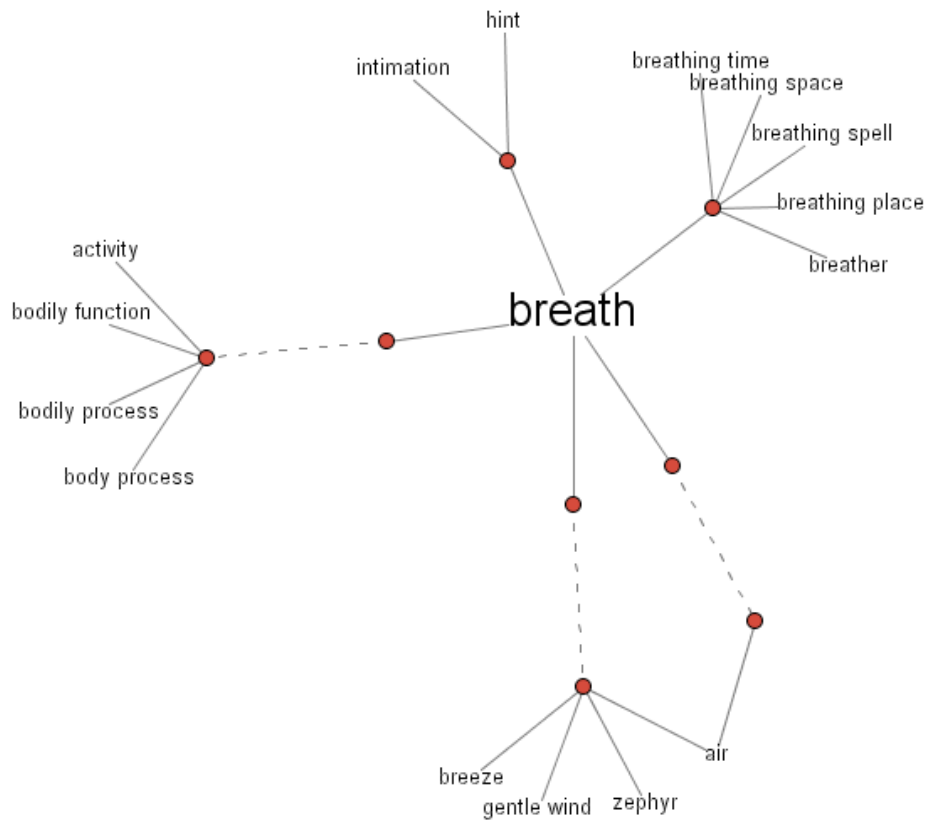


Figure 64. Visual Thesaurus of the word 'Breath'

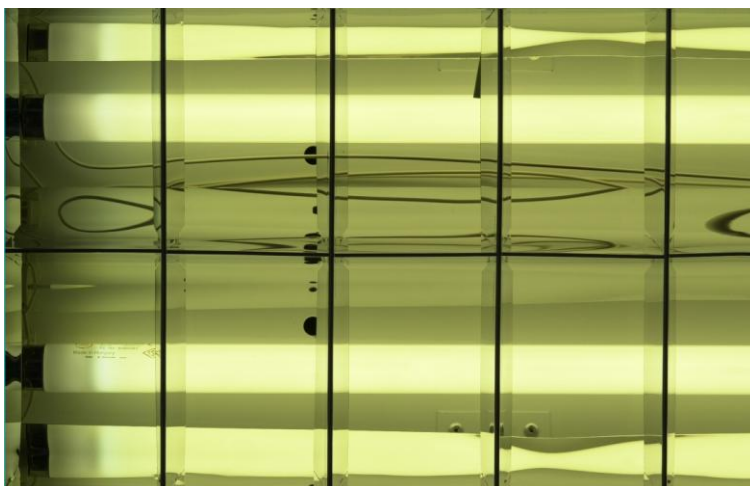


Figure 65. Susan Ryland. *Light and Breath* (2004). Video still

Pulse

When I initially filmed strip lights for *Light and Breath* I was trying to capture an actual ‘pulse’ of the light, but the digital video camera was unable to achieve this. Considering other ways of emulating a pulse of light led to the creation of a short video *Pulse* (2005).

In this, I wanted to extend the notion of LIGHT IS LIFE by animating the light source. I used ‘light wire’, a narrow battery powered plastic wire that glows or pulses (Figure 66, below). I modelled the wire into a simple shape, suspended it in a clear plastic bottle and a latex glove, then moved it back and forth in front of the video camera. The resulting video was manipulated in Adobe Premiere (video editing software) to slow the movement down to match a soundtrack of a foetal heartbeat, followed by that of an adult. The film appears to be quite abstract, but the graininess caused by slowing it down is reminiscent of foetal scans, while the colours and shapes evoke associations with medical images, the womb and foetus, indicating our inclination to anthropomorphize our world reinforced further by the heartbeat soundtrack. All references to the ‘light’ source have been lost in the postproduction process; only the target associations with LIFE remain.



Figure 66: Susan Ryland.
Pulse (2005) Stills from
video and materials used to
create images (top right)

Light:Strip

This is the final piece on the theme of light. Again, I wanted to capture a light ‘pulse’, so I chose to examine the light source at close quarters, in order to reveal the composition of white light itself. Instead of using a digital camera, I used an *Epson Perfection 3170 PHOTO* flatbed optical scanner, which takes a line-by-line image over ten seconds. The scanner comprises a glass pane or platen, under which is a bright light that illuminates the pane, and a moving optical array – a charge-coupled device or CCD image sensor, of the sort commonly used in digital cameras. CCD scanners contain three rows of sensors with red, green, and blue filters. Normally, images to be scanned would be placed face-down on the glass, ambient light would be excluded and the sensor array and light source would move across the pane, reading the entire area line by line. The article being scanned is visible to the detector only because of the light it reflects. In the case of capturing an image of the strip-light, the opaque cover was removed, rendering the scanner light ineffectual, and the moving optical array captured light emitted from the fluorescent strip-light on the ceiling two metres above it.

Though scanners use the same image-capturing device (CCD), they have a considerably higher resolution than most digital cameras (200 pixels per mm). The scanner registers light emissions using a one-dimensional array that captures a single slice of the image. The image sensor (CCD) takes ten seconds to scan the entire A4 platen. The light emitted by the overhead strip-light is broken down into its constituent colour spectrum parts (Figure 67, below) and the constant fluctuations of the emissions (the natural pulse of the fluorescent tube) are recorded along the axis of the scan head’s movement, as it captures different periods of the light fluctuations line by line. These subtle changes in colour are visible in the resulting image, at pixel level at a 1600 magnification (Figure 68, below).

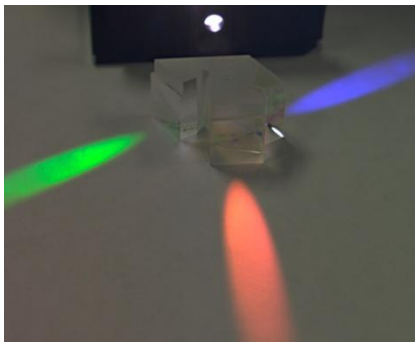


Figure 67. Colour-separation beam splitter prism assembly, with a white beam entering the front, and red, green, and blue beams exiting the three focal-plane faces

Scanners progressively and sequentially capture an image, line by line, to construct a whole image (Figure 69). The particular process of the digital scanner captures the subtle shifts in colour and light intensity as the fluorescent light ‘pulses’ at a frequency of 100Hz (cycles per second), which is twice the frequency of UK mains alternating current.



Figure 68. Susan Ryland. Scanner image of strip-light (assembled from seven individually scanned images)

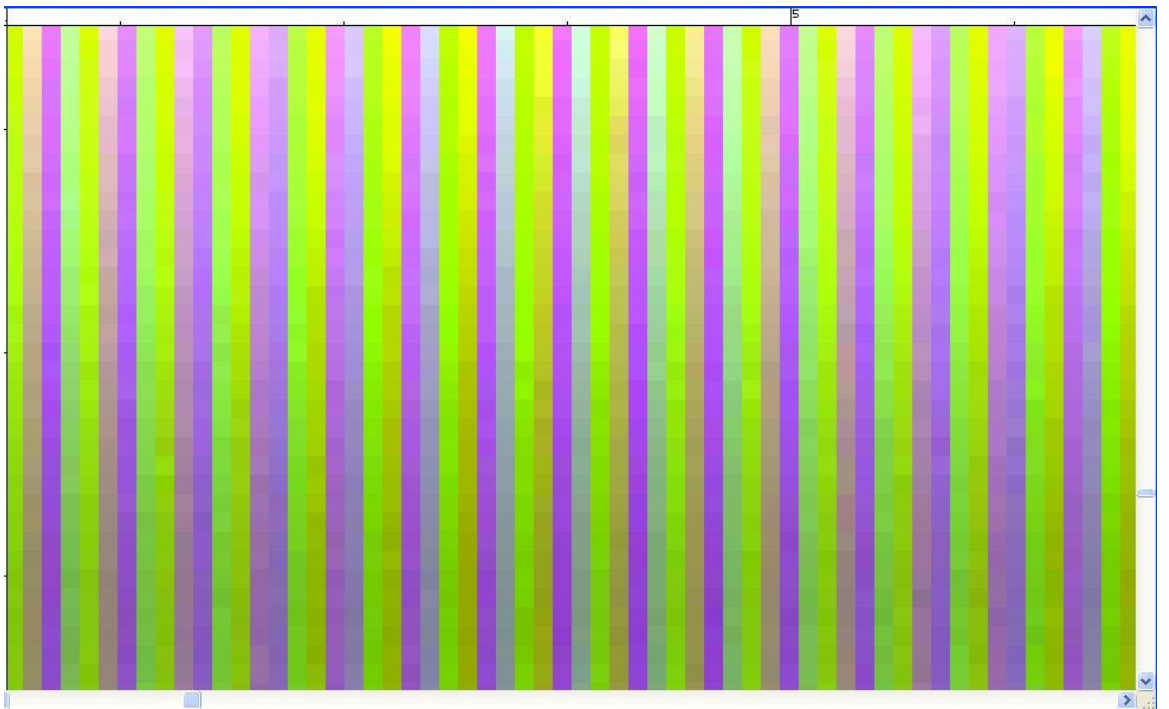


Fig. 69. Susan Ryland. Scanner image of strip-light magnified to 1600 per cent

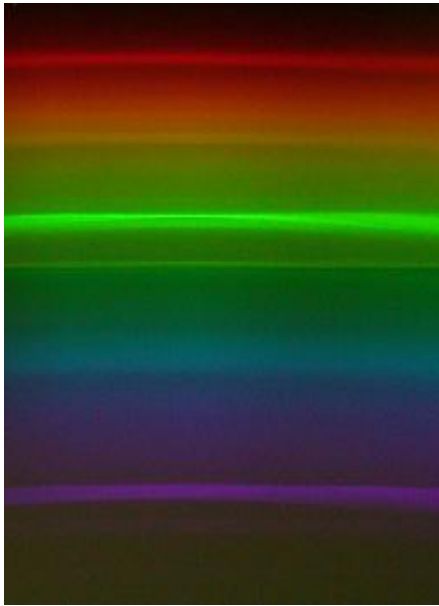


Fig 70. Spectrogram of a fluorescent light

The scanner image of the fluorescent strip-light is effectively a complex variation of a simple spectrogram (see Figure 70 above).

Once the image was 'captured', I magnified it 1600 times on the computer to reveal the constituent parts of the white light– the visible spectrum (red, orange, yellow, green, blue, indigo and violet). The resulting images offer a complex rendition of white light that has been generated through the interaction of a particular scanner, computer and light source , with no interventions by the artist other than in the presentational format of the printed strip image. In opting to consider the light metonymically (material for entity), focusing on part-for-whole relationships, I have conceptually framed the materiality of light at a forensic level. The final result is a horizontal grid format of endlessly varying colours, which appear to have vertical stripes. As with the other *Light* images, the starting point or 'source' is no longer available; the abstract colour image makes no direct reference to 'light'. The 'strip' element, however, is repeated horizontally in the overall format of the piece, and vertically in that the vertical stripes are predominantly tints of one colour. The context in which the printed image is displayed, and title of the work, will provide vital clues to its metonymic origins, so, for example, the work might be titled *Light:Strip* and it may be displayed with an audio track of the sound generated by the strip light. Without these 'prompts', the image retains the poetics of colour, with references at a mundane level to a Pantone colour chart. If the source of the image is revealed, it then opens up associations between light and colour, of rainbows and the inherent beauty of our world under magnification.

In *Pulse* and *Light and Breath*, the soundtracks act as titles, in that the sound directs the viewer to consider the visual images in a particular way. As mentioned previously, during the showing of the *Light and Breath* video at St Mary's Church, Guildford, members of the public said that they involuntarily synchronised their breathing with the sound-track of breathing. I decided to test the effect of an entirely audio work.

Path project: Nun's Walk

For the sound work *Nun's Walk* (2006) I chose the path schema that gives rise to the metaphor LIFE IS A JOURNEY. *Nun's Walk* is a temporary installation set along a secluded pathway in the grounds of the National Trust property and former stately home Polesden Lacey, in Bookham, Surrey (see Figures 71 and 72, below).



Figure 71. Polesden Lacey viewed from south side. Photograph by Susan Ryland 2006

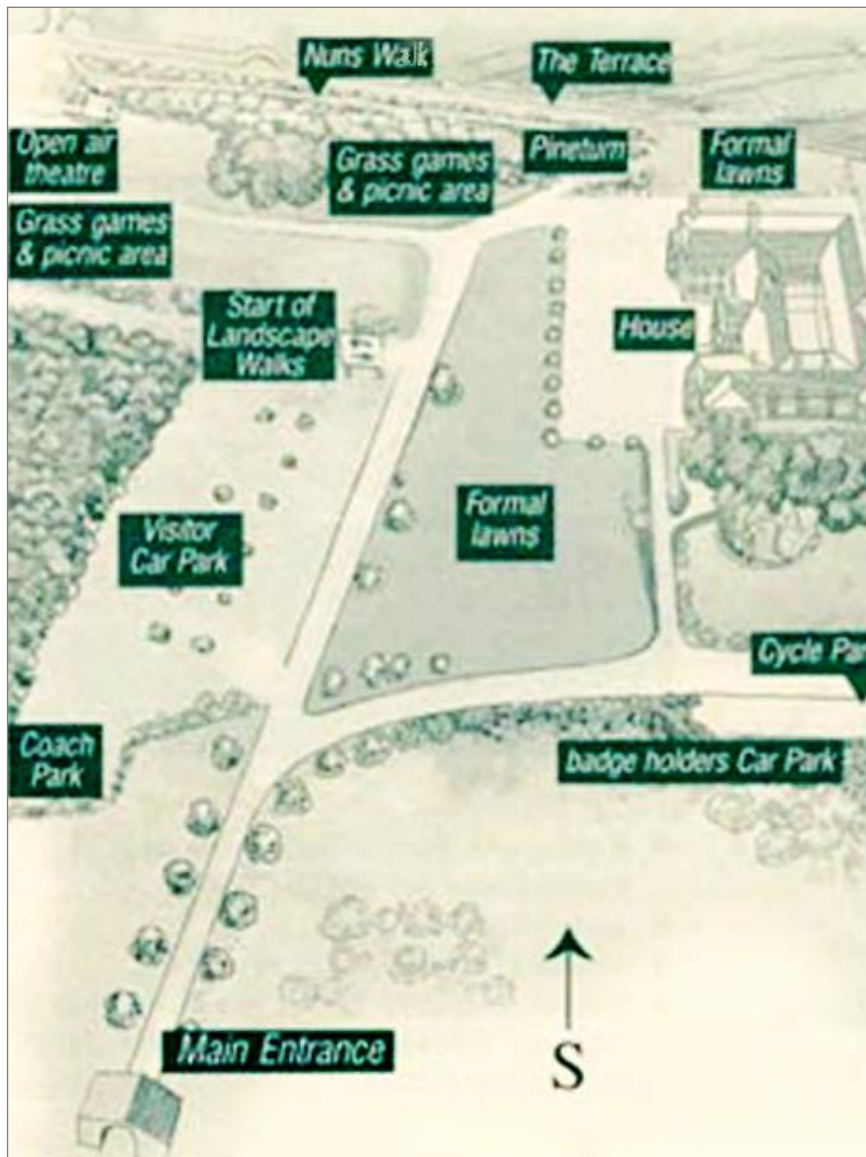


Figure 72. Polesden Lacey site map with Nun's Walk located at top left, courtesy of the National Trust

I was interested in altering the feel of the space without changing its appearance. The location was familiar to many visitors who regularly walked in the grounds, so for these 'regulars' I wanted to alter their experience of the space without interrupting its distinctive natural beauty. I was trying to manipulate an intangible element of the space – its 'atmosphere' or 'feel' within altering its 'look' (Figure 73, below). This brought to mind what George Perec called an 'ambient milieu' in *Species of Spaces and Other Pieces*:

...not the void exactly, but rather what there is round about or inside it... To start with, then, there isn't very much: nothingness, the impalpable, the virtually immaterial; extension, the external, what is external to us, what we move about in the midst of, our ambient milieu... (Perec, 1997: 5)



Figure 73. Susan Ryland in the Nun's Walk. Photograph by Roger Bamber 2006

The *Nun's Walk* carried associations with spiritual spaces, in its title and with the arching Yew trees which provide a tunnel effect, reminiscent of cloisters. I was also carrying with me associations with the *Light* project at St Mary's Church, Guildford, along with recollections of sitting in a Cathedral in Brussels, and a recent visit to St Paul's Cathedral in London. Perec's opening paragraph to *Species of Spaces and Other Pieces* captured the sense of the immateriality of sound; its simultaneous something and nothingness. I was curious to find out whether sound could transform the sense of space in the landscape, and what this experience would feel like. Would it be oppressive, liberating, disturbing or reassuring? Would added sound in the landscape be experienced as an externalization of the 'inner voice' or maybe conjure sad or happy memories? My studies followed a path format, whether I was thinking about light, the tree-line, or ambient and rhythmic sounds (Figures 74 and 75 below).

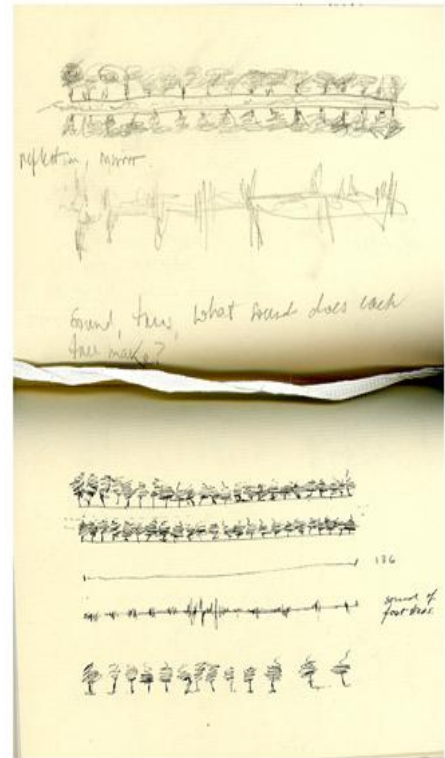
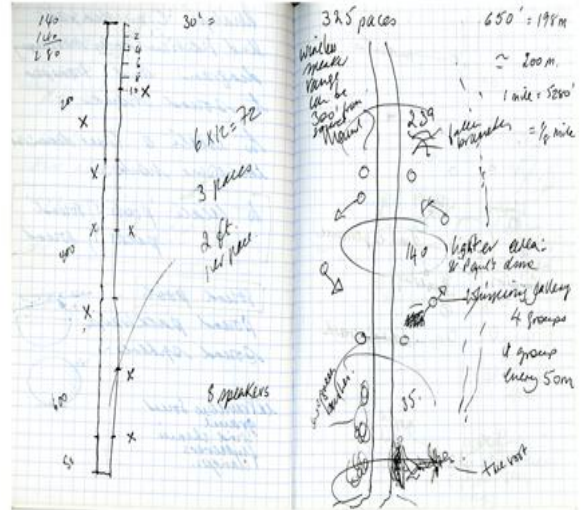
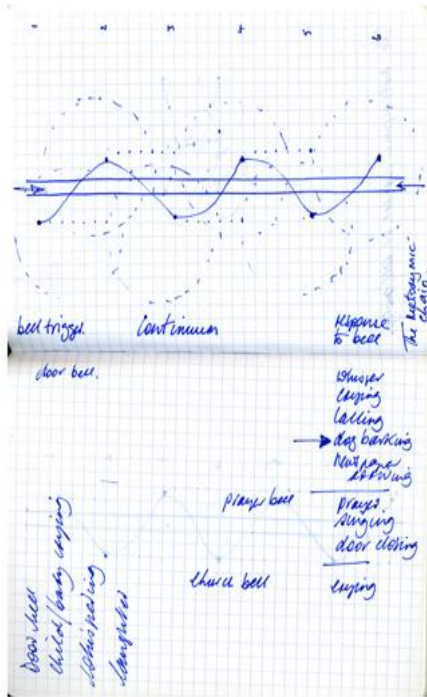


Fig. 74. Sketchbook notes exploring a number of configurations for the location of the speakers along the Nun's Walk pathway

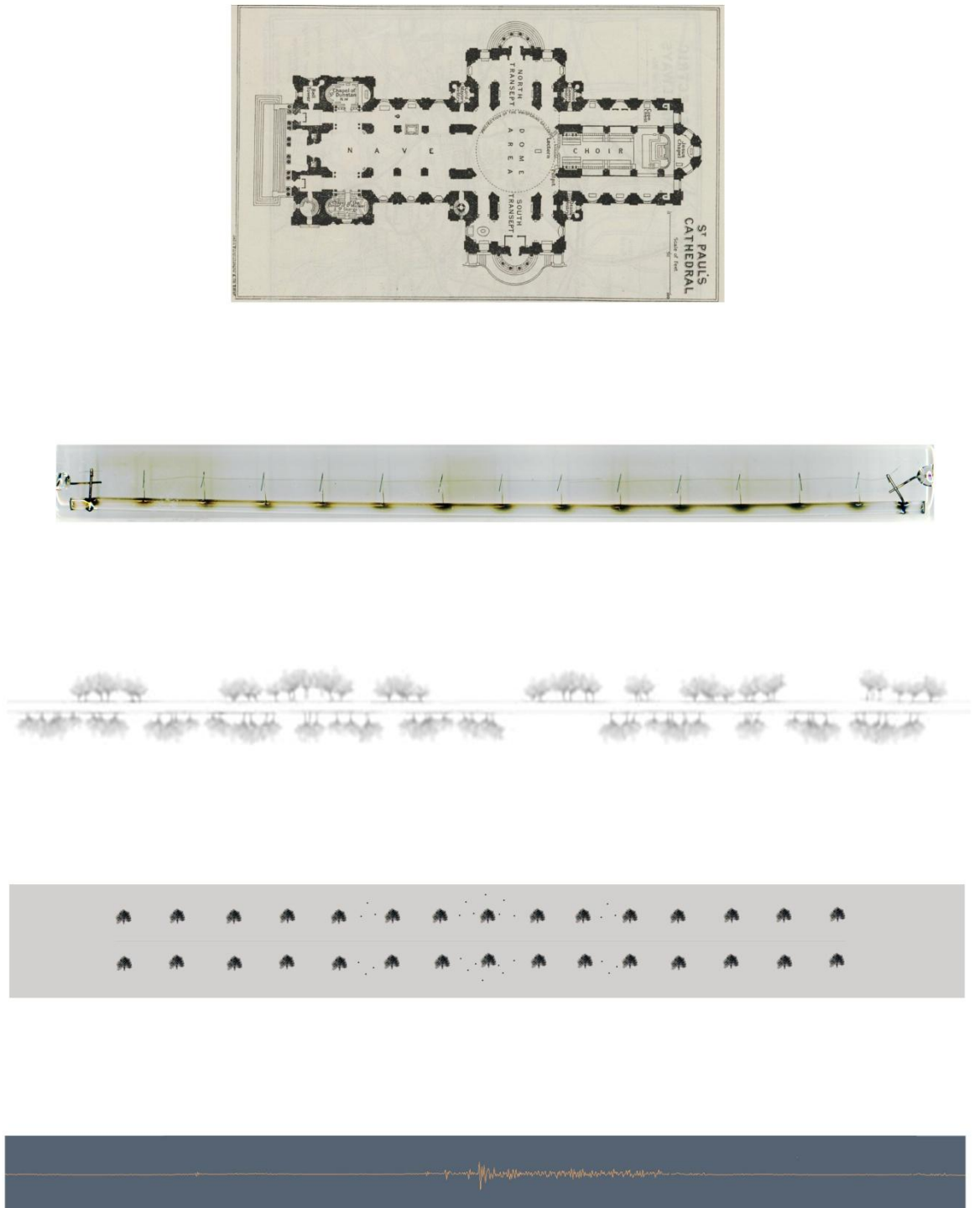


Figure 75. Studies for Nun's Walk

From top: St Paul's Cathedral plan drawing 1922 Bartholomew's Pocket Atlas and Guide to London; close-up of long light bulb filament; study of trees along Nun's Walk; study for speaker layout along Nuns Walk; sound wave of trotting horse

Over a three-month period, I recorded the sound of my footsteps as I walked along the pathway and surrounding areas. I filmed one such session and made the video *Footsteps* (2006) which incorporates multiple soundtracks of my footsteps, unsynchronised, in order to give the impression of a crowd of people walking, set to the image of looking down at my own walking feet (see Figure 76). Curiously, however strenuously I attempted to keep the footstep soundtracks out of synchronisation, they sounded like soldiers marching – an aural illusion formed by the brain’s need to find patterns in our surroundings and organise sensory data so that it conforms to what is already known and understood.



Figure 76: Susan Ryland. Video clip from *Footsteps* (2006). Path Project

My aim was to create a zone in the centre section of the pathway where there would be a blend of sounds evocative of the location’s distant past, its recent past, and its present, which would heighten visitors aural awareness, and provoke a shift of focus from the (dominant) visual sense to the aural one – a sense closely connected to emotions. I found that the site was surprisingly noisy of such a rural location, with jets flying over from Gatwick, light aircraft, helicopters, birds, sheep, dogs, children, adults, lawn mowers, maintenance noises (such as hammer strikes), wind in trees, and footsteps on the pathway. So, my final blend of sounds for playback along the pathway had to be highly pronounced, and fairly unsubtle, in order for it to be heard above the general ambient sound of the site, and for there to be a clear contrast between the sound zone and the rest of the location (Figure 77, below).

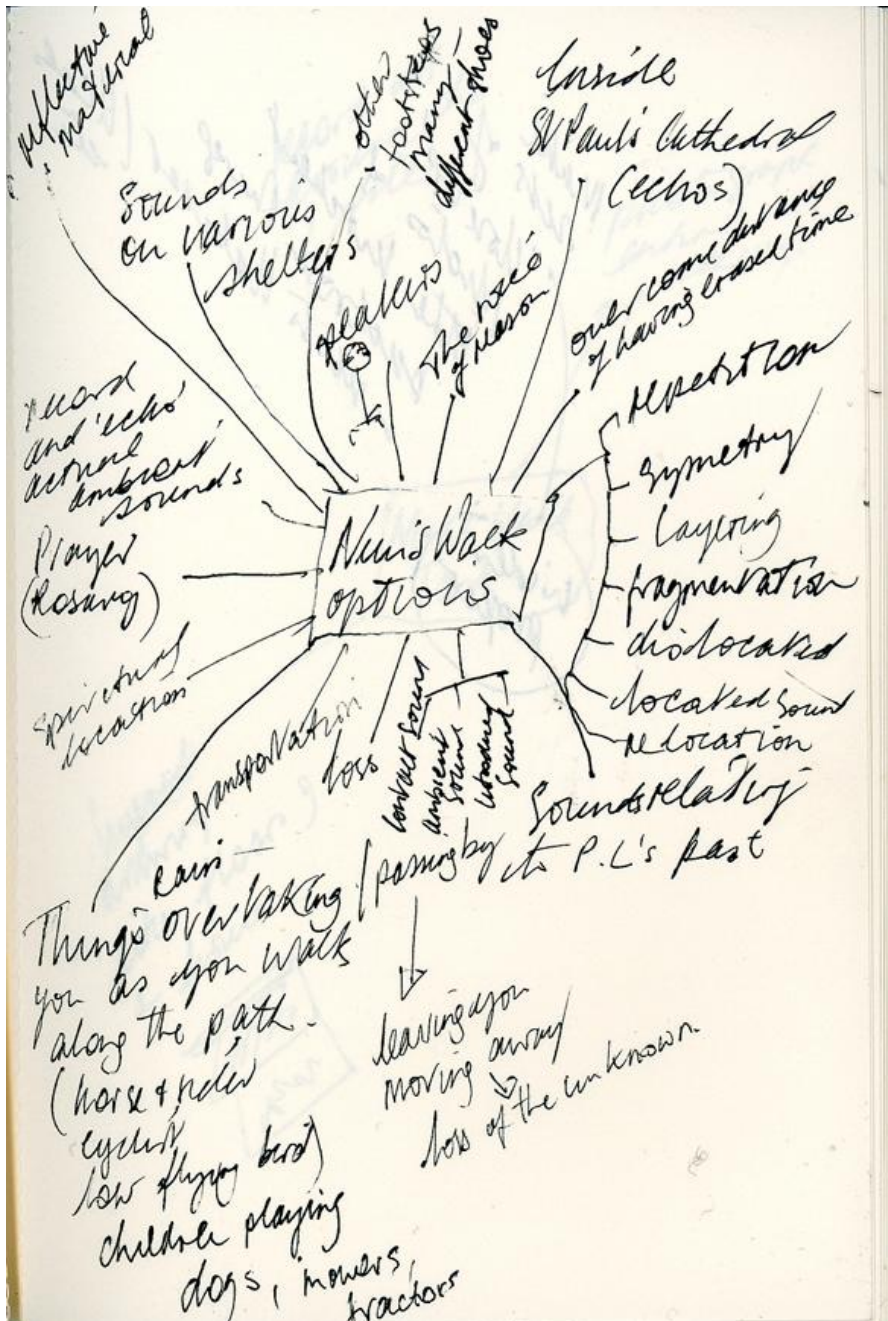


Figure 77. Susan Ryland. Sketchbook mapping of Nun's Walk elements

A series of sixteen speakers was set up along the pathway (Figure 78, below). The sound of single and then multiple footsteps were played into the space, along with the sounds of children playing, dogs barking and birds singing which had been recorded in the locality over a number of months. I added occasional interjections of sounds referring to the history of the location, which included a section of gramophone music dating from Edwardian times, and garden-party chatter, wine glasses clinking and gentle laughter.

The piece successfully blurred the boundaries between the present, the recent past, and the distant past of the imagination. It was almost impossible to distinguish between actual sounds and the recorded sounds taken from the locality. The overall effect heightened awareness of the sounds around, as well as making the visitor conscious of the sound they themselves made as they moved through the space. It disturbed the visitors' perceptual experience of the space, while the space itself appeared visually unaltered.

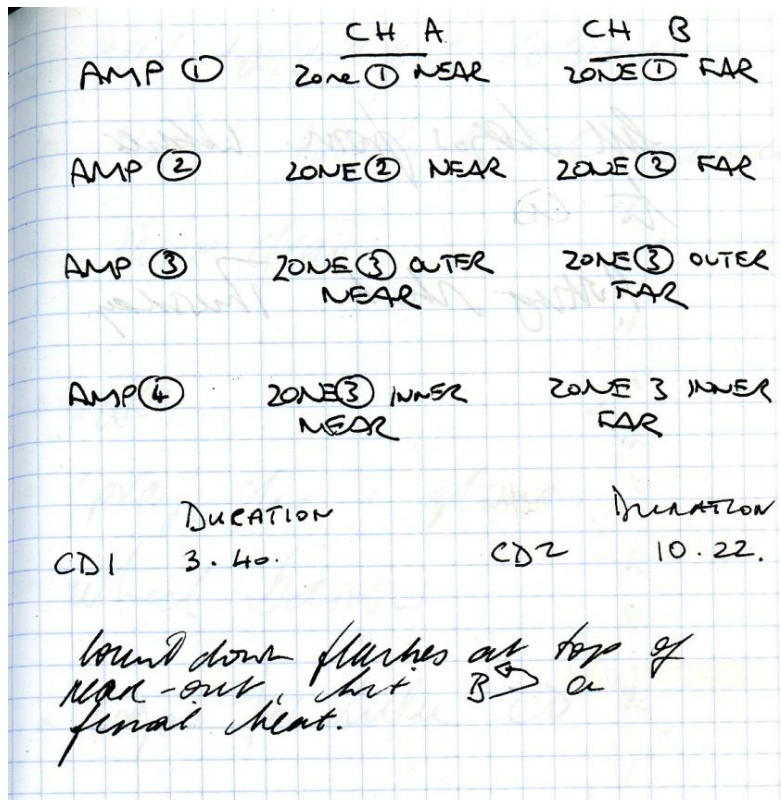


Figure 78. Susan Ryland. Sketchbook note of speaker, amplifier and sound-track layout

It was interesting to note that as one moved out of the sound zone there was a sense of loss, of leaving something behind, of parting, which generated mixed emotions: in part, a sense of sadness at leaving an intense experience, but also a sense of release, of freedom from the experience. One moved out of the sound zone with a heightened awareness of oneself and with a stronger feeling of connection to the environment, yet this left a sense of vulnerability, as if this new, exposed, self-aware person was emerging from a protective 'blanket' of sound.

While the sound work was installed along the Nun's Walk, I filmed walking down the pathway through the sound installation (Figure 79). Stills were also taken from a number of viewpoints along the pathway. Other path images were subsequently assembled from photographs taken when the project was in its conceptual stage (Figure 80). These included close-up images of surface textures such as leaves, stones and grass. I also set up the camera in a fixed position in the Nun's Walk and, using shutter-delay to take a series of images of myself moving along the pathway, assembled these into a Labyrinth sequence (Figure 80). Another assemblage was made of the Yew tree trunks, to highlight their distinctive gnarled qualities (Figure 80). These photographic assemblages formed long, narrow images which bore a visual resemblance to the video and audio time-lines generated in Premiere software (Figure 79). However, only the last three images overleaf *Composite tree trucks, Labyrinth* and *Panorama* seem to be 'arresting' images, largely due to their segmental characteristics that enables back-and-forth comparisons to be made between the sections. (Figure 80 overleaf)

The path metaphor became a literal and linguistic recurring theme in the project, as paths existed in the soundtrack, the video time-line and in my train of thought. Eventually, the visual motif of the long, linear image being assembled or disassembled into its constituent parts became the cipher for the project.

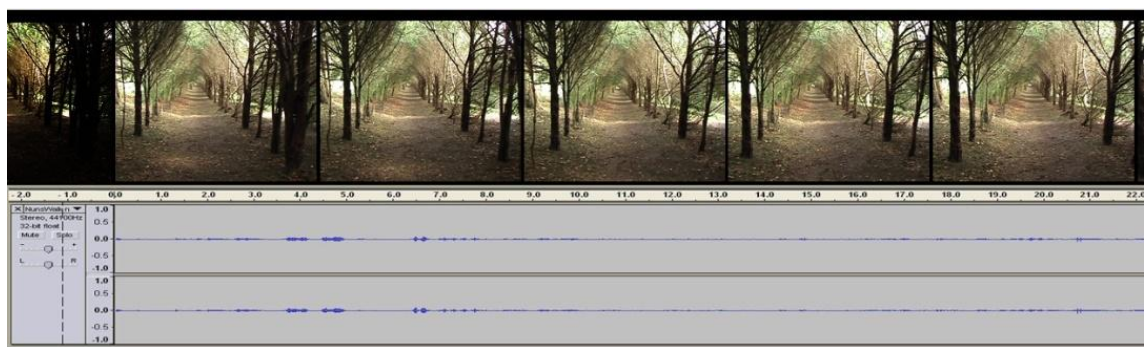


Figure 79. Susan Ryland. Video clip: *Nun's Walk* (2006)

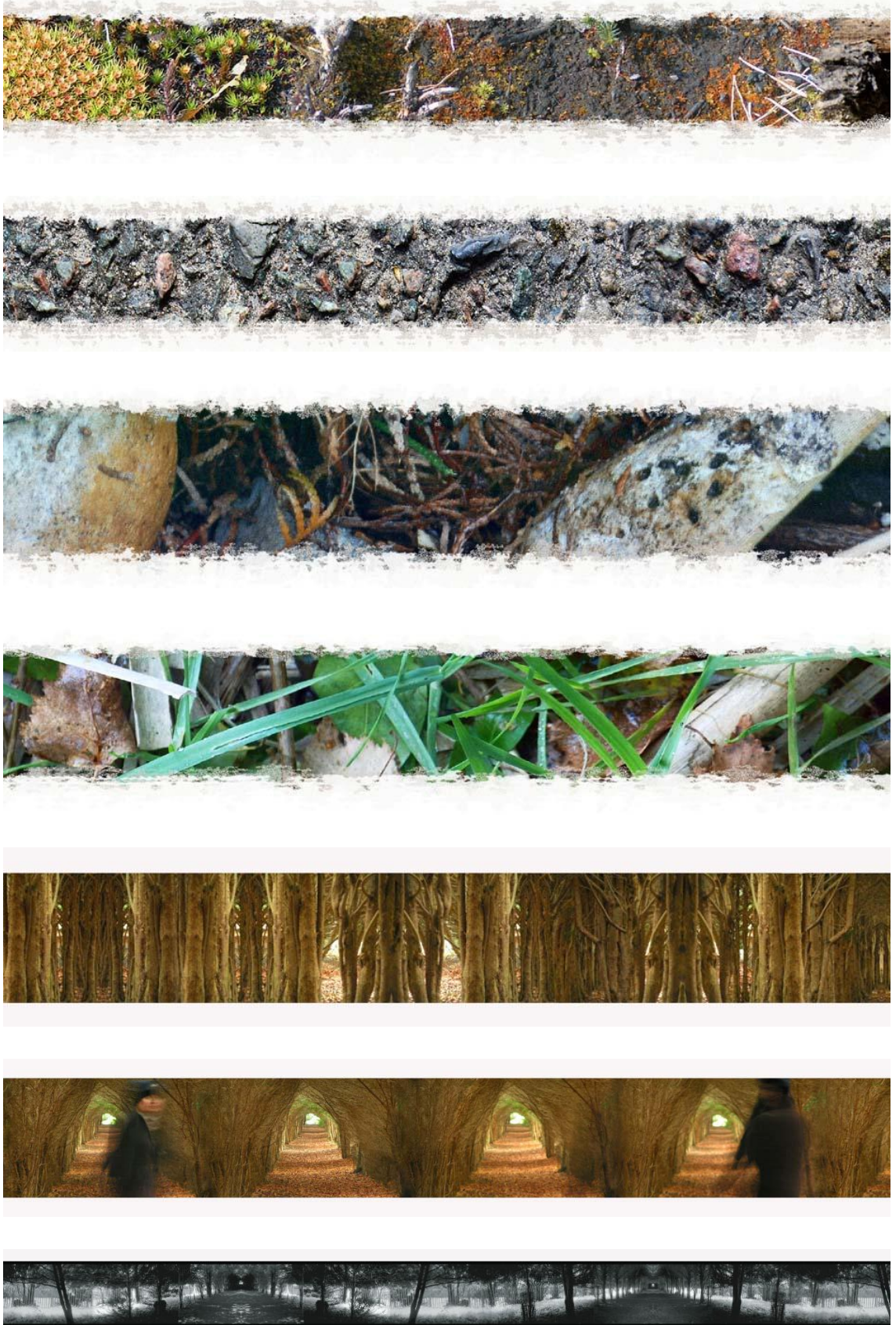


Figure 80. Susan Ryland, Path Project digital photographs (2006). From top: Surfaces: earth, road, stones, grass. Composite tree trunks. Labyrinth. Panorama (b&w)

As with the light metaphor, the path metaphor in cognitive linguistics is considered to be a primary metaphor that is universal – that is, not culturally specific. The path metaphor connects with a number of elements in this research, including continuums, time and space relationships and the visual similarities between the film and soundtracks and the close-up still image of strip-lights.

The path schema which is learnt in infancy, consists of a starting point or source, a destination or goal and a series of contiguous locations in between which relate the source and goal, leading to abstract notions such as ‘Christmas is *coming*’, where the event ‘Christmas’ is understood as a moving object.

In Chapter One I referred to image schema, the rudimentary concepts derived from sensory-perceptual experiences (such as up-down and warm-cold) (see Johnson, 1987). The *Nun’s Walk* explores the metaphor LIFE IS A JOURNEY which draws from one of the image schemas we form as young children: the PATH schema. The PATH schema is particularly important in our understanding of time and space. The relationship between source and goal is metaphoric (Christmas is *coming*), whereas the ‘series of contiguous locations in between the source and goal’ are metonymic.

The path of time can be thought of in three distinct ways, as George Lakoff (Lakoff and Johnson, 1999:152) explains:

Time Orientation:

What we will encounter in the future is ahead of us.

What we are encountering at present is where we are (present to us).

What we encountered in the past is behind us.

Moving Time:

What we will encounter in the future is moving towards us.

What we are encountering now is moving by (passing) us.

What we encountered in the past has moved past us.

Moving Observer:

What we will encounter in the future is what we are moving towards.

What we are encountering now is what we are moving by.

What we encountered in the past is what we moved past.

If we are standing still on a literal path, what we will encounter in the future is ahead of us; what we are encountering at present is where we are (present to us), and what we encountered in the past is behind us. When filming, moving along the path, the filmmaker is the ‘moving observer’. The resulting film, however, will be experienced by a non-moving observer, as events move towards and past them. This is most obvious in the *Footsteps* video, where the viewer has the illusion that the ground is moving under their feet, rather than the feet moving over the ground.

When the *Footsteps* video is presented in two different formats: single channel and multichannel (also known as split-screen or picture-in-picture), a clear distinction can be made between two types of serial metonymy: spatial and temporal (Figures 81 and 82 below). Figure 82 shows a still from the four-channel video, in which each channel is running a different stage of the single channel version. The viewer’s attention moves back-and-forth between the four frames drawing out differences between them – in this case the different qualities of light – taking attention away from the feet moving along the ground over time. This indicates that, when viewing films, our brains foreground comparisons between co-present elements, in preference to successive elements, most probably because our brains can process co-present comparisons more rapidly than successive events and therefore hold our attention. Multichannel sections introduced into a single channel film, will interrupt the overall narrative and introduce new meaning generated by the act of comparison between co-present elements. Accordingly, multichannel sections should be used to expand the plot rather than advance it.



Figure 81. Still from the single-channel version of *Footsteps*; an example of successive serial metonymy. Susan Ryland (2006)

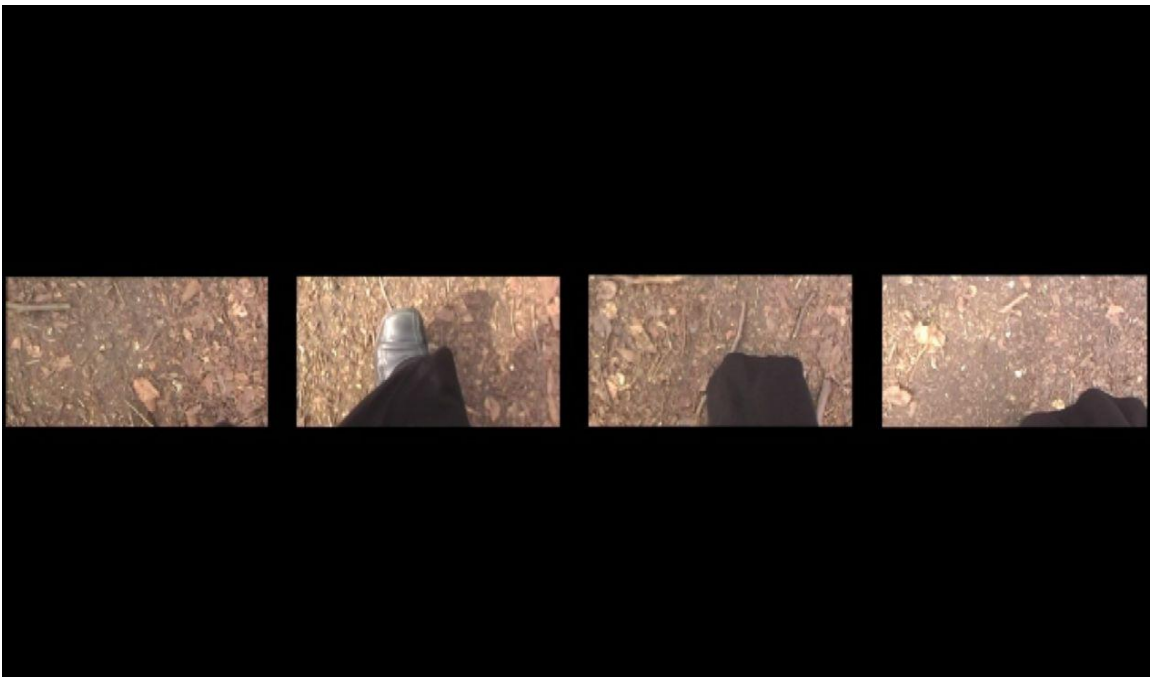


Figure 82. Still from the multichannel version of *Footsteps*; an example of co-present serial metonymy. Susan Ryland (2006)

Nun's Walk brings together a number of path metaphors that can be grouped within a category of 'kinds of' paths: time-lines, soundtracks, physical journeys walking from, along, and to a place, and mental journeys, imagining past walkers, past journeys, imagining what you will find at the end of this particular journey. In addition, the scale and format of the images require the spectator to physically move along the image to view its entirety or select sections of it for comparison.

Cognitive scientist Jean M Mandler has observed infants learning the path schema:

It seems that infants assume that any object taking the most direct route to another object (or following another object in linked fashion) is following a goal-path, and read this conclusion independently of whether the object is animate or inanimate. Infants see people get up and take a direct route to the telephone when it rings and they see balls rolling and knocking over other balls. Experience with both animate and inanimate objects following direct paths may lead infants to powerful expectations that at first apply to both kinds of objects. It may take developmental time to begin to limit goal-directed interpretations to animate objects. Alternatively, it is possible that there is an innate proclivity to interpret paths in this fashion. At the least, there is a known innate responsivity to contingent events that is responsible for associative learning, and it may be that it is this innate responsivity that leads to a tendency to interpret all events in a goal-directed fashion. In either case, even as adults we still sometimes ascribe goal-directed behavior to machines and other inanimates. (Mandler, 2005: 144–146).

For *Nun's Walk* I wanted to use metonymic relations to consider the 'series of contiguous locations in between the source and goal'. To do this, I focused on the peripheral sound elements, the parts of the journey along the pathway that heightened awareness of the location, its history and its atmosphere. The process of moving along the pathway became important, the awareness of one's own footsteps, and the sound of other footsteps of unseen or imagined people.

The *Nun's Walk* project brought to mind Lacan's notion of metonymy and desire, where transformations are an endless striving towards something; an unattainability, which leaves the past behind, but cannot embrace the future in any concrete, tangible way: the goal moves away, like the rainbow's end. It took the notion of the past *behind* you, walking *towards* the future (in front of you).

The experience of walking along the *Nun's Walk* is one of moving through the 'here and now', from an external space to an internal or mental space that utilises recollection, memory and sensory perception. The person is physically located and mentally

‘transported’. This process of going to another (mental) space, maintains connections with the location through the senses, so that as such it is a process of transportation, rather than a relocation or dislocation.

This process of transportation can be one of moving towards (desire for) a thing, or moving away from a thing (a process of loss), of leaning towards desire or slipping away or losing one’s grip on something. From a psychological standpoint, metonymic relations reflect desire, seeking to attain or acquire on one side, through metonymic chaining; and on the other failing to maintain or retain, a process of losing the present, of giving it to the past.

There is always a risk of under- or over-interpreting artworks. Paul Carter (2004: XI) believes it is a combination of circumstances that make interpretation problematic. ‘Critics and theorists...remain outsiders, interpreters on the sidelines, usually trying to make sense of the creative process afterwards, purely on the basis of outcome’. On the other hand, ‘for their part, filmmakers, choreographers, installation artists and designers feel equally tongue-tied: knowing that what they make is an invention that cannot easily be put into words.’

Whether artworks are ‘under-interpreted or over-interpreted, the meaning of the artwork is detached from the matrix of its production.’ As discussed earlier, this can come about because some metonymic artworks place such an emphasis on the target domain that the source domain is lost.

Carter refers to Francis Bacon’s (1561–1626) term ‘humid’, which Bacon uses to refer to what is formless – a signifier without a signified – stating that ‘all material signs are humid. Composite, rather than elemental, elastically diffused, neither solid nor liquid, it is in their nature to dissolve hard and fast distinctions and, instead of yielding solid entities, to present images of becoming’ (Carter, 2004: 187).

[Humid is] nothing else than a mark loosely and confusedly applied to denote a variety of actions which will not bear to be reduced to any constant meaning. For it both signifies that which easily spreads itself round any other body; and that which in itself is indeterminate and cannot solidise; and that which readily yields in every direction; and that which easily divides and scatters itself; and that which easily unites and collects itself; and that which readily flows and is put in motion; and that which readily clings to another body and wets it; and that which is easily reduced to a liquid, or being solid easily melts. (Bacon and Anderson, 1960: 57)

Carter recognizes that 'Metaphors that yoke unlike things, representing one thing by another, ignore the importance of material kinship'. Kinship is the basis of metonymy. But equilibrium is an unachievable and, as thermodynamics indicates, is ultimately undesirable, since thermodynamic stability spells death for it, purely and simply. It is in a temporary state of imbalance, and it tends as much as possible to maintain this imbalance. It is hence subject to the irreversible time of the second law [of thermodynamics, i.e. entropy], since it is dying. But it struggles against time. This 'out of balance' state is crucial to survival, whether it is language, art or an organism. Derrida is describing such an out of balance state in his essay *Différance* (Derrida, 1982) and Serres (1982: 74) suggests that it is 'noise' that maintains imbalance and defers equilibrium. As Taylor (2001: 135) explains: 'Noise disrupts order and creates the condition of possibility of the emergence of a new and more complex order.'

Artists intuitively know the importance of noise, as in this Leonardo da Vinci sketch for the angel in the first version of his painting *Madonna of the Rocks* (ca. 1483). The 'multiple choice' line that provides 'noise', is intentionally left, so that the viewer contributes to the construction of the image (see section on left of main image, Figure 83).



Figure 83. Leonardo da Vinci, preparatory sketch of the angel for the first version of *Madonna of the Rocks* (ca. 1483). Detail (left) shows multiple lines

Serres explains a ‘law of series’ – a system that integrates ‘noise – converting waste products into meaningful content:

Consider any level of an interlocking system. Locally...it operates like a series of chemical reactions at a certain temperature...Let us consider only the energy conditions at this one level. It mobilizes information and produces background noise. The next level in the interlocking series receives, manipulates, and generally integrates the information-background noise couple that was given off at the preceding level...In a certain sense, the next level functions as a rectifier, in particular, as a rectifier of noise. What was once an obstacle to all messages is reversed and added to the information. This discovery is all the more important since it is valid for all levels. It is a law of the series, which runs through the system of integration. (Serres, 1982: 77–78)

Such a 'law of the series' may well be as applicable to serial metonymy as it is to thermodynamics. Taylor points out that the 'rectification of noise is not, of course, its elimination. What is information in one context is noise in another context.' So, here again, we find context determining meaning, as 'Noise...is always in formation.' Indeed, it is always in a process of forming and in a process of providing in-formation.

Serres drew his ideas from those of French professor of biophysics Henri Atlan, whose studies in the 1970s remain untranslated and are therefore not widely known. Atlan's 'theoretical speculations and extensive mathematical calculations rest on his guiding principle of 'order from noise'. At an International Symposium on *Order and Disorder* at Stanford University, US, in 1981 Atlan summed up his own work: 'What I have to say may be summed up in two sentences: one is that randomness is a kind of order, if it can be made meaningful; the second is that the task of making meaning out of randomness is what self-organisation is all about.' Atlan claims that for systems to work there must be neither too little or too much noise. He explains that self-organizing systems:

imply a transmission between substructures but with ambiguity or equivocation. We arrive, then, at the apparently paradoxical idea that organization is proportionally greater as ambiguity increases, up to a certain limit where there is no more transmission at all and where organization disappears. (Atlan, 1972: 258–259)

This can be illustrated using paintings by two abstract expressionists: Willem de Kooning's *Woman and Bicycle, 1952–53* retains meaning in that the woman and bicycle are discernible (Figure 84), whereas in Jackson Pollock's *Autumn Rhythm No. 30 1950* (Figure 85), the degree of 'noise' or apparently random marks, tips the work into 'chaos', albeit a 'branches in Autumn' kind of chaos.



Left: Figure 84. *Woman and Bicycle*,
Willem de Kooning 1952–53

Below: Figure 85. *Autumn Rhythm No. 30*,
Jackson Pollock, 1950



Jackson Pollock's early work was drawn from nature, but as his *oeuvre* developed the randomness of the process of 'action painting' passed the point at which figurative references were available to the viewer. The works can be understood as influencing one another, first with De Kooning who created a more physical cubist space by marrying the act of painting with the image, then with Pollock who eradicated the figurative image in the act of gestural painting.

Atlan describes noise as an 'aleatory aggression' [chance or random aggression] on the part of the environment, which, can both increase the disorder of the system, and, provide the circumstances for the emergence of a more complex order. ...Complexity, therefore, nothing other than the 'property of being able to react to noise in two opposed ways without ceasing to function.' (Atlan, 1972: 265–66). Taylor elaborates:

Since order emerges from noise and noise is an 'aleatory aggression' directed towards any system or organizational structure within a system, self-organization necessarily entails 'organizational chance'. If the aleatory cannot be integrated or assimilated, the system is in danger of dissolving. In this case, noise is, obviously, destructive for the system. If, however, the aleatory is effectively appropriated, noise can be creative. Accordingly, the system displays 'the capacity to utilize aleatory phenomena, to integrate them into the system, and to make them function as positive factors, creators of order, structures, functions.' (Atlan, 1972: 229–30). *The process of appropriation results in an internal proliferation of differences, which, when integrated, form a more complex system.* (Taylor, 2001: 137)

Atlan's three significant insights can be summarized thus: first, complexity is composed of a great number of parts interconnected in multiple ways; second, complexity is an emergent phenomenon whose occurrence cannot be accurately predicted; and third, the negentropic² processes at work in living organisms produces an evolution that appears to be orientated toward more complexity.' (Atlan, 1972: 230).

Artists deploy 'noise' in order to create the conditions for the emergence of new meanings. Here I am referring to 'noise' as the paint splatter, or other events not central to the initial intentions of the artwork. For example, in *Words Articulated* (2009), [Figure 86] formatting 'junk' was added around the word path to provide a tone and spatial affect, without adding further linguistic meaning.

² Negentropy is the entropy that a living system exports to keep its own entropy low; it lies at the intersection of entropy and life.

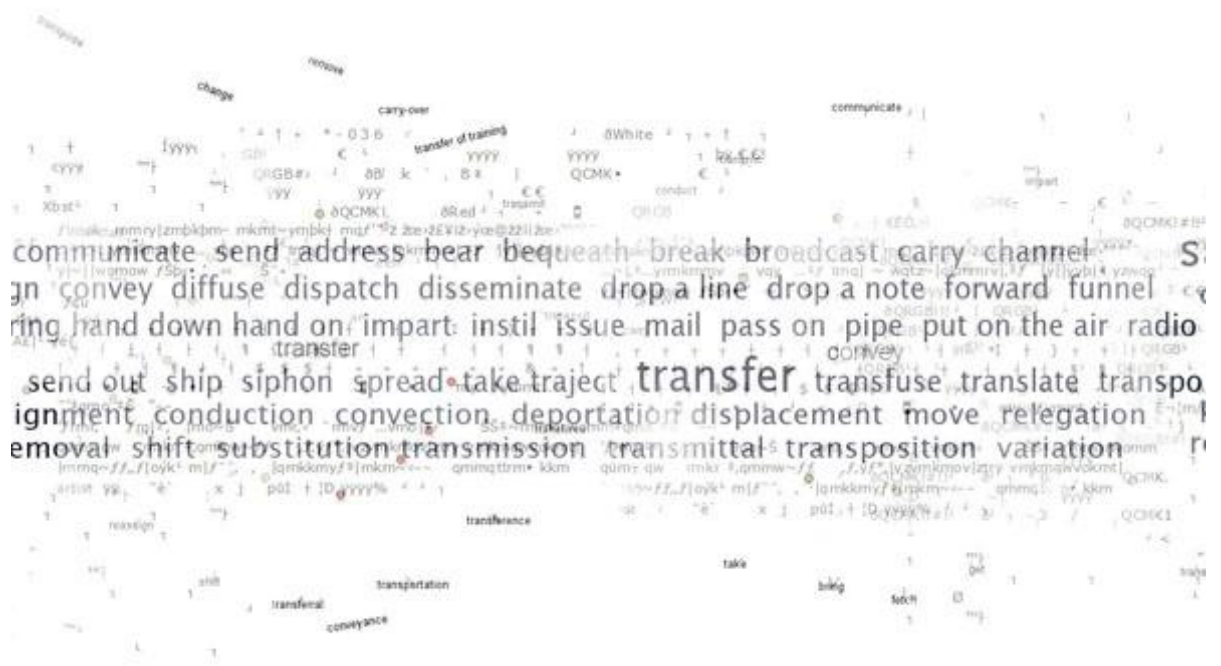


Figure 86. Susan Ryland. 'Noise' in *Words Articulated*, 2009 (detail)

Equally, artists respond to the unpredicted and unpredictable qualities of the materials or medium, the so-called 'happy accident' is where a dialogue develops between the maker and the 'being made' artwork. Jackson Pollock explained: 'When I'm painting, I'm not aware of what I'm doing. It's only after a "get acquainted" period that I see what I've been about.' And "The painting has a life of its own." This experience of the artwork having a 'life of its own' is a common one. In the context of self-organising systems and complexity, it makes sense. The artist works with an element of intension and control, but responds to events that are triggered by the materials doing something unexpected. The artist then attempts to assimilate this 'noise'. If assimilation is successful, the artwork might progress in a new and unforeseen way, however, if the 'noise' cannot be assimilated then the artwork may well be discarded or set aside for reassessment another day.

Jackson Pollock's painting seems to be an envisioning of the network, of the tipping point between order and chaos (Figure 87). What Pollock recognized was the order and structure held within the apparent tangled mass of tree branches. The tree structure can be found in our lungs, arteries, brain as well as in a vast array of organic forms. Pollock's paint marks even emphasise the moment of branching.



Figure 87. Jackson Pollock: *Number 5*, 1948, detail

There is, of course, a 'combinational play' between metaphor, metonymy, irony and so forth, but my interest is primarily with metonymy, since there is less understanding of how it functions in creative thought. I have argued that creative or novel metaphors and metonyms should be considered differently from conventional ones, indeed, brain scans have shown that creative thought uses different aspects of the brain from conventional or familiar ideas, whether literal or figurative. Our brains treat novelty in a very particular way, and it is in the area of novelty that we see the parallels with models of evolution. It is not unreasonable to suggest that creative thought operates at the tipping point, where ideas can make a creative leap to greater complexity or die away.

Summary

This chapter has described the processes undertaken to test the boundaries of partonomic and taxonomic metonymy. It began with the premise that taxonomic relations were largely explained in chapter one³, but partonomic relations required further investigation.

The two subtypes of partonomy identified in chapter one were examined through ‘material thinking’. The first was part-whole relations in which the part expands meaning into known-but-absent other part(s) or whole (this phenomenon is regarded as true metonymy by Ken-ichi Seto (1999: 116)). To test the boundary of part-whole relations I created a five metre long print: *Light:Strip* (2008) (Chapter Two leporello) digitally constructed from a scan of an actual striplight magnified 1600 times. At this magnification the image formed an abstract sequence of colour tints from the light spectrum. I found that although the final artwork did make reference to the light spectrum, the title *Light:Strip* was necessary for the viewer to interpret the work. This indicates that the ‘part’ of a whole needs to be either recognisable or alternatively, additional information should be supplied enable the viewer to gain access to the wider meaning of the work. *Light:Strip* also conformed to the dynamics of conventional category taxonomic relations because, whilst the image was abstract, it appeared to be sequential, and therefore enabled the viewer to make close comparisons between different sections, and it was this subtle shift in colour tints that was the most pleasing aspect of the work.

The second subtype of partonomy involving relations between an entity and its physical and conceptual context was tested with the sound work *Nun’s Walk* (2006). This work set out to find the threshold for new meaning to emerge from a visually engaging context: a pathway through a tunnel of trees. To do this, ambient sound recorded in the locality was played back into the central zone along the pathway to alter the ‘feel’ of the place. After some adjustments, a level was found that amplified ambient sound to a point that shifted visitors’ attention away from the appearance of the shaded pathway towards the actual and supplementary sounds. This demonstrated that only a slight, but discernable, increase in the sound content and volume was enough to move attention away from the dominant

³ Ceal Floyer’s *Helix* series (Figures 20-23) eloquently illustrate *ad hoc* category relations and the Bechers’ *Water Towers* (Figure 33) demonstrate how conventional categories can shift from quantitative to qualitative relations.

visual qualities of the location and sensitize the visitor to the sounds they created and those around them, causing them to reflect on the effects of their presence in the space and of those who had walked there before them.

To test conventional-category taxonomic relations I created sets of images including *Brushes* (Figure 59) and *Lights* (Figure 63) and a number of strip-format images such as *Labyrinth* (Figure 80) and *Composite Tree Trunks* (Figure 80). Each of these works demonstrated that co-present category relations (visual comparisons) cognitively took precedence over more abstract part-whole relations and metaphors.

To gain a better understanding of serial metonymy I considered the dynamic shift between temporal and spatial serial metonymy that occurs when the *Footsteps* (2006) video is altered from single channel to multichannel. This demonstrated that because our brains process co-present elements faster than successive elements, the multichannel *Footsteps* version foregrounds the different lighting conditions between the co-present frames through back-and-forth comparisons, whilst the successive elements of the feet walking on the ground are backgrounded. This suggests that multichannel sections introduced into a single channel film, would interrupt the narrative flow of the film by introducing a cognitive process of co-present comparison, indicating that multichannel sections are best used to expand plot rather than advance it

Additional elements emerged from the process of material thinking that were outside the original parameters of the art practice. These included the need for ‘noise’ in an artwork (whether surplus or repetitious marks in a drawing or literal noise on a sound-track) in order for the work to be visually or aurally convincing. This finding conformed to *Complexity Theory*. I also found that there is a strong drive to anthropomorphise entities even when the cognitive clues are slight, as seen in *Pulse* (Figure 66) and *Light and Breath* (Figure 65). I suggest that the primary mechanisms of creative thought exist along a continuum from concrete (in the physical world) elements at the literal end, through metonymic conventional categories, *ad hoc* groupings, entity-context relations, part-whole relations, and finally to the largely abstract elements found in metaphor.

In Chapter Three I consider work by three conceptual artists, Cornelia Parker, Susan Hiller and Ceal Floyer to extend understanding of the mechanisms and value of metonymy in art practice and analysis.



CHAPTER THREE

CASE STUDIES

The case study artists Cornelia Parker, Susan Hiller and Ceal Floyer were chosen for their intuitive or conscious understanding of metonymy, and their close fit to my own art practice in terms of gender, cultural influences and most importantly, strategies for art practice. These strategies include: 1) an often interdisciplinary enmeshing of conceptual ideas with a forensic interest in mundane objects and materials; a relishing of the power and affects of language, and an interest in notions of marginalization, peripherality and overlookedness.

At an emotional level, I also believe each of us shares an inexplicable sense of loss, an emotion that I believe that metonymic relations can navigate via ‘stands for’ part-whole relations, in which wider domains are simultaneously accessible and conspicuous by their absence, like a relic or archaeological fragment. This sense of loss is inextricably enmeshed in the striving towards the ‘unattainable’ described so poetically by Lacan as being ‘caught in the rails – eternally stretching forth towards the desire for something else.’ And so it is that, for these artists and for me, metonymic relations proposes a dialogue with notions of difference, deferral and loss.

CORNELIA PARKER

My affinity with Cornelia Parker is a cultural one. I am a similar age, and I am also familiar with, and sympathetic to, the conceptual art ethos of the MFA course at Reading University, where Parker studied. Possibly most significantly, I had a Catholic education. Catholicism, certainly for a child growing up in the 1960s, had a profound and insidious effect on the psyche. We were supposed to have an unquestioning faith in God and therefore a belief in the fantastical; on one hand we were exhorted not to sin while on the other hand we felt an irresistible obligation to have sinned in order to have something to confess, since – in a wonderfully self-fulfilling instruction – it was a sin not to confess our sins. As a non-believer, I maintained a daily vigil against indoctrination. This mindset provokes an impulse to challenge; to take an opposite view; to rail against institutions and

authority. I felt instinctively that blind obedience was a denial of the intellect. Yet, despite our protestations, we were held in the thrall of Catholicism: mesmerised by its ritual, the mournfulness of plainsong, and the theatrics of incense and candles.

I believe that in Cornelia Parker I recognise the desire to challenge, albeit somewhat politely, the rules, institutions and conventions that a Catholic education may induce. Certainly, she deals with ‘acts of God’ such as lightning striking a chapel (*Mass: Colder Darker Matter*, 1997) and the Catholic notion of transubstantiation by turning bullets into nets (*Bullet Drawing*, 2008). Parker’s working process is a performative act of defiance: she defies the law of gravity in her large-scale suspended works such as *Breathless* (2001); crushes valuable silver artefacts, once heirlooms and wedding gifts, in *Thirty Pieces of Silver* (1988–89); cajoles the British Army into blowing up an innocent garden shed for *Cold Dark Matter: An Exploded View* (1991); convinces NASA to send a meteor into space, disregarding the huge sums of money spent trying to stop meteors entering our airspace. In 2008 she persuaded Peruvian officials to supply her with a large quantity of cocaine (*Exhaled Cocaine*, 2008), which at the close of her exhibition she donated to the Museo De Arte de Lima. This is insidious activism.

During the question and answer section of Cornelia Parker’s *Talking Art* session at Tate Britain in 2008, an American member of the audience told Parker: ‘There is something about you that embodies the best of British’, and suggested that in her work ‘there’s an absence of anger, even though you are quite concerned.’ Parker laughed, but replied firmly: ‘I’m half-German! And I’m *very* angry! And I’m actually very concerned! I am always trying to still my raging soul!’ (Parker, 2008).

There, in a half-joking outburst, Parker captures the psychological drivers that lead to her frozen explosive moments; a ritualistic act ‘to still my raging soul’. Parker likens her works to inhalations and exhalations, which sounds rhythmical and fluid, but perhaps the actual process is more jarring and polemic: outbursts and explosions countered by withdrawing and introversion. Parker claims that her suspended works give her a kind of motion sickness and feeling of disorientation, so it may be that the small works furnish a grounding and reorientation. It may be more than a display convention that her small works are usually framed or encased in glass.

Where the flow can be found in Cornelia Parker's work, however, is in the meaning shifts that occur along a continuum. This begins with the initial conceptualization of the artwork, through the performative wrangling with institutions and authorities in its realization; the process of installation; photographic documentation, interviews and supporting publications; the removal of the artwork from the site, and finally the legacy, the residual mythology that stays with the site long after the artwork has gone. In this process the movement of meaning is unpredictable, so the initial idea for the work is far removed from the meanings drawn from the work at a later stage.

It is not unreasonable to speculate on the psychological impulses that drive the process of making art. Parker observed that when she became 'computerate' she thought she would make a list of all the ideas she had jotted down in sketchbooks over many years, only to find that there was only one idea endlessly recurring, popping up in various guises, as if it were a fresh thought. This is a disconcerting but not uncommon experience for artists.

Though, as Parker claims, there may be only one impulse driving her work, it manifests itself in many ways. Most frequent is the use of multimodality (Ryland, 2009), in which the meaning held within a material interacts with titles and subtitles assigned to the work; one is unable to release meaning without the other. To challenge the viewer's expectations, Parker employs what Lisa Tickner (Tickner, 2004: 59) calls an 'absurd literalisation'.

Parker's work is imbued with metonyms. From her work and her comments, it is possible to surmise that she uses metonymic thinking processes to carefully craft metaphoric and metonymic relations. Parker explains: 'I like the use of physical objects in place of metaphorical representations.' (Tickner, 2004: 47)

A physical object that is not a metaphorical representation allows the viewer to respond to the materials for what they are, rather than what they might symbolise. Perceptual information, gathered through metonymic relations, holds the viewer in the conceptual domain of the material, retaining focus on the physicality of the artwork rather than mentally moving to another (metaphorical) place. Paul Carter's notion of 'material thinking', which recognises 'the creative capacity of the materials to rejoin themselves in different ways' is at the heart of Parker's work (Carter, 2004: 187). Parker works with 'part of' relations, in which the material 'stands for' the object or entity. This is not only a conceptual process, but also a physical taking apart or disassembly of an entity or group of entities, via processes as various as burning, crushing, exploding, cutting and rubbing,

followed by reassembly through a gathering and grouping of debris. The debris is reconstructed to evoke the 'break down', revealing meaning via the materials that relate to the original object or category of objects and their inherent qualities, such as malleability, brittleness, flammability or propensity to corrode or tarnish.

Investigation of where meaning could emerge, and of what form the cognitive processes could take, makes it possible to glimpse points of intersection or oscillation between literal and figurative thought. This is demonstrated by a number of works in which Parker has explored the theme of 'negatives': *The Negative of Whispers, 1997* (ear plugs made with fluff gathered in the Whispering Gallery, St Paul's Cathedral, London); *Negatives of Sound, 1996* (black lacquer residue from the cutting of original grooves of records), and *The Negative of Words, 1996* (silver residue accumulated from engraving words). These pieces focus on the traces left from the processes of meaning production. In their simplest incarnations, the material is presented as a pile of residue, carefully set out on a plinth under glass; the hand of the artist seems almost entirely absent. These small-scale works provide minimal sensory stimulus; the artwork acts primarily as a visual and linguistic prompt to explore a far larger mental space, through metonymic chains of association.

Parker explains: 'I wanted something that looked as though it took a split second to put down, which was the opposite of how laboriously they'd been made, as the negatives of something considered...' (Tickner, 2004: 49). These works, however, actually require a 'strenuous dispersal of mental energy' (Tickner, 2004: 68). Parker describes the way she thinks through her work:

And I think...this fluid, atmospheric sense of the relations and exchanges between things, is a model of the way I think. (Tickner, 2004: 51)

Parker describes this fluid approach: 'Nothing was solid, nothing was fixed, everything had the potential to change...' Metonymy has the characteristic of forming chains of association; it is a thinking process, rather than a means of reaching a conclusion. Parker says: 'process is what excites me' and 'words are just another material – like found objects.' (Tickner, 2004: 63)

The metaphor of 'fluidity' as a concept to describe the nature of metonymy is explored by Luce Irigaray in her essay, *The 'Mechanics' of Fluids* (Irigaray, 1985: 106–118). In her book *Ethical Joyce*, literary critic Marian Eide (2002: 93) observes that Irigaray:

[N]otes that metonymy and fluid mechanics are both characterized by the “dynamics of the near” and by the connections or friction between entities that are proximate to each other. (Eide, 2002: 93)

The dynamics of the near, of one association enabling access to another contiguous association, spreading out in a network of connected ideas, encapsulates serial metonymic thinking processes.

The ‘connections or friction between entities’ evokes the palpable energy that seems to be present in Parker’s large-scale works (see Figures 88 and 89, below) such as *Heart of Darkness* (2004), which is subtitled *Charcoal from a Florida Wildfire (prescribed forest burn that got out of control)*.



Figure 88. Cornelia Parker, *Heart of Darkness* (2004). Installation view, Ikon Gallery 2007. © the artist. Courtesy of the Ikon Gallery

From a distance the piece appears to be still, but close up, the fragments twist on their wires, rotating first one way and then the other, with the eddies and flow of air in the room. It is almost as if the fragments are going through a process of magnetically repelling and attracting each other, generating a sense of energy that is barely contained.



Figure 89. *Heart of Darkness* (2004)
Charcoal from a Florida Wildfire
(prescribed forest burn that got out of
control) detail. Photograph: Susan
Ryland, with permission of Ikon Gallery

German cognitive linguist Andreas Blank suggests a distinction between two types of contiguity (nearness). Blank focuses on two somewhat abstract conceptual frameworks that derive directly from the two fundamental ways of conceptualizing real-life situations: static frames and dynamic scenarios. Static frames are ‘spatially and/or temporally “co-present”’; they rely on the synchronism of their elements’, while dynamic scenarios function in a ‘causal, instrumental, final or consecutive relation, that is to say they are “successive in time”’. This definition can be used as a framework to classify metonymies or at least to ‘classify types of contiguity, according to the temporal status and the perspectivization of their conceptual relation’. (Blank, 1999: 178–79)

Blank suggests that ‘co-presence’ and ‘succession’ are two very general issues that can be closely aligned with two fundamental models of human conceptualisation:

the ‘synchronic’ model, in which all aspects of a given situation or a ‘system’ are equally present and where time is excluded;

the ‘diachronic’ model, where the processual, consecutive character of things and events is highlighted.

Blank notes that '[t]hese two 'domains of contiguity' each contain a considerable number of more specific types of contiguity.' Co-presence and successive relations are not distinct and separate; they exist on a continuum where there will inevitably be instances of overlap.

Artworks such as *Heart of Darkness* have 'successive relations', since Parker captures one moment in a chain of events. As Blank explains:

Successive relations exist between a STATE and its PREVIOUS and CONSECUTIVE STATE, between an ACTIVITY or a PROCESS and its PURPOSE or AIM, its CAUSE or PRECONDITIONS, or its PRODUCTS or RESULTS. Other successive relations exist between PERIODS, different PLACES and, last but not least, related FRAMES. (Blank, 1999:181)

Related frames can also be considered as the less inclusive and more inclusive elements in a category. This shift from less-inclusive to more-inclusive categories moves the contiguity relations from co-presence (less-inclusive category) to successive relations (more-inclusive category relations). In Parker's artworks, both successive and co-presence relations exist, depending on whether one considers the wider meaning of work (successive relations), or scrutinises the material relationships (co-presence). Blank argues that, to his knowledge, all conceptual contiguities conform to one or other of these superordinate domains.

Work such as *The Negative of Whispers* (Figure 90), which carries the subtitle '*Ear plugs made with fluff gathered in the Whispering Gallery, St Paul's Cathedral, London*' is an example of 'successive' relations. The 'fluff' was caused by centuries of people coming together at a site of religious and political importance; the act of making earplugs from it is an attempt to silence the whispers. The artwork describes a sequence of events, of which one part is seen. The earplugs 'stand for', in a part-for-whole relation, the conceptual domain of the Cathedral and the past, present and future relationship between religion and state. The choice of the word 'fluff' rather than 'dust' or 'debris' generates metonymic associations via perceptions of fluff as a 'soft' material capable of muffling sound, of trivia, and of 'softly-spoken words'. Metaphoric associations from softly-spoken words and fluff as trivia follow on from the initial metonymic associations, providing an example of metaphor from metonymy (Goossens, 2003: 367). It could be said that the work primarily speaks for itself, and of itself.



Figure 90. Cornelia Parker, *The Negative of Whispers* (1997) (Ear plugs made with fluff gathered in the Whispering Gallery, St Paul's Cathedral, London) © the artist. Courtesy of Frith Street Gallery

Another artwork in the 'Negative' series, *The Negative of Words* (1998) carries the subtitle *silver residue accumulated from engraving words*. The meaning in the work resides primarily in metonymic relations. Viewed in the exhibition space, the physical artefact appears to be a small pile of silvery metal swarf, brittle, curled, fragile and presented as a museum 'relic', set on a plinth under glass (Figure 91).



Figure 91. Cornelia Parker. *The Negative of Words* (1996). © the artist. Courtesy of Frith Street Gallery

The title of the work provides access to metaphorical elements through *the negative*, that is, something that is in opposition or lacking. It is also a negative in the photographic sense, in that it is a reversed aspect of a process. The title also indicates that it is of *words*; that it is a material manifestation of units of language.

The parenthetical line offers a literal explanation. The material is *silver*, maybe a trophy with both material and symbolic value. It is a *residue*, or the discarded remains of a process (silver residue is also a part of the traditional photographic process). The silver residue has *accumulated* through time and may have a history or heritage, and is the residue *From* engraving words – a skilled process, requiring cutting, precision, force and control.

In the space between the artefact, the title and the parenthetical line, it is possible to tease out the interplay between metaphor and metonymy (see Figure 90). If the route of the metaphors is followed, the notion of ‘cutting words’ can be considered, on the one hand – comments made with the intention of inflicting emotional pain, which can be seen to be ‘negative’; equally they may be ‘incisive words’, words with penetrating insight. The notion of the ‘body of text’ should also be considered; the material nature of the text, which challenges the idea of knowledge as transcending the body and having power over the flesh. In Cornelia Parker’s *The Negative of Words*, the material residue is part of the body from which the words are created, (Ryland, 2007).

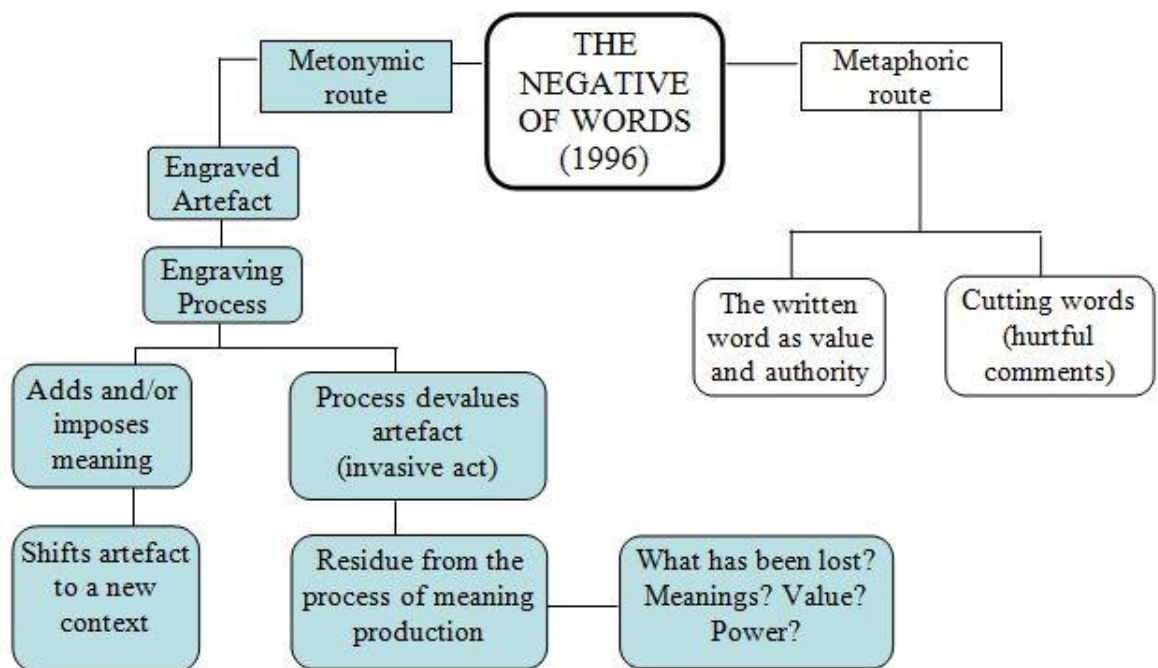


Figure 92. Cornelia Parker, *Negative of Words* (1996) Metonymic and metaphoric route

In her essay *In Mind and Body: Feminist Criticism Beyond the Theory/Practice Divide*, Marsha Meskimmon explains the historical/biblical word-flesh divide:

It is important to recognise that the pairing of the 'word' and the 'flesh' is not merely coincidental. That opposition places flesh, body, woman and all forms of sensual knowledge ('aesthetics' in the widest sense) as subordinate to mind, man and forms of knowledge linked to rationality and, significantly, text. Traditionally, these binary structures gave rise to particular hierarchies in aesthetics. Within textual modes, philosophy and history, as 'objective', rational knowledges, were taken to be more pure and of greater status than drama and poetry with their appeal to 'subjective' emotion. Additionally, these arguments have been used to place word and text over the more physical, sensual languages of the visual arts, still mistrusted as 'lower' forms of cultural expression. Text, and the knowledges appropriate to it, is understood as a privileged signifier over image, or the arts which use base matter or the body to construct meanings. (Meskimmon, 1998)

Cornelia Parker is privileging the sensual, material quality of words, and a denial of the objective authority of words. Along the metonymic path, it can be considered that the engraving process is a literal imposition of new meaning onto the artefact and a removal of the artefact from its original context, for example, as a decorative object, to another context such as a commemorative piece. The act of engraving words reinforces the notion that meaning conveyed through words has greater value, and is therefore superior to meaning conveyed through other vehicles such as the decorative or visual arts or music. In auction houses, engraved words on an artefact may enhance or reduce value; a beautifully-crafted pocket watch can be devalued by the engraved initials of an employee it was awarded to on retirement, or increased if its original owner was historically significant.

The engraving of words thus transfers the site of meaning production from the object to the words placed upon the object. New meaning is imposed on the object and takes precedence over the object's inherent meaning. This raises the question of what has been lost in the production or application of words.

The interaction between metonymy and metaphor occurs at the meeting of cutting as an act of engraving and cutting as a verbal attack, raising the question of what is the matter with/of language. The swarf may represent what is unsaid or what is conveyed through

other senses; it is a semi-precious metal, suggesting that the residue of the words, though discarded, still holds value. But there is no way to confirm this suggestion, only questions about social relations, the relationship between practice and theory and the privileging of the written word.

It is therefore conceivable that such a 'quiet' work might stimulate debate on the subject of corporeal theory. In her essay *In Mind and Body*, Meskimmon calls for 'multi-sensorial languages of visibility, whereby the 'visual, tactile or bodily modes of knowing are not subordinated to seemingly disembodied, abstract mental processes,' and 'the multiple aesthetic knowledges coexist and interpellate the embodied subject.' (Meskimmon, 1998)

Clive Cazeaux (2007: 78) discusses phenomenological philosopher Maurice Merleau-Ponty's view that language occurs as a 'modulation' of our embodied immersion in the world, in which thought is at its most creative when 'already available meanings', serve an intention which 'outstrips' and 'modifies' them.' Merleau-Ponty redefines the body in such a way that it ceases to be a thing and instead becomes a 'world-creating network of conceptual cross-referral'. His 'world-creating network of conceptual cross-referral' comes to mind when Cornelia Parker describes her relationship with her work: 'I am always trying to maintain a certain openness to interpretation. I want the work to tell me things, to surprise me, so that the work is a kind of waste product from a process, an inquiry you started when you didn't know the answers at all.' (Tickner, 2004: 52)

Cazeaux describes the world-disclosing nature of sensory interaction as resembling 'a crease in a piece of paper lifting the paper from out of being a two-dimensional surface into being a three-dimensional form, with one facet (mind) that can now look upon another (reality).' (Cazeaux, 2007: 95). This analogy brings to mind Carter's 'material thinking' and Derrida's 'deconstructive hinge'. Metonymy relates closely to sensory perception (body) and metaphor with conceptual space (mind). It is their interaction that provides the richness of understanding. Privileging one over the other offers a view that is incomplete, or even misleading.

Art theorist James Werner refers to Merleau-Ponty's view of a partnership between mind and body:

The evidence of the perceived thing lies in its concreteness and our physical relationship to it. In this experience we experience a truth real to our senses, not just our minds. But we are always limited to the constructs of human perception, our empirical phenomenological relationship to things. (Werner, 2006: 80)

Werner then presents Jean François Lyotard's view of an 'unexplained, unrepresentable essence that escapes explanation through our lack of adequate presentation', but argues:

an aesthetic coherence exists within artworks that transcends the values of verbal explanation. Art provides a gap filler, so to speak, between reason and the unrepresentable allowing us to approach the essence of a logos that constantly attempts to evade presentation and complete explanation. (Werner, 2006: 80)

Cornelia Parker's work looks specifically at the gaps, margins, and the swarf of existence. The material element of the artwork is provided as 'evidence' in the forensic sense, in order to ground people in 'truth content' that can be navigated through metonymic associations via stimulation of the senses, without the need for, or before making the conceptual leap necessary to explore metaphoric, and therefore non-evidence-based associations. Parker recognises that the processes of deconstruction and reconstruction are an interaction between mind and material. As Cazeaux states:

the mind has some knowledge of, and possibly stipulates, the materials it needs within a range of appropriate materials, but nevertheless has to know and understand the material, and respond to the possibilities which are available and the breakages which may occur. (Cazeaux, 2007: 161)

Philosopher Samuel Fleischacker (1996) also argued that '[w]e must stretch the margins of literal meaning when we reach the margins of human knowledge', and that poetry and by extension art:

thrives precisely at these margins. It explicitly concentrates on, and derives its power from, the difficult circumstances that we need to live beyond our intellectual means, the fact that we must always project our commitments beyond what, strictly, we know. It plays with, delights in, the uncertainty that we consider frustrating in literal utterance. When reading poetry [or art], we are prepared immediately to delight in the difficulties of interpretation that in science and everyday discourse we would rather avoid. (Fleischacker, 1996: 113–114)

Cornelia Parker uses ‘material evidence’, a ‘truth real to our senses’, to direct people towards the outer limits of their understanding. *The Negative of Words* is material evidence of what has been removed, and is absent, lost or unknown. It is a manifestation of the unexplainable; that which ‘cannot be put into words’.

Lacan expanded on Freud’s ideas from a psychological perspective, suggesting that, in psychology displacement, avoidance and delusion provided the means of transference of physical intensities along an ‘associative or metonymic path’, so that strongly-cathected ideas have their charge displaced on to those that are less strongly cathected. Parker is familiar with Freud, because she has undertaken forensic-style examinations of his leather chair and couch. In Parker’s *Never Endings* exhibition catalogue, Sadie Plant writes:

Parker’s attention to what Freud sat on, rather than what he stood for, wrote down, or spoke about...is an endorsement of the importance of material culture as a kind of foundation, a cultural unconscious, the matters underlying our aesthetics and ideas. (Plant, 2007: 14).

In her ‘ability to miss the point, escape the thing, and attend to the connections and the in-betweens’ (Plant, 2007: 12) Parker shows typical metonymic inclinations: highlighting peripheral or marginalized elements within a domain or related domains, finding close associations between materials, language and context, and suggesting the enormity of events through their fragmented remains; thus bringing together ‘feelings’ in both the emotional and physical sense.

This attentional shift to marginalized elements raises the question of ‘salience’. In metaphoric associations, source and target are identified by their salience within a context, but what is considered salient will vary from one person to another, according to their knowledge of the world. With metonymic associations, however, there is a tendency to move away in a radial fashion, from the central most prototypical relations towards the margins, and peripheral or least prototypical relations (Lakoff, 1987: 65). This forces a shift in thinking; a review of what is salient and why one element is given preference or dominance over another. For this reason, feminists should regard metonymy as a valuable tool for analyses across many disciplines.

Plant describes Parker's particular relationship with objects thus:

Objects do not live, but they are lively, and far more influential on our thinking than has been traditionally supposed. If things can be invested with histories of their own, so too can they affect the world of narratives, ideas, the theories and the workings of the minds that have so often been prioritised over the messiness of matter itself.
(Plant, 2007: 14)

Cornelia Parker uses part-whole metonymic thinking processes as a strategy to examine process and materiality and consider experiential and embodied thought. By undertaking a process of deconstruction and resurrection, Parker initiates a shift of focus from a central, conventional view, to the traces left from the processes of meaning production, found along the margins of the conceptual domain. In this way Parker subverts Relevance Theory, and forces a re-viewing of the dominant culturally held viewpoint, thereby presenting another view for consideration. Parker's modus operandi is the use of part-whole metonymic relations, in which the artwork is constructed from the partial remains of a destructive event in which the absent-but-known 'whole' event is alluded to through a dialogue between the artwork and its title.

Susan Hiller

Susan Hiller's art practice spans more than forty years. Hiller has been described as a feminist, a conceptualist and a para-conceptualist, but, above all, she is a collector. She trained in anthropology, but became disenchanted by what she saw as the cultural violence inherent in the anthropologist's processes of collection, classification, archiving and translation. Hiller's work presents 'rhetorical questions' in which the viewer/listener/participant must fill in the gaps with their personal, cultural narrative. Inevitably this brings ambiguity and unease to the work, as one is unable to ascertain Hiller's position. On one hand she presents her work in a seemingly neutral, cool and scientific manner, but on the other her methods of presentation using repetition, accumulation and emersion work as an amplification, a persuasive insistence, or as Hiller describes it, an 'intensification of subjective experience' (Brett et al., 1996: 17). Though Hiller shares Cornelia Parker's interest in the spiritual, she is drawn to the paranormal, the ghosts of the past, voices from beyond, and aliens from other worlds rather than the trappings of religious spirituality. She is also an activist, interested in drawing attention to the marginal, different, and the culturally invisible.

Freud plays a significant part in Hiller's work. Inspired by Freud's artefacts, she assembled her own personal museum-style collection *At the Freud Museum* which was later titled *From the Freud Museum* (1992/6). This consisted of fifty boxes, each individually titled and labelled, and displayed in a large vitrine. During a talk at the 1986 conference *Making Exhibitions of Ourselves: the Limits of Objectivity in Representation* organised by London's Museum of Mankind Hiller explained:

In my work I have the tendency to return again and again to certain themes and motifs... The basic facts are that 'we' have in 'our' possession a multitude of important objects, whose display by us commemorates our subjugation of the makers and our destruction of their history, and perpetuates our attempt to obliterate their indigenous realities. It would be educational, to say the least, if ethnographic exhibitions would begin to make us aware of the interaction between the objects displayed and our own history. Without allowing ourselves the luxury of false empathy, we could then begin to follow our thought to the place where it collapses upon itself, the site of representation, and source of ourselves as subjects in a culture dedicated to mastery of a mirage, symbolised by the projection of 'the other' onto real other peoples. (Hiller and Einzig, 1996: 36)

Hiller uses Freud's own collection of antiquities and the history of psychoanalysis to create a personalized act of re-collecting, incorporating elusive traces of memory, allusions to her earlier works and personal associations in a free flow of implicit narratives. These remain open-ended, enabling viewers to add their own particular raft of meanings. Her serious but unsettling technique of juxtaposing knowledge derived from anthropology, psychoanalysis and other scientific disciplines with mundane ephemera is central to her practice. In *From the Freud Museum*, Hiller uses the device of a scientific, museological display format in a very particular way. She presents the illusion of objectivity, which she considers 'a fantasy our culture is heavily invested in' (Hiller and Einzig, 1996: 210), and offers the mundane as special. She presents things which are around us but which we often overlook because they do not rate highly enough in the value system of our culture. In *From the Freud Museum* she does not materially alter the objects but creatively and skilfully contextualizes them. As Alicia Foster explains in her book *Tate Women Artists* (2004):

The common denominator in all Susan Hiller's works is their starting point in a cultural artefact from our own society. Her work is an excavation of the overlooked, ignored, or rejected aspects of our shared cultural production, and her varied projects collectively have been described as "investigations into the 'unconscious' of our culture." (Foster, 2004: 211)

From the Freud Museum (1991–1997) consciously sets out metaphoric and metonymic relations (Figure 93). She explains that each of the boxes 'present the viewer with a word (each is titled), a thing or object, and an image or text or chart, a representation. And the

three aspects hang together (or not) in some kind of very close relationship which might be metaphoric or metonymic or whatever.’ Hiller describes the contents as ‘rubbish, discards, fragments and reproductions which seemed to carry an aura of memory and to hint at meaning something.’ (Brett et al., 1996: 11)



Figure 93. Susan Hiller. *From the Freud Museum 1991-1997*. 50 mixed media boxes in vitrine 30 x 8.5 ft. © the artist, Courtesy of Tate Galleries

So, for example, box .019 entitled SOPHIA/wisdom (Figure 94, below), contains four samples of water in identical small bottles, each with black thread bearing a label round the neck. The samples are labelled to indicate the origin of the water: a holy well in County Down, Ireland; the sanctuary spring at Dodona, Greece; a sacred stream at the Temple of Artemis, Turkey and the Castalian Spring at Delphi. In the box lid is a printed sheet of paper with four columns of words, each with a tick-box to the left. The list is a repeating cycle of words: Seer, Shaman, Prophet, Sibyl, Saint, Priestess, Sage, Initiate, Acolyte, Oracle, Witness, Magus, Saddhu, Goddess, Sanyasin, Houngan, Pilgrim, Disciple, Hierophant... This chant-like list is an example of ‘kind of’ metonymic relations and constitutes a taxonomy of the spiritual. Each bottle of water metonymically captures the spiritual power: the essence of the place. The sacred water, set with the list of mystics, combines with the title SOPHIA/wisdom to ‘stand for’ feminine wisdom; the box pays homage to women of wisdom. The bottles stand metonymically for the sacred waters, and metaphorically for all women of vision and wisdom.



Figure 94. Susan Hiller. *From the Freud Museum* (1992–), detail, SOPHIA/wisdom

In addition to the relationships between the three elements of each box, there is also a dialogue between adjacent boxes and others within the display (a format that lent itself admirably to a limited edition book *After the Freud Museum*, published by Book Works in 1995 and 2000). There is a sense that a self-portrait emerges from these wider relations, that each box is a facet of the person. So, for example, we build relationships between the following:

Vitrine 1: .001 – NAMA-MA/mother; .003 – PANACEA/cure; .005 – VIRGULA
DIVINA/water-witching; .018 – PLIGHT/plite; 019 – SOPHIA/wisdom; .020
HEIMLICH/homely...

Then there is consideration of the wider context in which these boxes are presented. The piece was commissioned for the Freud Museum. Susan Hiller explains:

At first I saw that if I were going to compare my assortment of things with Freud's there were some easy differences that one could name. For example Freud had beautiful, classic objects which although not immensely expensive at the time he bought them, were still rare and valuable enough. Everything in my collection is either something that's thrown away or is rubbish, of no value. The only value these things have is that I have assigned some kind of value to them. So immediately I could say that Freud is an early modernist with antiquarian taste and my collection is obviously very postmodern – fragments and ruins and discards, appropriations, etc...(Hiller and Einzig, 1996: 228)

This process offered an opportunity, through conventional and *ad hoc* groupings and part-whole relations, to identify differences and similarities between Hiller's own collection and that of Freud's. Hiller observed:

The more I thought about it the more I needed to think through the idea of collecting. A deeper, more distanced view reveals that the objects I have collected are constant evocations of mortality and death, which of course could also be said of the objects in Freud's collection and perhaps in all collections. So there is a kind of circularity that I have discovered in my entire project. (Hiller and Einzig, 1996: 228)

The theme of death or mortality that Hiller identifies in her work is largely symbolic rather than literal. Her work considers 'cultural invisibility' (Hiller and Einzig, 1996: 242), evoking a sense of absence or loss of parts of one's 'Self'; the assembling of the artworks becomes the act of retrieval of lost, hidden, or repressed parts of the Self; a process of drawing together parts to make some kind of whole. This Self may be, to some extent, the artist herself, but also embraces womankind and the 'collective consciousness' of humankind; Hiller also knows that 'to put the new into old language is to destroy its ability to intervene and change the system of ideas we live under.' (Hiller and Einzig, 1996: 53)

Hiller uses overlookedness as the device to bring to the fore aspects of a domain of knowledge that has been lost by or hidden from us by the culturally driven filtering effect of a community. Her work examines our past to tell us about the present, and the possibilities of our future.

For Hiller, Minimalism offers 'a non-hierarchical orderly way of arranging things' (Hiller, 1984: 28) that has 'the look of the rational' to generate 'an intensification of subjective experience' (Brett et al., 1996: 17). For the display of her photographic and collage works, Susan Hiller has taken the minimalist grid format. Hiller refers to this format as 'opening a closed book' (Brett et al., 1996: 16); each image is a page in that opened book. Hiller

presents materials to be read as if they were words, and uses words like objects, ‘material fragments from which whole sentences – whole lives – may be conjured’ (Brett et al., 1996: 10). These word-objects can be interpreted, but not read, and invites viewers to be ‘active participants – collaborators, interpreters, or detectives’ (Brett et al., 1996: 11). Although Hiller is fascinated by language, she insists that she has a primarily materials-based practice which ‘comes out of Minimalism: putting together many similar units with tiny differences’ (Hiller and Einzig, 1996: 245). This ‘putting together of similar units with tiny differences’ suggests a visual equivalent to linguistic serial metonymy, where one word leads to another, for example, ‘paper’ whose metonymic relations may include: the material constituents of paper, types of paper products or contents of paper products. (Nerlich and Clarke, 2001: 245)

Susan Hiller investigates overlooked everyday phenomena: UFO sightings (*Witness*, 2000), near-death experiences (*Clinic*, 2004), and dreams (*Dream Mapping*, 1974) and cultural anomalies such as the pleasure experienced while watching enactments of violence, such as horror movies (*Wild Talents*, 1997) and Punch and Judy shows (*An Entertainment* 1990). She employs sound, video, text and photography, often creating large-scale, immersive installations.

Hiller often begins with an artefact, such as the archive of dead or dying languages held in the British Library. In *The Last Silent Movie* (2007), which comprises a 22-minute video and a series of 24 related etchings of sections of the soundtrack, Hiller presents a sequence of 25 voices accompanied by a screen showing only subtitles translating the words spoken on the soundtrack. These words are spoken by people who are now dead; their language remains only in the anthropological archive recording. The translated words, however, tell us little or nothing of the lost culture to which this recorded language belonged: ‘I can speak my language’; ‘I am a fluent speaker’; ‘Do you speak your language?’ The story lies in the gap between the meaning of the words and their sound. The poetic rhythms and tones convey a sadness and accusation, as in: ‘Children of the Sun! No one subdues us if we keep our golden language’ uttered in Southern Sami, a virtually extinct language.

Within this work we can recall Derrida's notion of *différance*, the word he used to denote the gap between what is read or written but 'cannot be heard'. The *Last Silent Movie* is offered as 'a silent mark...a tacit monument' (Derrida, 2008: 280), in which the cultural violence that resulted in the loss of a language can never really be known. We hear the words spoken, but the speaker is not heard; their story is 'discreet, like a tomb' (Derrida, 2008: 280).

Hiller's act of resurrection can be only partial, as meaning is lost in the act of soliciting a recording for archiving and further lost in translation. Even the nuances of the speech in some cases indicate that the words were empty, spoken self-consciously as a performance for an anthropologist. Not even these last recordings can be considered 'authentic'.

Hiller's work starts with the cultural artefact, in this case the archived sound recordings of extinct or endangered languages. The act of etching the sound wave of the spoken words attempts to engrave it in the minds of listeners, to leave a physical trace, but in the sound wave the meaning in the words is silenced. The subtitles below the sound wave are a translation of the spoken words, and act as a visualization of the gap, the loss, the increasing distance between the extinction of a language and ourselves, in our place in time, rendered helpless, in which the language has been frozen, fixed or etched but cannot be recalled, retrieved, or saved. This heightens the tragic irreparable loss captured at the moment of recording (Figure 95, below). The ghosts of these annihilations are presented to us to haunt us, through an endless repetition, a futile cycle, just as progress is an illusion of novelty:

The silence in The Last Silent Movie is one that makes audible the mortality and vulnerability of language by resurrecting voices from the dead. (Firth, 2009)

In a recent interview, Hiller remarked:

Our lives are haunted by ghosts, I mean our own personal ghosts and collective social ghosts and those are the kinds of cultural materials that interest me to start with, those are my starting points. (Hiller, 2008b)



Figure 95. Susan Hiller. Etchings from *The Last Silent Movie*. Subtitles (top to bottom): Plate 12. Lenape: 'Do you speak Lenape?' Plate 13. Southern Sami: 'Children of the Sun! No one subdues us if we keep our golden language.' Plate 24. Comanche: 'From now on we will speak Comanche forever'. Courtesy of the artist and Matt's Gallery, London

This film is a collection, and like much of her work raises questions about the whole notion of the archive. The recordings have been resurrected from archives and defy archival classification through Hiller's own ordering. *The Last Silent Movie* begins with, we are told, the last speaker of K'ora from South Africa. He is welcoming an overseas delegation of linguists, entreating the 'sons of the sea' to listen to his 'beautiful language'. At another point in the film, a woman sings a lullaby in Kulkhassi, an extinct language that cannot be translated and therefore has no subtitles (Firth, 2009). The film refers to the era of silent movies and the British Empire. In his essay accompanying Hiller's exhibition at Matt's Gallery, London (2008), critic Mark Godfrey (2008: 6–8) suggests:

that the extinction of the languages we hear in The Last Silent Movie is the extinction of other realities, other ways of living and understanding the world. Each extinction marks the termination of a site from which to critically view the world as constructed by English.

The voices offer tentative traces of a lost culture, whose rhythmic chants taunt us and remind us of our colonising history.

Hiller is not speaking for them and has taken these voices out of the archives in order for them to be heard, but it is as much about our listening to and hearing the voices as their speaking. The speakers are not on an equal footing to us. Their words come to us mediated through the translated English subtitles. We are witness to the violence of the process of collection, classification, archiving and translation and in this sense the anthropological method itself is implicated. (Firth, 2009)

The sense of loss is discerned in the gaps between the screen – blank save for the subtitle translations – and the voices heard as one attempts to gather meaning from the different rhythms and intonations. There is a paradox within the originating material. Though the earliest recording, made on wax cylinders in the 1930s, was intended to preserve the language, it was silenced again because no-one listened to the archive recordings. The question remains: 'Why have the people gone?'

Some of the recordings are stories, some songs and some simply vocabulary lists collected for their ethnographic interest. Hiller highlights gaps formed by metonymic relations, gaps that convey cultural silencing. She refers to the many examples of languages that were only spoken by small groups of people, and have now vanished. Some of these lost languages were spoken in places that are uncomfortably close to Britain, such as Manx from the Isle of Man, Welsh Romany and Jerrais from Jersey.

The linguist Benjamin Whorf (1897–1941) believed that language captures a world; that the death of a language is the death of a world-view. While working as an insurance investigator, Whorf observed that a fire had been caused by a spent match thrown into an empty gasoline can; though empty of fuel, the can contained fumes so the match was not totally extinguished. This analogy illuminated the world-view that is conveyed by different languages; Whorf maintained that each language brought with it a distinct view of reality. His observations led to the Sapir-Whorf hypothesis, which proposes that languages encode cultural and cognitive categories in different ways, affecting how their speakers think and causing them to think and behave differently. As an example, the Native American Hopi believe that a new sun rises every day, so there is a different word for each sunrise. The Navaho categorize colours by intensity, not by hue. The world constructed through the English language is simply one view.

Hiller describes her tape-slide work *Magic Lantern* (1987) as one of the ‘clearest, strictest, most direct statements’ that she has made (Hiller and Einzig, 1996: 248). The name *Magic Lantern* (Figure 96, below) pays homage to the Victorian ancestor of the slide-projector (Brett et al., 1996: 27). Its soundtrack takes as its starting point the ‘voices of the dead’ experiments undertaken between 1965–74 by Latvian scientist Konstantin Raudive, who recorded the ‘silence’ in empty rooms and claimed that he had evidence of so-called ‘ghost voices’. On the soundtrack Raudive’s ‘ghost voices’ alternate with a recording of Hiller singing or chanting, evoking some kind of personal ritualistic language. Electronic pulses recorded on the soundtrack trigger the visual presentation, what Hiller terms the ‘visual distraction’, an apparently simple display of red, blue, and yellow discs of projected light. The projected colours produce after-images on the viewer’s retina, which are not ‘there’ in the external sense. Hiller says:

I’m showing you – and showing myself...that the perceptions of the body and the effect of light on the eye, the intersection of the body and desire, creates beauty, creates meaning. That piece [Magic Lantern] can’t be documented because the colours you’re seeing are real but invisible externally. So it’s specific to you, but it’s also collective because it happens to all of us in the audience at the same time.
(Hiller and Einzig, 1996: 249)



Figure 96. Susan Hiller. *Magic Lantern* 1987. Audio-visual installation, programme duration 12 minutes. Slide projections with synchronised soundtrack; 3 x carousels each with 12 x 35mm slides, driven by electronic pulses. Edition: 1/3. (TE001529). © the artist. Courtesy of Timothy Taylor Gallery, London

For Hiller this is a way of tapping into her sense of the collective consciousness to explore the capacity for the imaginative mind to find meaning where there might be none. It is through the power of suggestion that listeners of these amplified recordings of empty rooms believe they hear the voice of Winston Churchill.

This serial metonymy carries a rhythm that Hiller has identified as analogous with internal bodily or mental rhythms such as inner dialogue, pulse, or breathing; what could be called a 'life pulse'. In her introduction to the catalogue accompanying Susan Hiller's exhibition at Tate Liverpool, Fiona Bradley describes this rhythm as the 'constant shifting from whole to part and back to whole as the viewer advances towards and retreats from the works, negotiating a manipulated rhythm between watching and reading, looking at and looking into.' (Brett et al., 1996: 9)

Each work addresses Hiller's 'desire to experience, record, and classify spectral phenomena, a desire that coincides with the history of science as well as the history of art, and has complicated connections to both.' (Hiller, 2008a). The relationship between

subjectivity and objectivity and human perceptual awareness is central to Hiller's investigations. Time and again Hiller uses light projections to make visible the invisible, to use light to convey knowledge, and create a condition of receptivity in the audience; a receptivity to ideas and to our own perceptions.

Hiller work allows complexity, she is interested in ambivalence and paradox. The social facts are the starting point, the work has different, but considered subject matter and form, and this is where meaning might immerge. Hiller explains her interest in the marginal and trivial: 'Often opinion makers will mock the UFO thing, I suggest there is more to it.' Hiller said in an *Art Monthly* talk for Tate Channel (Hiller, 2008b):

If people don't feel that there are other possibilities, other than laid down in culture, there is a sense of despair. The dearth of ideas, no 'enemy other' to direct themselves against – we're left with a kind of flatness, it would be quite hopeless, if we didn't have these ideas to play with. (Hiller, 2008b)

Hiller takes language in various forms and reshapes it into a new, previously inconceivable form. For example Hiller has taken her earlier minimalist paintings and cut them up or burnt them, thus transferring them into a different form, past the point of being finished, in the conventional sense of a painting. Taking paintings further, beyond their familiar state, creating painting 'blocks' – changing surface into mass, making it a sculptural thing, or making paintings into books, so they can be handled in a different way. All these different ideas about process, push beyond a given boundary, as an opposition to institutions and systems, thereby making other discourses possible.

Hiller suggests that artists benefit from the sense of outsidersness, they need to be someplace else, to create a distance from the work and other contexts. She claims that anger is not a bad motivation. Hiller is interested in the unnoticed mythologies and unresolved dualisms, such as in *Punch and Judy* puppet shows in which the left hand (Judy) is punched by the right hand (Punch), then the myth is passed on to children in the guise of entertainment.

Hiller believes that our cultural system undervalues our internal capacity as human beings to create pictures, to have dreams, to have an imaginary world, and a powerful subconsciousness. She employs taxonomic (categorical) and partonomic (part-whole) metonymic relations to reveal absent-but-experienced encounters with the paranormal, through powerful suggestiveness and perceptual illusion. This is the zone – of difference, otherness and marginalization – that Hiller navigates.

Ceal Floyer

The third case-study artist is Ceal Floyer. Floyer's visually slight and conceptually complex ultra-minimal works involve an exhaustive interrogation of mundane materials and commonplace objects, such as marker pens, shopping receipts, rubbish bags, light bulbs and labels, from which she draws disarming new meanings, through discrete shifts of perspective often induced by linguistic ambiguity.

Although Floyer was born in 1968, her work bears many the features the *Anti-form* movement of the late 1960s and early 1970s, which can be broadly grouped with *Process Art* (Figure 97). It was Robert Morris who put forward the notion of *anti-form* as 'a basis for making art works in terms of process and time rather than as static and enduring icons'. The basic elements of *Anti-form* works are the properties of the objects themselves, such as their form, surface and dimensions. The intention is to enable the semantic properties of the objects to emerge, and flow freely in any or many directions: the work thus acquires an anti-form, a form that is not established *a priori*, by the artist, but is released through an interaction between the viewer and the context in which the work is encountered. The 'hand' or gestures of the artist are absent, and in that sense can be related to *arte povera* and *Minimal Art*.

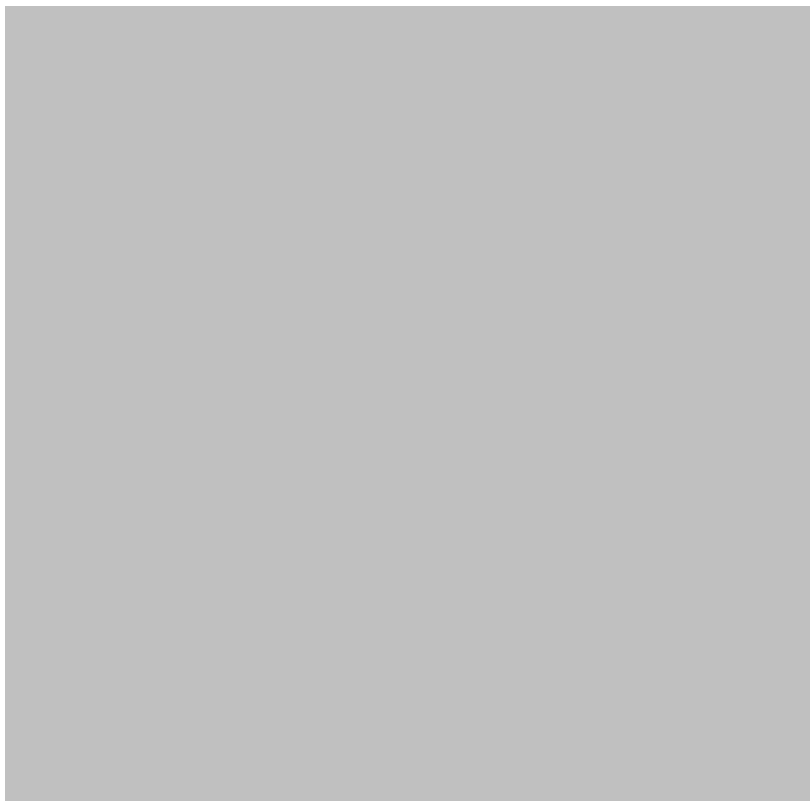


Figure 97. Example of Process Art:
Eva Hesse, *Untitled* (1967),
drawing of graph paper (detail)

Heidi Zuckerman Jacobson, MATRIX Curator at the University of California's Berkeley Art Museum, explains that Floyer:

reconsiders the nature of visual perception through an engagement with everyday objects and situations. Floyer and other young British artists such as Angela Bulloch, Rachel Whiteread, and Douglas Gordon sort information procedurally, recycle trivial ideas, and situate meaning directly within the cognitive process of the viewer. (Zuckerman Jacobson, 2001)

Floyer herself suggests that the objects and the space are homogenous. In the catalogue for the *Freddy Contreras/Ceal Floyer* exhibition (1995) she says: 'The activity of making the work and the consequent result of it being shown become inseparable.' (Floyer, 1995)

In his review for *Frieze* magazine of Floyer's 2006 exhibition at the *Esther Schipper Gallery* in Berlin, Dominic Eichler quotes Floyer as saying that she 'focuses attention on the space allotted to art...[and]the interaction between expectations and perception.'



Figure 98. Ceal Floyer – *Title Variable*: 3m 86.5 cm, 2001, black elastic. © Peppe Avallone

In *Title Variable*: 3m 86.5 cm, 2001, (Figure 98, above) Floyer uses a reference, common in 20th- and 21st-century art, to the size of the artwork as 'variable'. In practice this often means that the work is capable of being made larger or small according to its location,

often because it has several or many separate components that can be laid out with different degrees of proximity to one another. In *Title Variable: 3m 86.5cm* the length of black elastic that measures 3m 86.5 cm can be stretched to fit various lengths of wall. This is interesting in relation to metonymy, as its site-specific nature alludes to contiguity and proximity in space.

Though an artwork may be referred to as *Untitled*, titles are invariably not variable because of the difficulties this proposes with regard to cataloguing and archiving. The title of Floyer's work, however, is fixed as *Title Variable: 3m 86.5cm*: the convention is thus challenged, though not undermined. The artwork comprises of one element that is physically elastic and may therefore be stretched to fit a number of spaces, and is also semantically 'elastic' because meaning, like 'truth' for Nietzsche, is a 'movable host of metaphors, metonymies, and anthropomorphisms'. The creation of an artwork in which both meaning and material are elastic undermines all the conventional 'knowns' of the viewing of art. It also undermines the fabric of the museum or gallery, implying that even the solidity of its walls cannot be presumed. The conventional position of 'variable' has therefore moved from being a reference to size to being the title. Implicitly, this also references musical 'variations', whereby a theme is modified a number of times while retaining its essential characteristics.

Commenting on *Title Variable: 3m 86.5 cm*, Mario Codognato of *The Museo d'Arte Contemporanea Donna Regina (MADRE)* says:

the variability of the work passes, by transitive property, to the title that designates it. The environmental character, the resort to open operational processes, and the choice of a flexible material that is subject by nature to the laws of indeterminacy... aim...to open random coefficients within the Euclidean geometry of the architectural space. (Codognato, 2008)

In *37' 4"*, a similar work that was part of the site-specific MATRIX exhibition at the University of California's Berkeley Art Museum, Floyer alludes to US composer John Cage's work *4' 33"*, which consists of the environmental sounds that its audience hears during the four minutes, 33 seconds of the otherwise silent performance. In *37' 4"*, a single length of black elastic measuring 37 feet four inches is stretched to its maximum extension, 84 feet $51^{11}/_{16}$ inches; the actual length of the wall. MATRIX curator Heidi Zuckerman Jacobson says:

Floyer chooses to use a material [elastic] whose dimensions are constantly in flux to quantify distance and delineate the defining feature of the matrix Gallery, its long uninterrupted wall. And allowing the viewer to imagine the performative aspect of the wall-to-wall (corner-to-corner) stretch reveals the artist's sense of humor. The poetics of the work lies in the discrepancy between the title and the actual length of the wall of the matrix Gallery (84' 5 11/16"). As viewers we are left to ponder how titles (identifying factors assigned to works of art by their creators) influence what and how we see. (Zuckerman Jacobson, 2001)

Floyer's wall 'drawing' made with a single piece of black elastic appears Minimalist but, argues Zuckerman Jacobson (Zuckerman Jacobson, 2001), it is actually the opposite: it is Maximalist. The material is fully extended, thereby negating its elasticity and reducing it to a black line. The choice of material, however, is extremely important, and the use of black elastic is deliberately absurd. But the work is definitely rooted in the minimalist tradition which requires the viewer's bodily awareness in the appreciation of, and interaction with, works of art. Like Morris and Judd before her, the power of space, light, and material function literally rather than as mere illusion. Floyer, however, introduces further possibilities and new uncertainties, and in fact has described her work as manifesting uncertainty in art.

Floyer uses metonymic thinking processes and literality to expose both the complexity and the ambiguous nature of the English language and our sensory perceptions. Objects are subjected to surprising interventions that engage people in a reassessment of what they think they know and what they believe they are seeing. Floyer is not presenting illusions, but is showing that what is perceived is not objectively real. Art historian Graham Coulter-Smith observes:

Unlike science art can only pose questions and leave the process of creating answers to those who view the work. In the case of Floyer one question seems to be 'how can we look beyond a habituated mode of thinking and perceiving?'
(Coulter-Smith, 2008)

This question is addressed directly in *Blind* (1997) in which Floyer presents a 30-minute video of what at first appears to be a blank white screen, but, as gradually becomes apparent, is a close-up view of a window-blind gently moving in the breeze. Here, Floyer is playing with the polysemy of the word 'blind', referencing the object 'blind', the condition of being blind i.e. unable to see, and the expression 'blind to the obvious', offered in the spirit of Marcel Duchamp who said: 'One can look at seeing' (Duchamp, 1973: 23). Jeremy Millar explains:

It is like the shift between transparency and opacity which occurs in Blind (1997) where, at first, we cannot see the (roller) blind against the window even though that is all there is to see, and only become aware of it when the faint outline of the window-frame appears behind as the material blows in the breeze. The classical 'window onto the world' which representation promised remains obscured; in becoming conscious of that which frames such a view, our ability to perceive is greatly improved. (Millar, 2001: 31)

Blind generates uncertainty around our sense of something and nothing: it is only when the blind moves that we see something; when it is still we see nothing. As with many things in life, we only recognise things for what they are when they change in some way.

The potency of much of Floyer's work can be found in literality. This is what critic Jon Erickson is reflecting on when he cites Henry James' (1962: 25) reference to 'the fatal futility of Fact'. Erickson says:

[p]art of the task of modern art and literature has been to prevent the process of literalisation from happening as fast as it does. To reduce the speed with which... the resistant symbol [turns] into the literal for easy consumption and forgetting. (Erickson, 1995: 24)

The poetic power of literality, however, goes back centuries to the classical Japanese *Haiku*, which is one of the most effective forms of poetry in world literature. The *Haiku* is a simple literal description of, for example a landscape, a season, a time and a mood, that nevertheless has the power to invoke a wide array of implications and references. Consider, for example Bashō's *Haiku* of 1680, translated by Joan Giroux in 1974:

On a leafless bough
A crow is perched –
The autumn dusk.

If the poetic beauty of *Haiku* poetry can be recognised, why should it be supposed that literality in visual art challenges the ‘habituated mode of thinking and perceiving’ (Coulter-Smith, 2008)? Floyer focuses on perceptions that generate ‘illusion without illusion’. It is known that brains can be tricked with visual illusions, as shown by the Gestalt ‘vase-profile’ which plays on the brain’s need to distinguish foreground from background. What Floyer does, however, is demonstrate that literality can be hard to understand. Our brains are tuned to use metaphor to understand new concepts, to use metonymy to expand the range of options within a concept. Literality, or the illusion of literality, is an attempt at precise, unambiguous expression. When, in order to present ‘the obvious’, Floyer uses the conceptualist process of reframing and recoding elements, it takes time to realise that things are not quite what we had assumed. Unexpected literality therefore becomes ‘difficult’ to comprehend.

In her 1995 exhibition *Just Do It* at the Cubitt Gallery, Floyer exhibited *Door* (1995). This comprised a slide projector shining a band of light along the base of a closed door (Figure 99, below). The work simultaneously presented the illusion of a brightly lit and far more interesting event taking place on the other side of the door, and undermined the illusion by placing the slide projector in full view. Viewers could see what was literally there, rather than what they might imagine was happening. Despite this, as noted by art critic David Barrett (Barrett, 1996), it took between 30 and 90 seconds for spectators to work out that the tantalising strip of light came from the projector rather than from behind the door.



Figure 99. Ceal Floyer. *Door*, 1995.
© the artist. Courtesy of Lisson
Gallery

Metaphor, metonymy and literality are cognitive processes used to grapple with the issue of representation. Floyer's art embraces 'the obvious', the 'illusion of the literal'; it thereby exposes people's blindness – albeit temporary – to the obvious. The human mind is set up to rationalise the complex, to find structures in chaos. Being confronted with simple, literal elements in a cultural context forces people to think differently – it is necessary to pay close attention to the sparse clues provided, and believe in what one's senses say.

Gabrielle Giattino, who curated Floyer's exhibition at the Swiss Institute in 2006, says:

If Floyer never intends to trick the spectator or to create illusion, she nevertheless believes that there is no unmediated access to reality. To her, representation or more precisely re-presentation is a preferred access to reality for it leads us to see the obvious. (Giattino, 2006)

Floyer's work challenges the sense of what is literal. Literality may yet prove to be definitively indefinable; with literality only existing within particular, specified contexts.

As David Barrett states, Floyer presents:

[A] finely balanced paradox of the obvious literalness of the work, coupled with the pressing urge to read further into meanings which present themselves so shamelessly. Maybe this is the crux of the work: the furious tension between literal, matter-of-fact mundanity and the imaginative construction of meaning – a tension dependent on simplicity of presentation. (Barrett, 1996).

Is the literality of Floyer's work equivalent to the poetic literality of Bashō's haiku, or is it an act of 'estrangement, defamiliarization or 'making strange', that is, a renewal of the perception of everyday things and events which are so familiar that the perception of them has become routine? Certainly, Floyer intends to disrupt stock responses in order to, as Shklovsky suggests, 'impart the sensation of things as they are perceived and not as they are known,' because the 'process of perception is an aesthetic end in itself and must be prolonged'. (Shklovsky, 2008 [1916]: 16)



Figure 100. Ceal Floyer, *Genuine Reduction* 2006. © the artist. Courtesy of Lisson Gallery

The work *Genuine Reduction* (2006), an ‘assisted’ ready-made sign (Figure 100, above), was first exhibited in the street-facing front exhibition space at the Lisson Gallery, London. Viewers entering the gallery underwent a process of disorientation, review and reorientation. Visually, the space appeared empty, save for an unexceptional paper sign stuck on the wall that might easily have been overlooked; it lacked the familiar hallmarks of ‘art’ and carried all the commonplace qualities of ‘bargain basement’. On their way out, however, visitors were prompted to reconsider their assumptions when they spotted the exhibit label on the wall by the exit. It was only when they returned to reconsider the sign that they realised it had been altered: what they had read as ‘*Genuine Reductions*’ had, in fact, been edited by the careful removal of the final ‘s’ to read ‘*Genuine Reduction*’.

It is at this point that thinking is reorientated to confirm that this simple act references the history of minimalist art, offering itself as the ultimate minimalist piece: a statement, physically reduced from plural to singular, in an empty room. It comprises just two words, yet printed words carry a natural authority: anything seen in writing is presumed to be true. The word ‘genuine’ also confirms that what is seen is true and must not be doubted; to emphasise the point, the word ‘reductions’ is further reduced from plural to singular

with the cut of a knife. There has been a move from the ‘Genuine Reductions’ associated with retail sales to the concept of genuine reduction: physical and implied reduction; ideas associated with absence, removal, artistic and monetary value and the lack of it. This is the artist’s only intervention in an otherwise mass-produced printed sign. It is at this tipping point that the syntactic and semantic elements are recognised, and the sign is seen for what it is, rather than for what it was thought to be.

LITERAL		METONYMIC		METAPHORIC
(A) HIGH TOWER	(B) HIGH TIDE	(C) HIGH TEMPERATURE	(D) HIGH PRICES	(E) HIGH QUALITY

Figure 101. Literalness-metonymy-metaphor continuum. (Gunter Radden 2000)

Genuine Reduction is a PART-FOR-WHOLE metonymic relation: the word Reduction is part of the word Reductions. Within the wider category of ‘places that sell things’ the printed sale sign also includes the gallery. The original text ‘Genuine Reductions’, however, is metaphoric. As discussed in chapter one, this text relates to the notion of ‘high prices’, which on Günter Radden’s continuum (Figure 101, above) would be an example of a metaphor from metonymy ((d) on the continuum) or a metonymy-based metaphor. High prices are derived from a literal pile of money or valued commodities; the more money or items one possesses, the higher the pile.

In her book *Slide Show* (Alexander et al., 2005: 104), Darsie Alexander, who is Senior Curator at Baltimore Museum of Art, explains:

Floyer’s work calls upon the viewer’s capacity to switch frames of reference... [s]he takes what is most familiar about an object and inverts its seemingly most fundamental qualities, ‘like mentioning the obvious but in a different [tone of] voice.’ (Floyer and Watkins, 2001: 7). This strategy is not simply a perceptual trick (gestalt). Floyer asks viewers to think in new terms about how their sensory systems channel seemingly familiar data...she reveals...established habits in our viewing experience – habits that her work quietly disrupts.

When viewing art there is an expectation that metaphors will be found, but Floyer's work asks people to transfer their frames of reference from the seductive attraction of metaphor to the stark reality of factual relations. The phrase 'blindingly obvious' refers to the capacity to fail to see what is actually in front of one, and to see only what is expected. Since, according to neuropsychologist Richard L. Gregory (1998) some 90 per cent of perception is memory, it is necessary for people to heighten sensitivity to sensory stimuli and reduce reliance on memory.

It is therefore valid to enquire whether understanding of this piece of work would be affected if the viewer was unfamiliar with the sales strap-line 'Genuine Reductions'. The artwork is culturally, socially and contextually specific, and as a linguistic device will not translate easily into other languages. But the metaphor MORE IS UP on which this piece draws is an orientational 'primary' metaphor that operates as a basic 'image schema'; since all humans are subject to the effects of gravity and make simple correlations between height and quantity, the notion of MORE IS UP or that prices can go up or down is cross-cultural. It can therefore be considered universal.

The MORE IS UP metaphor is not, however, the central concept of the piece; it is the metonymic and literal elements that are key. There is an instinctive need to interpret the work, find symbolism and metaphor within it. Because seeing what is actually there runs in a way that is contrary to usual thought processes, its disconcerting nature entertains and amuses. Human brains are simply not set up to read the world so literally, so this literality occurs as a novel experience.

Floyer's work pulls away from comfortable metaphoric domains and takes people through the metonymic, in which their understanding of their embodiment gives them access to the startling, literal reality that Floyer holds in front of them: the dematerialized art object.

Paul Carter observes: 'To speak the plain truth is always to countenance a disappearance.' (Carter, 2004: 23). If 'to speak the plain truth' means 'to speak without using figurative language', it could be suggested that figurative language offers insights that plain language cannot. People are attuned to deciphering coded thought and are ill-equipped to understand the direct, the overtly simple, the obvious and the real. Carter illustrates this with a quotation from the Edgar Allan Poe story *The Purloined Letter*. In this, a detective

exposes a thief's logic: 'As stolen things are generally concealed, the thief, he reasons, has left the purloined letter exposed in full view, guessing in this way it will be overlooked.' Carter describes 'The *tabula rasa* conception of mind [which]...sees so clearly...a world without vision: its own blinding blindness.' (Carter, 2004: 23)

Human beings are designed to be very efficient at finding an object in a heavily camouflaged environment, a survival instinct that arises from the (historic) need to discern a lion amongst trees, or the present need to spot an oncoming vehicle along a country lane. In his 2003 *Reith Lecture* Vilayanur S. Ramachandran (2003) said: 'the goal of vision is to do as little processing or computation as you need to do for the job on hand.'

Humans edit out vast quantities of information that they think they 'know' and concentrate on what they think needs their attention. This is the mechanism used to process the overwhelming volume of data around us and the reason why we are 'blind to the obvious'. Artists such as Ceal Floyer are happy to expose 'blinding blindness', drawing attention to things we would normally filter out, the obvious and the mundane, and asking us to consider such with a *tabula rasa*, without preconceptions. Her work, however, cannot be understood without memory. It is necessary to recognise the 'mundane' references before making a mental shift to the new frame of reference.

Raymond Gibbs describes the process thus:

Psychological research...provides good evidence that people immediately infer entire sequences of actions from having heard or read only some salient subpart. In fact, when an inference must be generated to understand some verbal message, people do construct the missing information and often misremember it as having been part of what was originally said. (1994: 329)

These 'salient subparts' activate knowledge of the subject under consideration, and people use this information to fill in the gaps so that it makes sense to them. They must first choose a relevant script, then modify it to fit the particular situation. The knowledge held in long-term memory of coherent, mundane events can be metonymically referred to by the mere mention of one salient subpart of these events.

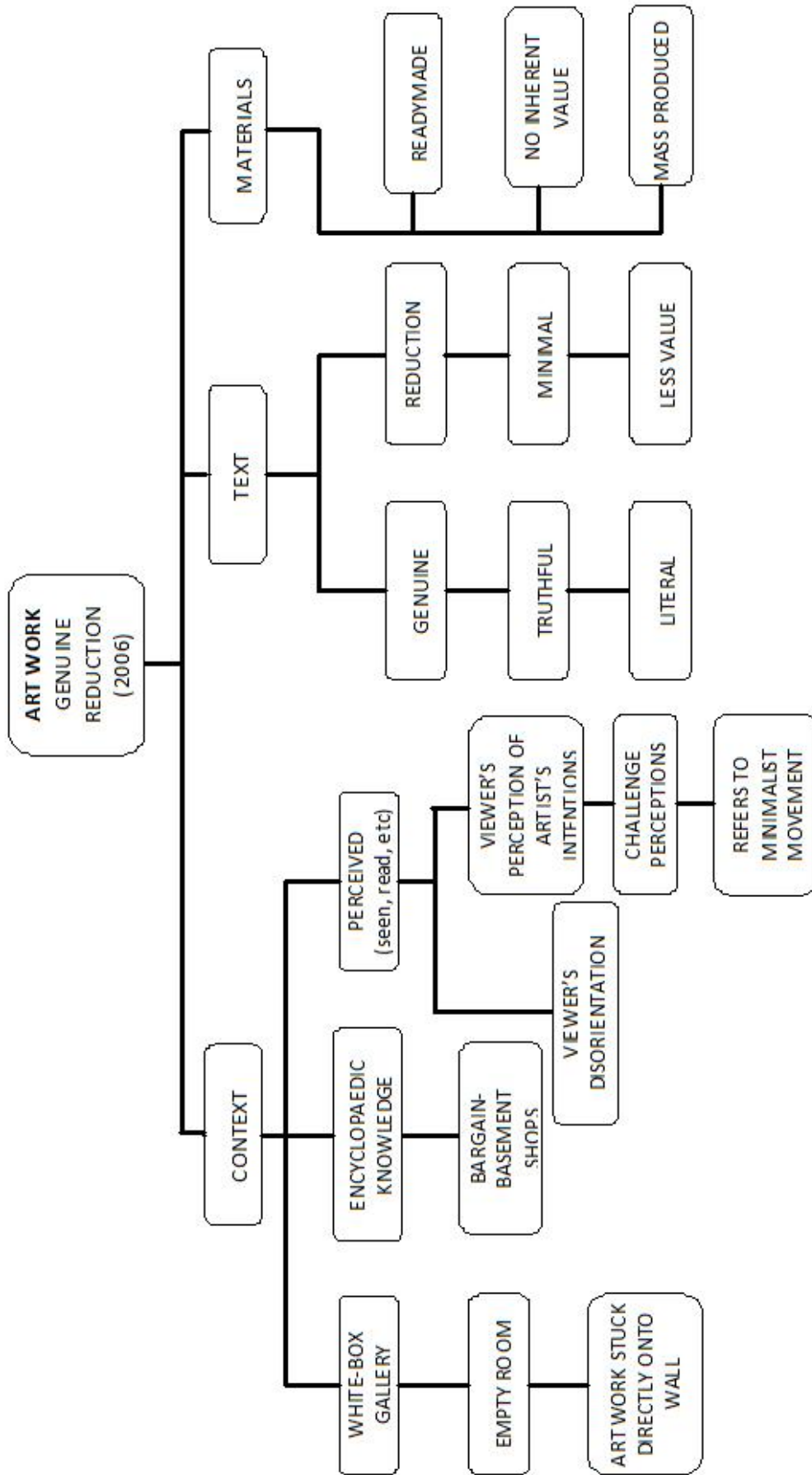


Figure 102. *Genuine Reduction* 2006 Context, text and materials diagram

The diagram (Figure 102, above) shows the generation of meaning through the context in which the artwork *Genuine Reduction* is experienced, including the local (gallery) context; the ‘encyclopaedic’ knowledge the spectator brings to the work; the meaning found in the text ‘Genuine Reduction’, and the meaning generated by the materials used in the artwork. It shows that the context of the artwork provides the richest source of meaning, which contributes to the sense of uncertainty since it is hard to judge the boundary point between the meaning of the artwork and the world it is located in. If, for example, we were to see a black garbage bag in the gallery (Figure 103, below), we would not be sure whether it had been left there accidentally, or placed carefully by the curator or artist. When artists disturb our familiar world, where can ‘truth’ reside?



Figure 103. Ceal Floyer, *Garbage Bag*, 1996. Black bin liner filled with air and secured with a twist-tie



Figure 104. Ceal Floyer.
Autofocus 2002. Edition 4/5.
Courtesy of the artist and
Lisson Gallery

In Floyer's *Auto Focus* (2002) light projection (Figure 104, above), it is possible to recognise a 'script' of shared attributes between the slide projector and oneself. *Autofocus* features a single empty projector projecting a square of light onto a wall, engaged in a futile attempt to focus on a non-existent slide. The constant rhythm of refocusing makes the white square appear almost to be breathing.

The thinking process begins with the materials – the material in *Autofocus* is the Leica Pradovit P-150 projector; then, with experimentation, the work develops metonymically, leading to metaphoric associations.

Projector (material) → attribute of projector: autofocus (metonymy) → attribute of autofocus: continuous refocusing in the absence of a slide/something to focus on (metonymy) → lack of focus is an attribute of this projector and some people (metaphor) → projector is a person (personification metaphor) → rhythm of refocusing process is similar to a human breathing (metaphor) → The futility of an unfocused/undirected life is similar to a projector without a slide (metaphor).

The title *Autofocus* directs the spectator to the source domain. The title, however, is not essential to the meaning of the work, since the projector perched on its telescopic tilting stand is set at a comfortable height for a human viewer. The stand bears basic human characteristics: it is upright, of an average height for a human being and it has feet. It is the support for the projector, and is analogous with a human head containing the brain, the control centre and site of knowledge. The projected light can be understood as the human eye: lit up, it is a sign of life capable of projecting the thoughts, or the knowledge it contains, to the world outside itself.

The material, in this case the slide projector, is the starting point for generating meaning. This ‘material thinking’ referred to by Paul Carter is always metonymic, in that it is a consideration of attributes and contiguous associations made in the domain or domain matrix of the material. From this metonymic starting point, the artist can choose to expand meaning across domains, metaphorically, as in the personification of the projector in *Autofocus*.

Though the art critic Dominic Eichler (2006) considers Floyer’s work ‘sparse and rigorous ...somewhat cool and detached’, he also recognises that it is playful. In the case of *‘Til I get it right* (2005), shown at the *Esther Schipper Gallery*, it is striking for its emotional directness. In this exhibition, the first element of uncertainty generated by Floyer is whether there is an exhibition in the gallery at all. The viewer enters the gallery, and empty space filled with the sound of a repeating sample from the Tammy Wynette song *‘Til I get it right* in an uncertain frame of mind.

The original lyrics of the song were: ‘So I’ll just keep on falling in love ‘Til I get it right’. Floyer edited the original sound file, seamlessly removing ‘falling in love’ to leave the melancholy, undulating invocation ‘I’ll just keep on/’til I get it right’. In this, Floyer uses Wynette’s words as a material that carries with it the notion of unattainability, the ‘will to live’, or the ‘will to life’; that compulsive and endless drive that gives the illusion of purpose to our lives, yet rarely provides satisfaction. The hope of ‘getting it right’, of finding answers to our existence is always just out of reach.

Eichler notes that these words were ‘looped and abandoned to play *ad infinitum* on a sound system placed without any noticeable fuss against a side-wall’. For Eichler:

Every intonation, breath and syllable of the displaced voice of the former 'First Lady of Country Music'...was drenched in a cathartic pathos. It seemed to me that repetition served not to abstract this (like the Warhol screenprints of Jackie mourning), but rather to give it even more emphasis. (Eichler, 2006)

Floyer's intension, I suggest, was to use repetition and saturation to foreground a mantra embedded in our subconscious minds: that survival instinct present in every person that keeps humanity evolving, and in which the 'meaning of life' is constantly just beyond our grasp.

In *'Til I get it right* the repetition is identical in every way, in that the sample is repeated in a seamless loop, the quantity of repetitions (endless and circular) emphasizing the sense of hopelessness, unattainability and sadness. For artists, the driver or motivator is that the next piece of artwork will say what the artist is trying to say; the one artwork is the basis for the next and the next in an endless drive towards clarity of thought and clarity of communication. This subconscious need that pushes artists on; in which artist and artwork are entwined, is their *modus operandi*, set deep within the psyche.

'Til I get it right is a Lacanian moment: the notion of desire; the unattainable; the plight of humanity to strive for something that is just out of reach.

Floyer captures the sense of futility through repetition and amplification: the point is not just made but overemphasised, so that it exceeds its normal narrative and moves into a zone of absurdity. Thus, where for example in the *Frieze Projects* piece *Stable* (2008) one folded beer mat placed under a table leg might seem a reasonable response to a wobbly table, a beer mat under every table leg raises questions, and intrudes on our psyche (Figures 105 and 106, below).

Complexity Theory has shown that there is a tipping point at which an accumulation of things or events undergoes a sudden qualitative change that can lead to chaos or provide a new order. Ceal Floyer plays with the economies of scale, repetition, amplification and exaggeration, to provoke this cognitive shift. *Stable* is destabilized by over-use. In the same way *Ink on Paper*, 2009 (Figures 107, 108 and 109 below) tests felt pens to their absolute limits. Rather than drawing with the pens, the artist uses blotting paper to draw out the contents of each, turning the act of drawing in on itself: the pens are drawn, rather than drawing.



Figure 105. Ceal Floyer, *Stable* (2008), detail



Figure106. Ceal Floyer, *Stable* (2008)



Figure 107. Ceal Floyer creating *Ink of Paper* (2009)



Figure 108. Ceal Floyer, *Ink on Paper* 2009 (Ink on paper) 30 pieces



Figure 109. Ceal Floyer standing by Ink on Paper

The resulting set of thirty ‘drawings’ tells us something about scales of standardization and the manufacturer’s tolerance levels in filling felt pens. Through the act of comparison, we can discern the degrees of difference between the pens in terms of capacity, colour intensity, absorbability, light-fastness, and so on – all aesthetic concerns of an artist – on a par with Bruce Nauman’s *Coffee Thrown Away Because It Was Too Cold* – an artist’s examination of *doing* and *being*.

Floyer’s contemporary and compatriot Martin Creed has also interrogated the humble felt pen, in this case, for its blackness. Creed claims to have bought every type of black felt pen available in London, carefully coloured separate sheets of paper with each, then placed them side by side. From a distance they all seem black, but when seen up close the subtle differences between the blacks, from blue-black to brown-black, are revealed. We delight in the revelation that, in the depths of physical and metaphorical blackness, there are nuances of experience that can give us pleasure (Figure 110, below).



Figure 110. Martin Creed, *Work No. 557* (2006). Six parts, each 210x297mm

Creed says of *Work No. 557* and his other incremental and scalar works:

I want my work to have the whole world in it, although it could only ever fail to do that, maybe a work can make a sort of equivalent of the whole world...(Creed, 2010).



Figure 111. Constantin Brancusi,
Colonne sans fin. Oak

Creed's and Floyer's works hark back to the first *Colonne sans fin* (see Figure 111 above) by Constantin Brancusi (1876–1957) which was carved from a massive oak beam into a single vertical rhomboid pattern. In dissecting the upper and lower-most segments of this rhomboidal movement, Brancusi was implying that the column, regardless of its finite length, would uninterruptedly continue its trajectory at both ends to penetrate the ground below and the space above it. This simultaneously, offers seriality and part-for-whole relations; and, through the implication that there is more beyond the artefact, highlights absence. This is why Creed claims that 'these are all works that are all failures': not because the artist could have made better work, but because they are parts of a greater whole; they stand for the whole world, but can never be the whole world.



Figure 112. Top left: Ceal Floyer, *Warning Birds* (2002). Self-adhesive warning birds on window. Top right: Ceal Floyer, *Mind the Step* (2007), Self-adhesive warning sign. Bottom left and right, Ceal Floyer, *No Positions Available*, (2007)

In Ceal Floyer's works *Warning Birds* (2002), *Mind the Step* (2007) and *No Positions Available* (2007), this sense of unattainability becomes neurotically absurd (Figure 112, above). *Mind the Step* was a site-specific work for *Centre d'Art Santa Mònica*, Barcelona, in which Floyer placed a warning label reading *Mind the Step* on every step of its vast, baroque staircase. The intervention draws attention to the 'object-ness' of the step itself, and creates an overstatement of almost ridiculous anxiety. The minimal and conceptual approach of everyday text and signage clashes with the absurd exaggeration of the work itself, which is a serious overstatement of the mundane. In her consideration of the economy and the semantics of scale, Floyer teeters on the tipping point between order and chaos, testing the extremes of minimal and maximal; a contrary notion of more-of-less. It is in this oscillation between aspects and elements within the same frame that provokes the shift in meanings. For Floyer, the rephrasing and re-presenting process is 'amphibious', a kind of back-and-forth flow between the personal and universal, in part-whole and whole-part relations, which through accretion brings forth new, metonymic meanings.

Summary

As with metaphor, metonymy is a creative process used to some degree by all humans in creative thought and problem solving, it should not therefore, be considered as a cognitive process particular to artists. However, artists exploit these mechanisms to present ideas in new ways and studying their work can provide valuable insights into how metonymy and metaphor function. The three case-study artists, Cornelia Parker, Susan Hiller and Ceal Floyer, have been selected for their use of part-whole and category relations providing a sense of how these cognitive relations can manifest themselves.

Cornelia Parker's *modus operandi* is the use of part-whole metonymic relations, in which the artwork is constructed from the partial remains of a destructive event in which the absent-but-known 'whole' event is alluded to through a dialogue between the artwork and its title. Her close attention to process and materiality through deconstruction and resurrection, facilitates a cognitive shift from a central, conventional view, of what an entity had been, to the traces left from its creation or destruction which draw meaning from the margins of its conceptual domain. In this way Parker subverts *Relevance Theory* (discussed in chapter one) as she focuses on elements that are culturally considered to be

irrelevant (debris and dirt) forcing a re-consideration of where meaning can be found, what might be concealed or overlooked and how attentional shifts can provide access to an array of new meanings. The large-scale suspended works offer both partonomic and taxonomic relations. Firstly, part-whole relations are invoked through a dialogue between the artwork and its title, (*Heart of Darkness* (2004) Charcoal from a Florida Wildfire (prescribed forest burn that got out of control)). Then taxonomic relations are drawn from the close comparison between fragments within the piece and expanding meaning into charcoal as a drawing material, thus re-viewing the piece as a three-dimensional drawing in space. The ‘whole’ wildfire event expands into thoughts about the effects of humanity on climate change.

Much of Cornelia Parker’s work uses metonymic part-whole relations to allude to absence and loss whether they are the remnants of a process (in the Negative and Tarnish series or wire drawn from iconic objects). Although it is possible to find metaphors the power and complexity of Parker’s come from partonomic metonymic relations – which provide highly effective and affective means to convey loss and unattainability, through the absent ‘whole’ whilst simultaneously drawing attention to marginalize and undervalued elements through the ‘parts’ displayed.

Susan Hiller believes that our cultural system undervalues our internal capacity as human beings to create pictures, to have dreams, to have an imaginary world, and a powerful subconsciousness. She employs both taxonomic and partonomic metonymic relations to reveal absent-but-experienced encounters with the paranormal, through powerful suggestiveness and perceptual illusion. It is this zone, of difference, otherness and marginalization that Hiller navigates.

Hiller trained as an anthropologist and is an inveterate collector of ephemera, from seaside postcards of stormy days, to artefacts associated with rituals, the occult and fortune telling. Inevitably much of her work exploits taxonomic relations, that is to say, that she tends to group work into sets of similar items such as *Auras* (Figure 35) and *ad hoc* groups, as in *From the Freud Museum* (Figure 93) which are displayed in boxes. Each box has a particular theme containing parts that interact with each other to generate meaning, and then contiguous boxes set up dialogues, and the vitrine as a whole carries associations with museums and archives.

Of the three case-study artists, Ceal Floyer’s use of metonymy is probably the most exacting. She takes mundane, normally overlooked items and pays excessive attention to them, before integrating them into a space. She uses an extreme form of conventional-

category relations to amplify, through excessive repetition, the affect of cautionary labels. (*Warning Birds, Mind the Step* and *No Positions Available* (Figure 112)). Their repetition instils both anxiety and a certain aesthetic pleasure; through sheer quantity, the warning labels become the artefact and their original purpose is thoroughly undermined.

Equally rigorous is Floyer's use of ad hoc category relations in which she has, for example, delineated a cognitive domain with a *Helix* circle-drawing template, into which she has inserted various perfectly sized utilitarian objects (Figure 20–23). The objects: a toothbrush, dart, torch, film, light bulb and so on, visually and conceptually interact with each other, eventually becoming a kind of portrait of the artist, and maybe even, metaphorically, a cityscape.

Floyer's use of partonomic entity-context relations are pushed to the limit in *Title Variable* 3m 86.5cm (Figure 98) in which the 'part' is a length of black elastic used to measure the gallery wall. With a deft touch Floyer's entity and context are placed in flux. Does the room contain the artwork, or is the artwork redefining the space? In *Genuine Reduction* partonomic 'entity to absent-but-known' relations are semantically reduced, part by part in an homage to Minimalism. (Figure 102)

Floyer's intention is to test perceptions and confound expectations. She finds ambiguity all along the boundary between literality and metonymy, where she delights in the play of difference and deferral.

Conclusion

Metonymy is a dynamic, transformational cognitive process that enables the generation of new possibilities and viewpoints, through conceptual spreading inside and across adjacent domains of knowledge, in what can be called micro-domain annexation.

Two types of contiguity relations that require distinctly different modes of thought have been identified in visual art; they are: 1) category or taxonomic relations, and 2) part-whole or partonomic relations. It is Ken-ichi Seto's view that category or taxonomic relations should be referred to as synecdoche and part-whole (partonomic) relations should be termed metonymy (Seto, 1999: 116). This research has found however that in art practice and analysis the boundaries between taxonomic and partonomic relations are in constant flux, therefore for the purposes of this research metonymy has been used as the term for both types of contiguity relations, and the investigation of synecdoche remains an area for future work.

Metonymy can be conceived as lying along a literality-metonymy-metaphor continuum within which metonymic conventional category relations are closely aligned with literality, and metonymic part-whole relations, with their higher degree of abstractness, are closer to metaphor. Figure 113 shows the transition from concrete literality to largely abstract metaphor, and *vice versa*. Whilst metaphors are irreversible within themselves, it is usually feasible to break a metaphor down into metonymic relations, as indicated by the two-way arrows.

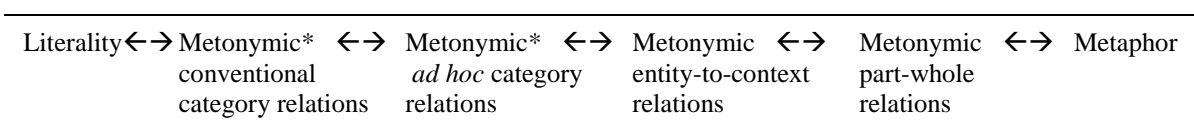


Figure 113. Literal-Metonymy-Metaphor continuum showing the main transitions from concrete literality to more abstract metaphoric domains

*conventional category and *ad hoc* category relations may be referred to as synecdoche, according to (Seto, 1999: 116)

This research challenges the view, long-held within art philosophy, that metaphor is the primary mechanism for creativity, and offers metonymy as a 'middle term'. It sees Jacques Derrida's linguistic construction 'différance' as capturing the essential characteristics of metonymy: difference and deferral. It supports Antonio Barcelona's view that 'every metaphorical mapping presupposes a prior metonymic mapping' (Barcelona, 2003b: 31), and finds that Rachel Giora's *Optimal Innovation Hypothesis*, which states that

there is roughly an equal balance between novel and familiar elements in an effective creative metaphor, is as applicable to metonymy as it is to metaphor. It finds that Complexity Theory provides an insight into taxonomical relations that at a certain critical point in an accumulation of related items, undergo an attentional shift that foregrounds differences between these elements and triggers an expansion into a wider domain or domain matrix of meaning.

Whilst metonymy is understood to be a cognitive process involving contiguity relations, a distinction needs to be made between spatial and temporal contiguity. Spatial metonymy is concerned with co-present elements, and temporal metonymy with partial or wholly successive elements. It is suggested that spatial co-present metonymic relations, observed in multi-screen or picture-in-picture films invites comparisons between frames and backgrounds the successive temporal relations. This suggests that picture-in-picture sections should be used to broaden rather than advance the central narrative. It is suggested that further research could be usefully undertaken to clarify the relation between spatial and temporal metonymy in other art forms, such as music.

Summarized at the end of this conclusion is a range of examples of metonymy in art, which are intended to provide a starting point for the consideration of other permutations. Many of these artworks may also have metaphoric meanings that are accessible via metonymy, as noted in Tracey Emin's *My Bed* (Figures 6–11, Chapter One) or, as in Tatsuo Miyajima's *Sea of Time* (Figure 14, Chapter One), in which metonymy is found within metaphor. All the examples overleaf generate a network of meaning expansion that can provide open-ended multidirectional access to new possibilities.

Co-present sets of work or groupings (what I have called conventional and *ad hoc* category relations); annex information internally from the to-and-fro comparison of the elements within the set, which enables nuanced differences to be discerned by the observer. Thus, at a certain point, the accumulation of differences between the related elements is brought to the foreground of our attention, and triggers an expansion of meaning into related, but hitherto unidentified domains. The differences between these related elements may be pronounced, as in the Bechers' *Water Towers* (Figure 114), in which only nine images are required to cause a foregrounding of the differences between the various water towers, removing them from being a mere record of utilitarian structures. In Eva Hesse's drawing (Figure 115), however, a large number of circles, fitting each of the graph-paper squares, are needed before differences can be discerned and consequently foregrounded. Neither of

these examples is dependent on its immediate surroundings to supply meaning, though it could be argued that the Eva Hesse's drawing, for example, might seem different if viewed lying unframed beside a telephone in a person's home. *Complexity Theory* also recognises the importance of 'noise', extraneous elements that are present, but do not make a central contribution to meaning generation until they offer something useful to the system. At this point the 'noise' (or 'trace', to use Derrida's term) creates new senses, and enables new meanings to evolve.

Ferdinand Hodler (Figure 120) takes a similar approach by creating a series of mini-scenarios that, rather than using a grid format, draw the eye in a vortex towards the centre of the composition; the dark, depths of distress. Ceal Floyer's *Helix* series (Figure 116) uses groupings of familiar objects placed in the novel context of a *Helix* circle-drawing template to create a site-specific work in miniature. In Susan Hiller's *Auras* (Figure 116) the source of imagery is the novel element, since photographs of (invisible) human auras are not well known. After comparing and contrasting fifty such images, however, the viewer begins to believe, through weight of evidence that human auras might exist.

In this category of co-present (taxonomic) category relations one may include co-present series, sets, sequences, increments, scales, repetitions, accumulations, stacks and piles. At a point where co-presence and succession overlap, we might expect metonymic relations in perceptual after-images, echoes, oscillations and feedback.

Artworks will often employ a number of devices for meaning generation, so for example, in my work *Light:Strip* (Figure 125) a blend of co-present category relations is formed between colour bands (see also Hesse Figure 115) and a PART-FOR-WHOLE metonymy is accessible through the title of the work, prompting the realisation that the spectrum of colours in the print comes from a source of artificial light, a strip-light. PART FOR WHOLE (entity to absent-but-known) relations generate presence-absence dynamics, which can be used to draw attention to what is lost, missing, or neglected. Cornelia Parker's *Negative of Words* (Figure 121) uses a fairly well understood type of metonymy, PRODUCT-FOR-PROCESS, that requires the title and subtitle to provide access to the context (the engraving process), in order to draw meanings held within the residue.

In Susan Hiller's etching (Figure 123), which is part of the work *The Last Silent Movie*, attention is drawn specifically to the loss of context, that is the loss of a language and a culture; the absent elements are the subject matter of the work. Ceal Floyer also deals with absence in *Blind* (Figure 124), which uses metonymic polysemy (one word with two

related meanings) of the word 'blind', to give access to a barely-discernible image of a window behind a white roller blind. Floyer's *Genuine Reduction* (Figure 119) is a direct challenge to the object-based works of American Minimalism: it employs two contexts, the space in which the sign is situated (present) and the space from which it came (absent). The sign has also been subjected to a subtle act of reduction, through the removal of the 's' in an attempt to test the boundary between absence and presence, the elusive point of meaninglessness.

As Raymond Gibbs pointed out, one of the challenges to 'truth' or literality is ambiguity (Gibbs, 1994: 75). Floyer is particularly interested in the fluctuating boundaries of truth; she employs metonymic relations to present ambiguity. Since metonymy tends to draw meaning from proximal elements, it can be used to great effect in site-specific works, installations and interventions, to destabilise or tilt our world. Ceal Floyer's *Title Variable: 3m 86.5cm*, for example (Figure 118) the black elastic is of a fixed length, but is stretched to reach both ends of a gallery wall that is visibly longer than the stated length of the elastic. Its stretched length will vary from one gallery to another, but the title will stay the same. This generates an uncertainty as to what is varying: the elastic; the gallery wall, or the meaning of the work.

In *Door*, (Figure 122) ambiguity is generated between our expectations, based on our experiences of light coming from behind a door, mixed with the realization that the projector in the room is in fact shining a band of light on to the door.

Sensory perceptual illusion is a particularly unnerving form of ambiguity, and of myriad sensory oddities the *vase-profile* Gestalt (Figure 2) is the best known. In *Magic Lantern* (Figure 126) Susan Hiller draws meaning in the eyes and ears of the beholder by exploiting a quirk of the human perceptual system, in which slide-projected coloured discs produce after-images on the viewer's retina which are not 'there' in the external sense. On the accompanying soundtrack *Voices of the dead*, we are led to believe that, through the power of suggestion, we can hear the voice of Winston Churchill.

Artists (including artist-researchers) are not aiming, as might scientists, to provide answers, but are setting up scenarios in which new meanings have opportunities to emerge, creating usefully suggestive situations for the generation of possibilities. As Charles Forceville points out 'metonymy can have a short-lived ephemeral effect' and has a 'highly

contextualized character' (Forceville, 2009: 70). This, I would argue, leaves it well placed to capture fleeting thoughts, with their fluctuating boundaries and shifting categories. Viewed in this way metonymy can be regarded as an important and powerful force for creative thought.

Further Research

Metonymy Theory offers a fresh aspect of study into creative expression. It provides a basis from which art historians can re-view artworks, for metonymy theory to be integrated into metaphor theory, and used as an educational, research and development tool, in creative environments across all disciplines. Artists working in non-verbal forms of communication (such as visual, sound and music) who wish to theorise about their practice can now draw on a range of knowledge including metaphor and metonymy theory, complexity theory, network theory, neural computational modelling and experimental psychology. In the latter area, interesting work is being carried out on metonymy and eye tracking (Frisson and Pickering, 1999).


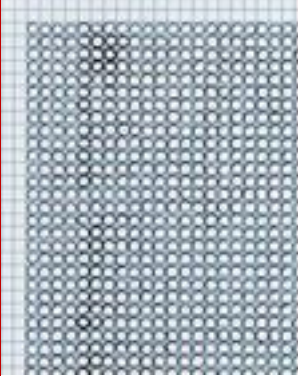

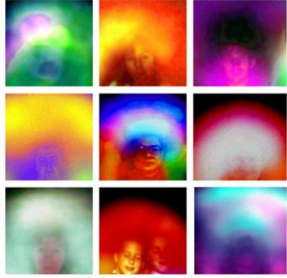



This research may also contribute to a number of issues raised within cognitive linguistics. It has found that the distinctions, even if fluctuating, between definitions of metonymy and synecdoche remain unresolved. I believe that for practical purposes a single term should be used to embrace all domain-internal meaning expansion; metonymy is my preferred term, but others might argue that synecdoche is the dominant trope. Ken-ichi Seto's proposal that synecdoche involves category (taxonomic) relations and metonymy involves part-whole (partonomic) relations (Seto, 1999: 116), should be examined further, and the transdisciplinary definition of metonymy offered in this research should be, if necessary, adapted to include the distinction between taxonomic and partonomic relations.

I have also found that separating meta-frames of succession and co-presence is useful, as they appear to have distinct cognitive requirements, whereby co-present elements are processed faster than successive elements, cognitively foregrounding co-present elements, when both co-present (spatial) and successive (temporal) elements are present simultaneously. This research suggests that further research could be usefully undertaken to clarify this distinction in other art forms, and to consider how this phenomenon could be exploited.



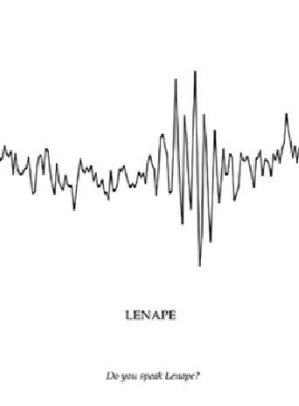

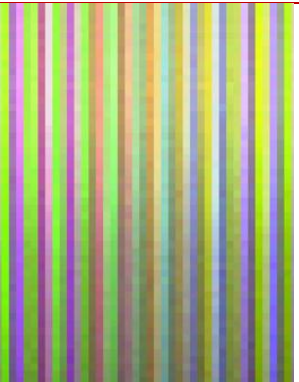
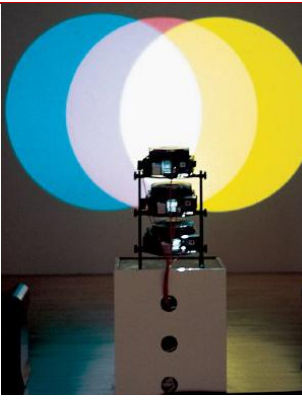
I have found the term ‘multimodal’ useful, as it encourages early identification of the modes of communication that exist in an artwork and a consideration of how they interact; it was through this process that I saw the significance of context as a mode in metonymy. There was also evidence for Goossens’ metaphonymy, or the interaction of metaphor and metonymy, and this may prove useful starting point for art analysis (Goossens, 2003: 369). Within education there is potential to draw these key terms together and build a ‘tool kit’ for art practice and analysis

I support Antonio Barcelona’s view that every metaphor presupposes a metonymy. This view is reinforced by Forceville (Forceville and Urios-Aparisi, 2009: 12) who is adamant that ‘it is impossible to study metaphor without addressing metonymy’. He is in no doubt that, ‘each property or feature [of metaphor] that is mapped from a source to a target must first have been metonymically related to that source’. For this reason, Metonymy Theory has considerable potential, as it offers a theory of how we look at and think about our world, and provides a clearer understanding of what drives artists to assemble objects and manipulate materials in the infinitely variable way that they do.

Examples of Metonymy in Art

Co-present conventional category relations (Clear Relational Differences)	Co-present conventional category relations (Slight Relational Differences)
 <p>Figure 114 Bernd and Hilla Becher <i>Water Towers</i> (1980)</p> <p>Set of nine similar elements (water towers) that become discernibly different when grouped together. Monomodal: Photographs.</p>	 <p>Figure 115 Eva Hesse <i>Untitled drawing</i> (1967) (detail)</p> <p>Barely-discernible (abstract) differences between elements; multiple elements needed for variations to be discerned. Monomodal: Drawing.</p>
Ad hoc co-present category relations	Co-present conventional category relations (Novel Subject)
 <p>Figure 116 Ceal Floyer <i>Helix</i> (2002)</p> <p>Idiosyncratic group of mundane objects in a novel context (Helix template). Monomodal: Found Objects.</p>	 <p>Figure 117 Susan Hiller <i>Auras: Homage to Marcel Duchamp</i>, 2008 (detail)</p> <p>Novel subject matter (auras) made more familiar by quantity (50 images). Multimodal: Images+Title.</p>
Entity-context partonomic relations	Entity to absent-but-known part-whole relations
 <p>Figure 118 Ceal Floyer <i>Title Variable: 3m 86.5 cm</i> (2001) (detail)</p> <p>Familiar material (elastic) changing understanding of physical space round it. Site-specific. Multimodal: Material (black elastic) + Context+Title.</p>	 <p>Figure 119 Ceal Floyer <i>Genuine Reduction</i> (2006)</p> <p>Familiar element (shop sign) changing meaning when relocated to gallery space. Title and material reference the process of reduction. Multimodal: Material+ Dual Contexts.</p>
Co-present conventional category relations	
 <p>Figure 120 Ferdinand Hodler <i>The Night</i> (1889)</p> <p>Amplification of theme (figures at rest) through a series of mini-scenarios. Monomodal: all meaning contained within related elements.</p>	

Examples of Metonymy in Art

Absent-but-known part-whole relations	Ambiguous Absent-but-known part-whole Metonymy
 <p>Figure 121 Cornelia Parker <i>Negative of Words</i> (1996)</p> <p>Material stands for whole process. Multimodal: Material (metal swarf) + Title & Subtitle → Absent Context (engraving). Metonymy: (WASTE) PRODUCT-FOR-PROCESS.</p>	 <p>Figure 122 Ceal Floyer, <i>Door</i> (1995)</p> <p>Uncertainty as to location of context: light from behind door, or light from projector. Multimodal: Projector + Title.</p>
Absent-but-known part-whole relations	Polysemic Metonymy
 <p>Figure 123 Susan Hiller, <i>The Last Silent Movie/ Do you speak Lenape?</i> (2007)</p> <p>Mute image of soundtrack of lost language and culture. Not site-specific. Multimodal: Image+Process (etching) + Text.</p>	 <p>Figure 124 Ceal Floyer <i>Blind</i> (1997)</p> <p>Polysemic (one word /two related meanings) meaning shifts between <i>blind</i>: unable to see, and <i>blind</i>: a screen over the window. Not site-specific Multimodal: Video + Title.</p>
Part-whole + co-present category relations	Absent-but-experienced part-whole relations
 <p>Figure 125 Susan Ryland, <i>Light:Strip</i> (detail)</p> <p>Figurative source of abstract image revealed through title + sequential quality of image enables to-and fro comparisons between colour bands. Multimodal: Image + Title.</p>	 <p>Figure 126 Susan Hiller, <i>Magic Lantern</i> (1987)</p> <p>Perceptual illusions seen and heard by audience but not actually 'out there'. Multimodal: Tape + Slides.</p>

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