

'Lexical Priming and Metaphor'

Application of the theory of Lexical Priming to metaphoric
language.

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by

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To Poppy

Abstract

Metaphoricity is often regarded as a distinctive linguistic phenomenon, in opposition to literal, or non-figurative language. Recent research from a corpus-linguistic perspective has begun to show, however, that such a dichotomist stance to metaphor does not bear scrutiny. Current categorization of metaphoric language is unable to address the fuzzy, ambiguous nature of metaphoricity with any definitive set of linguistic characteristics (Deignan, 2005; Partington, 2006; Philip, 2011). Moreover, a metaphor's ability to violate or bend the limits of linguistic conventions (semantically, lexically, grammatically) is what gives those who employ them a certain degree of freedom in their use of language. The focus of this thesis is to explore and compare the lexical characteristics of metaphoric and non-metaphoric instances of language from a corpus-based perspective.

Hoey's theory of Lexical Priming (2005) presents a usage-based account for both the psychological motivation behind our understanding of language and our ability to use language fluently to communicate within a given context. Presently, the theory accounts for both spoken and written language within particular domains but little attention has been paid to figurative language and in how far priming can account for its usage. This research aims to present an account of how lexical priming can be extended to account for metaphoric instances of language. The focus of this thesis is to explore the relations of collocation, colligation, semantic association and pragmatic association in metaphoric and non-metaphoric instances of the items *cultivated* (v), *flame* (n) and *grew* (v) within a corpus of nineteenth century writings.

Hoey's Drinking Problem hypothesis, an outcome of the Lexical Priming theory is shown to provide an explanation for what drives us as language users to identify metaphoricity. The findings reveal differences in the lexical behaviour between metaphoric and non-metaphoric uses: as a metaphor, it can be argued that *cultivated*, *flame* and *grew* are qualitatively different lexical items, when compared to their non-metaphoric use(s). These findings suggest that lexical, grammatical, textual and pragmatic manifestations in language carry a great deal of importance in distinguishing between subtleties in word senses and meanings. Moreover, the findings show a metaphoric sense of an item appears to be dependent on the primings activated in a reader. It could be argued, based upon the lexical priming approach, that metaphoricity is inherent in the language user rather than the language itself. The research concludes more generally that corpus linguistics, as a method, can offer an explanation for why we recognise metaphoric uses of an item successfully.

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Annotation key

Unless otherwise specified, the following conventions have been followed in the examples:

CAPITALISATION: Semantic associations / lemmas

“Indented double quotes”: Full concordance lines

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Declaration

This work is original and has not been submitted previously in support of any degree, qualification, or course.

Katie J. Patterson

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Chapter 1 - Introduction

1.1 Introduction to research

The focus of this thesis is to explore and compare the lexical characteristics of metaphoric and non-metaphoric instances of language from a corpus-based perspective. Metaphoricity is too often regarded as a distinctive linguistic phenomenon, in opposition to literal, or non-figurative language. Recent research from a corpus-linguistic perspective has begun to show, however, that such a dichotomist stance to metaphor does not bear scrutiny. Current categorization of metaphoric language is unable to address the fuzzy, ambiguous nature of metaphoricity with any definitive set of linguistic characteristics (Deignan, 2005; Partington, 2006; Philip, 2011). Moreover, metaphor's ability to violate or bend the limits of linguistic conventions (semantically, lexically, grammatically), is what gives it its freedom in language. Exploring metaphor from a Neo-Firthian perspective, this research explores notions of collocation, colligation and semantic association in relation to metaphoric meaning. Metaphoricity, then, is viewed as a product of Sinclair's 'extended unit', whereby metaphoric meaning is derived from a range of factors both within and outside of the text.

The main premise to this research is that language, whether figurative or non-figurative, is a social tool, and repetitive patterns of use are adhered to in order to conform and retain understanding, or avoided in some extent, in order to create new expressions (Gibbs, 1994). Creativity is often thought of as a free act of expression, but while this may be true to some extent, the expressive effect of that choice of language is diminished if it does not retain meaning for the user. Creative exploitation is discussed by Hoey as "the result either of making new selections from a semantic set for which a

particular word is primed or of overriding one or more of one's primings" (2008: 16). Thus metaphor must operate within a set of conventions which allow us to recognize it as such.

Hoey's (2005) theory of Lexical Priming provides an explanation for the pervasiveness of Sinclairian based concepts of collocation and colligation, and accounts for our motivation to conform to expectations. Drawing on and expanding upon psycholinguistic literature (cf. Hoey, 2005: 8; Pace-Sigge, 2013: Chapter 2), Hoey's theory claims that every time we encounter a word we subconsciously note the patterns this word tends to form with other words in certain contexts, so that eventually, as a result of the cumulative effects of our encounters with this word, it becomes "part of our knowledge of a lexical item that it is used in certain combinations in certain kinds of text" (Hoey, 2005: 10). These patterns are manifest in grammar and lexis, but also in more secondary aspects, such as semantic association, and pragmatic association. They are more prevalent than structured rules: they are encountered psychologically, and created through repetition. When we re-use a lexical item, we are then likely to reproduce these combinations in their respective contexts in our own language production. Importantly for this research, these primings or expectations are dependent upon a community, genre, and time, and have the ability to change.

Together with a corpus linguistic methodology, Hoey's theory is adopted as a theoretical tool for analysing metaphoric language. Metaphoric and non-metaphoric instances of a single lexical item will be analysed in order to determine how far the instances (and thus senses) avoid each other's patterns of use and meaning. This in turn will determine the extent to which we as language users are primed to understand and recognise metaphoric senses as distinct from non-metaphoric, non-figurative senses. One intention of this research is to discuss metaphoric meaning from the perspective of the language users as much as of the text itself, and the findings contribute to the idea that metaphoricity is not inherent within the language. Rather, metaphoricity should be seen

as a fluid concept, dependent on language users and their relationships and experiences with language, both individually, and as a collective whole.

1.2 Research aims

There are three main aims to this research. The first aim is to explore the degree to which metaphoricity is seen as an inherent characteristic within the language. Most metaphor theories to date too often view metaphor as a definite phenomenon, that language users must pick up on if they are not to risk losing the intended meaning of an utterance. In contrast, by focusing on meaning within a Neo-Firthian framework, this research aims to re-focus discussions of metaphor within the wider discourse field. Such a view places importance on aspects such as context, pragmatic meaning, and the individual's mental lexicon, and subsequently what role these factors play in interpreting meaning. The first aim then is to explore what metaphoricity means, and the ways in which metaphoricity is manifest in the language, as revealed through a corpus approach.

The second aim is to test how far the theory of lexical priming is applicable to metaphoric language. So far there has been little attention paid to figurative language and in how far priming can account for its usage. Similar research by Hoey (2005) and Tsiamita (2009) looked at polysemy, and found that two distinct senses of a word or item tend to avoid each other's primings (as claimed in Hoey's Drinking Problem Hypothesis, 2005). In relation to a pervasive phenomenon such as metaphor, whereby analysis of metaphoric behaviour and subsequent identification of metaphoric language remains creatively 'unrestricted' and largely problematic, Hoey's (2005) theory may provide an explanation for what drives us as language users to identify such a phenomenon. The introduction of an extended theory involving our psychological associations with language could possibly

offer an explanation for how we recognise conventional norms and creative exploitations in relation to metaphor.

The third aim of the research is to apply corpus linguistic methods to an investigation of metaphor. Rather than deriving examples from theory, corpus-based methods allow the researcher to study metaphors as they occur in everyday, real-life usage. If meaning can be derived from context, as the present research will explore, a usage-based, natural-occurring, empirical approach allows one to draw on the social and discourse contexts in which metaphors are used (Cruse, 1986). Corpus linguistics allows for a lexically-driven, bottom-up, and context-dependent approach to metaphoric behaviour. Such an approach stands in stark contrast to conceptually-derived semantic categories (Lakoff and Johnson, 1980 and Glucksberg and Keysar, 1990), and other heavily theoretical approaches to metaphor. By analysing lexical behaviour found in real-world examples, the researcher is forced to confront the fuzzy aspects involved in metaphor. Moreover, corpus methods and analysis entail the acknowledgment that meaning is derived from repetitive patterns of use. This idea of repetition goes some way to providing us with notions of *expectation* in language behaviour.

1.3 Research Questions

To summarise the main aims in a set of research questions, these are as follows:

1. To what extent is metaphoricity inherent in language?
2. Can the theory of Lexical Priming be applied to metaphoric language, and does this provide an answer to the question of inherence?

3. What can corpus linguistic methods and Hoey's theory of Lexical Priming add to our current understanding of metaphor from a linguistic perspective?

The present study sets out to explore these three questions by means of three case studies. The studies are corpus-driven lexical analyses of three keywords, identified in a 49-million-token corpus of nineteenth century writing assembled by the author, when compared against a more contemporary, general comparator, the British National Corpus. The keywords examined are *cultivated*, *flame* and *grew*. The aim is to compare and contrast the lexical behaviours associated with clear metaphoric language and clear non-metaphoric language and to determine in how far the lexical behaviours (and subsequently the senses), are distinct from each other.

1.4 Potential value of the research

By applying the lexical priming theory to metaphor, metaphor is explored from a psychologically-motivated perspective, whereby characteristics or patterns found amongst metaphoric instances of an item are the result of our expectations, or primings. This approach would explain what other metaphor theories have missed so far: namely that metaphoric uses of language, alongside their literal, non-figurative counterparts, must be discussed firstly, in relation to meaning as an extended unit, and secondly, as meaning existing within the language users and their collective mental lexicon.

If metaphoric uses of a lexical item avoid the primings of the non-metaphoric uses of that same item, (as has been shown to be the case with polysemy (by Hoey, 2005, and Tsiamita, 2009), this would lead to the idea that metaphoric senses have, to an extent, a fixed set of choices in terms of grammar and lexis. Such a result would have implications for how we teach metaphor, particularly in EFL/ESL contexts.

1.5 Structure of the thesis

The material in this research is divided into two distinct parts. Chapter 2 presents a detailed account of the theoretical perspectives on metaphor, mainly from a lexical-based stance. Metaphor is discussed as a creative deviation from more conventional norms within the language. The chapter discusses the particular characteristics associated with conventionalized versus original forms of metaphor and highlights current problems with categorizing metaphoric language. Finally, the chapter will present an account of Hoey's (2005) theory of lexical priming, offering it up as a suitable approach to analysing metaphoric language. Chapter 3 will outline the methodological approach to the proposed investigation, presenting details of the corpus and the concordance software employed, and, most importantly, the method of identifying metaphoricity.

The main part of this thesis' investigation comprises Chapters 4, 5 and 6, in which three individual words - *cultivated*, *flame* and *grew* - are studied in-depth. Whilst the two sets of data (metaphors and non-metaphors) are analysed quantitatively in each case, a subsection of each chapter is given over to a qualitative analysis of problematic instances of metaphor: those in which a group of readers have not agreed on the presence of metaphoricity. The intention is to display the indistinctness that lies between instances of metaphor and other phenomena such as polysemy, metonymy and semantic extension.

Finally, Chapter 7 will present the conclusion of this research and argue for the importance of corpus analysis to the study of metaphoric language. The research concludes that Hoey's (2005) theory of Lexical Priming can be successfully applied to metaphoric language, and by doing so, offers an explanation as to why and how we recognise metaphoric language as distinct from non-metaphoric uses of the language.

Chapter 2 - Literature Review

Introduction to the chapter

This chapter comprises a review of the current literature relevant to this thesis. The chapter is divided into three sections; each one dealing with a separate but related aspect of the research, and each linked to a phase of metaphor study (categorization, identification and analysis). Section 2.1 entitled *Metaphor Categorization* provides general but relevant definitions of metaphor, beginning with a brief discussion on the classical framework (rhetoric) before acquiring a lexical focus, with an emphasis on deviation. Metaphor is discussed primarily as a form of 'creative' language. The focus is on how this association of metaphor and creativity has come to be established.

The second section is entitled *Metaphor Identification*. Part 2.2 discusses current metaphor identification approaches and methods, with the aim of highlighting potential limitations in current research. Part 2.2.2 provides the framework for the analysis of the study. The intention is to stress the ability of metaphoricity to alter in respect to time, context, community and environment. Here meaning is discussed within a Neo-Firthian framework. Key terms such as collocation, colligation and semantic association will be introduced. The final part within this subsection (2.2.3) focuses on the use of corpus linguistics as an approach to researching and identifying metaphor.

Whilst Sections 2.1 and 2.2 remain fairly general and technical in their approach to metaphor, Section 2.3 is more specific and highly relevant to the research project. The review of literature returns in more depth to the notion of metaphor as a deviation from an expected linguistic norm (2.3.1). The focus here is on the point at which a novel and 'convention-exploiting' metaphor becomes re-used and even expected within a

community. Hanks' Theory of Norms and Exploitations (2004) and Hoey's Lexical Priming Theory (2005) are offered up as alternatives to current approaches to identifying metaphoric characteristics within the language. Finally 2.3.2 discusses the Lexical Priming theory in more detail and its potential claims for metaphor. The conclusion shows that lexical priming provides a valid approach to investigating and analysing metaphor, based on recurring patterns of use, and our subsequent expectations, or primings, associated with such behaviour.

2.1 Metaphor categorization

2.1.1 Metaphor as creative language

The term metaphor is often defined in terms of movement. The thirteenth century French word *métaphore* comes from the Greek μετά (*meta*), "after, with, across" and φέρω (*pherō*), "to bear" or "to carry"¹. The idea of conveyance is given in Aristotle's *Poetics* by the term *epiphora*. According to Ricoeur (2003), the epiphora of a word implies a form of displacement or transference, i.e. "giving the thing a name that belongs to something else" (Aristotle, 1457b 6-7 cited in Ricoeur, 2003). Working at the same time as Aristotle, the Greek grammarian Diomedes emphasised the movement of both the thing itself and the language: "The transferring of things and words from their proper signification to an improper similitude for the sake of beauty, necessity, polish, or emphasis"².

More explicitly, Ricoeur (2003) draws attention to the act of borrowing or substituting implicit within metaphor. He focuses on the manipulation of the language rather than the thing or concept itself. According to Ricoeur, both 'borrowing' and 'substitution' are slightly problematic in their implications. Borrowing is only relevant in

¹ OED – Online. Accessed 14/07/2015

² Cited in Povozaev (2013: 45).

highly original, one-of-a-kind metaphors (after which point, the metaphor begins to represent the thing or concept more than the term originally borrowed does), and substitution, which is bound up with the idea of borrowing, signifies the false premise that there must be a more fitting word/phrase to be used in its place - an “absent yet available” candidate (Ricoeur, 2003: 21). The argument against this assumption is that a metaphor’s value then would only be decorative, a notion which scholars working in a range of traditions challenge.

Remaining within a rhetoric tradition, metaphor is regarded as one of the five tropes (tropes being collectively known as figures of speech). Trope can be defined as using a word or phrase in a sense other than that which is proper to it such as association, comparison or resemblance (Scott-Baumann and Burton, 2014). As a figure of speech then, the notion of transference is retained. The purpose of figures or tropes is usually to provide emphasis or clarity (though an ambiguity between literal and figurative sometimes distorts clarity). Under the label ‘figure of speech’ the OED defines metaphor as occurring when “a name or descriptive word or phrase is transferred to an object or action different from, but analogous to, that to which it is literally applicable”³. Here the action of transference belongs to the word, which is applied to an object or an action other than that to which it ‘literally’ or perhaps more accurately, most commonly and therefore expectedly, belongs. The term ‘analogous’ is open to interpretation, and possibly ambiguous or ill defined. Clarity of definitions will be discussed in more detail in section 2 of the chapter. Crucial to the premise of this research, Ricoeur claims in relation to rhetoric, “every figure implies a displacement, a transformation, a change of semantic order” (Ricoeur, 2003: 100). Thus we see metaphor as a displacement of some natural or expected semantic order within the language.

³ The term “literally” here is not without debate, but this will be discussed in section 2.

Whilst metaphor has remained central to many cognitive, philosophical, literary, and linguistic theories of language, its role and consequently its interpretation in each of these spheres has shifted considerably in various directions. What remains tantamount in most theories is the well-rooted acknowledgement that metaphor is creative in its design and use. Black's (1993) influential account of metaphor and philosophy formed the basis for the Interactionist approach - the idea that metaphor actually creates insight or new meaning. The primary subject in a metaphor, he claims, is coloured by a set of "associated implications" normally predicated on the secondary subject (Black 1993: 28). Ricoeur (2003) claims that metaphor revives our perception of the world, through which we become aware of our creative capacity for seeing the world anew. Similarly in literature, metaphor is assigned to the "literary lexicon" (Carter, 2004), with the notion of deviance remaining central to literary scholars working with metaphor within the formalist tradition (Nowotny, 1965; Leech, 1969; Short, 1996). Leech (2008) stresses that these deviations from the accepted code in literature are unique and meaningful rather than "unmotivated aberrations", describing them as a "semantic absurdity" (Leech, 2008: 16).

Creativity, linguistically, is itself defined by Sampson as occurring when a product commonly falls "outside any class that could have been predicted on the basis of previous instances of the activity in question, and yet the innovation, once it exists, is recognized as in some way a valid or worthwhile example of that activity" (Sampson, 2013: 4)⁴. In this sense then, part of a metaphor's inherent quality is that it overrides an expected use of the language. Carter (2004) claims that creative language "inheres in the degrees to which it departs or deviates from expected patterns of language and thus defamiliarises the reader" (Carter, 2004: 58). It is this notion of deviance which often remains central to a lexical analysis of metaphor (Philip, 2011; Hanks, 2013). Steen (2009) states that

⁴ He gives the analogy of a creative painter differing from a technically accomplished one because he produces canvases that deviate in some way from the stylistic norms established by earlier artists. (Sampson, 1979: 101-107).

metaphors are accurately considered “a form of linguistic deviation at the semantic level, which are used to create foregrounding effects” (Steen, 2009: 87).

In pragmatics, it must be acknowledged that metaphor is often seen as a development rather than a deviation from straight forward, non-figurative interpretations of language. The Relevance Theory in particular, claims that metaphor and a variety of related tropes (hyperbole and metonymy for instance) are creative exploitations of a “perfectly general dimension of language use” (Sperber and Wilson, 1995: 237). The relevance of a metaphor will be established by finding a range of contextual effects which can be retained as strong or weak implicatures. The wider the range of potential such implicatures, and the greater the hearer’s responsibility for constructing them, the more poetic the effect and thus the more creative the metaphor. A good creative metaphor therefore, is precisely one in which a variety of contextual effects can be retained and understood as weakly implicated by the speaker. It is the search for optimal relevance that leads the speaker to adopt, on different occasions, a more or less faithful interpretation of their thoughts. The result is literalness in some cases, and in others it is a metaphor.

Metaphor in this sense thus requires no special interpretive abilities or procedures; neither is it seen as a deviation from the literal: “it is a natural outcome of some very general abilities and procedures used in verbal communication” (Sperber and Wilson, 1995: 237).

Metaphor, then, can be viewed in the above cases as a creative, interpretive expression of a speaker’s thought, which may or may not be viewed in opposition to literalness. It is the presence of creativity in both thought and language which remains a suitable point of departure from which a lexical view of metaphor will be discussed hereafter.

2.1.2 Conventionalization versus originality in metaphor

The exploitation or extension considered characteristic of metaphor cannot occur without a collectively accepted 'normal' or expected way of using language. Working in the field of philosophy of language, Wittgenstein claimed that the meaning of a word or phrase is nothing other than the set of informal rules governing the use of the expression in actual life (Wittgenstein, [1922] 2014). Wittgenstein emphasised the idea that language itself can only be understood as a practice, and that meaning – and therefore understanding - is developed through social situations and interaction. More than this, it must be arrived at through the co-operation of the partners in a conversation. This co-operation is what governs the expected conventions of usage. From this perspective, language, whether figurative or non-figurative, is a social tool, and repetitive patterns of use are adopted to conform, or can be avoided to create novel and new expressions (Gibbs, 1994). Creativity is often thought of as a largely free act of expression, but while this may be true to some extent, the expressive effect of that choice of language is diminished if it does not retain meaning for the user. Philip (2010) claims of language generally, that there is a "requirement of expressing unique, unrepeatabe meanings by means of a syntax and vocabulary which must retain a high level of rigidity so that the texts can be understood by the users of language" (Philip, 2010: 151). In terms of metaphor, language is granted a less conforming 'level or rigidity'; either in terms of the grammatical or semantic relationships, but it must still retain enough linguistic conventionality (grammatically, lexically, pragmatically) to be understood by the receiver.

This idea brings to light the necessary distinction between truly novel and creative metaphoric language and the many other forms of creative and metaphoric, but more conventional, language. Black (1979) in his chapter of the seminal book *Metaphor and Thought* addresses the dichotomy between creativity and convention from a philosophical

perspective. He claims that a 'successful' metaphor must strike a balance between the two:

...the writer or speaker is employing conventional means to produce a non-standard effect, while using only the standard syntactic and semantic resources of his speech community. Yet the meaning of an interesting metaphor is typically new or 'creative', not inferable from the standard lexicon.

(Black, 1979: 23)

Developing from this, Black (1979) posits the danger of presenting a standard response to a given metaphorical statement: "such a view is untenable because a metaphorical statement involves a rule violation. There can be no rules for 'creativity violating' rules. And that is why there can be no dictionary of metaphors" (Black, 1979: 25).

Despite such a stance, metaphor theorists have still tried to define and classify metaphoricity based on definitive characteristics. The most prevailing type of categorization (and relevant to the current research) is based on a metaphor's conventionality or subsequent strength of *metaphoricity* (the less conventional the phrase, the stronger its metaphoricity). Deignan (2005: 47) categorises metaphors into four groups, based on a level of conventionality in their usage. These are (with her examples in brackets): innovative metaphors (*the lollipop trees*, Cameron, 2003); conventionalized metaphors (*the wind whispering through the trees*, Allbritton, 1995); dead metaphors (*deep*, of colour); and historical metaphors (*comprehend*, *pedigree*, Lakoff, 1987). The categories are set out in such an order, revealing the element of a cline from highly original down to those so well used and embedded in our language that we do not recognise them as metaphorical.

Bowdle and Gentner (2005) claim that a computational distinction can be drawn between novel and conventional metaphor. Novel metaphors invoke what they call base terms that “refer to a domain-specific concept but are not (yet) associated with a domain-general category” (2005: 199). They claim that as metaphors become conventionalised there is a shift in the mode of processing from comparison to categorisation. Metaphors, as the primary source of polysemy, allow words with certain, specific meanings to take on additional or related meanings. Bowdle and Gentner (2005) give two examples: ‘roadblock’ coming to mean any obstacle to meeting a particular goal; and ‘goldmine’ to mean anything that is the source of something valuable (2005: 198). In such cases, the second senses are typically more abstract than the primary sense. This conventionality occurs when the base meaning of a vehicle for metaphor, having been found to convey useful information about the target (for example ‘obsession is a tumour’), is figuratively compared with a range of new targets in future discourse (e.g. ‘doubt is a tumour’ or ‘a grudge is a tumour’). In terms of conventionality, they go on to explain the convergence of metaphor and polysemy, claiming that the ‘career’ of metaphor is the evolution towards metaphoric polysemy:

If these new alignments yield the same basic interpretation as the original alignment: that is if the same abstract relational scheme is repeatedly derived or activated in the context of the base - then the abstraction may become conventionally associated with the base. At this point, the terms will be polysemous having both domain-specific meaning and a related domain-general meaning.

(Bowdle and Gentner, 2005: 198)

We will return to the notion of polysemy and its relationship with metaphor in Section 3.

Partington (1998) suggests that placing emphasis on instances of metaphor that are semi-fossilized or conventionalized allows one to see where and to what extent the boundaries between fossilized and original metaphor begin to blur. Deignan (2005) also places dead metaphors within this fossilised/conventional group, claiming that as types of metaphor they are not easy to 'disentangle'. In contrast, Goatly (1997) defines the majority of semi-conventionalized metaphors as 'tired', meaning that speakers are still prompted to remember the literal meaning. Dead metaphors are described as 'sleeping'; the difference being that speakers are not prompted toward the literal meaning in any way, but implicitly it is still accessible. Goatly's (1997) categories more accurately describe the metaphors as 'still living', or still active within the language. Thus there is retained a sense of activity in the language or at the very least the ability for language users to perceive a double meaning in the utterance.

In terms of semantic analysis, Partington (1998) acknowledges that heavily used collocations that are metaphorical in origin such as a *strong mark*, or an *ailing business*, where only a part of the possible vocabulary set of the vehicle is used, cease to become parts of a metaphor and instead become "fossilized collocations". It is then that they are considered as dead. Partington (1998) illustrates this with *flow*, stating that when used in relation to the concept MONEY IS A LIQUID, it is a completely dead metaphor because of the way *flow* and especially *cash-flow* collocate: "It [cash-flow] is generated, or helped, can be positive or negative. It can even be under pressure, which, if it were a liquid, would result in greater speed of flow, the opposite of what the writer intends" (Partington, 1998: 118). Thus it is dead at the point when it has become genre-specific technical language, with no figurative content or opportunity to extend. In addition, Partington explains:

It might be possible to posit a general rule of metaphor, which states that a metaphor ceases to be a metaphor when it has no literal alternative, or when a metaphor is much more common than its literal alternative in its genre.

(Partington, 1998: 119)

Cruse (1986) suggests that if a metaphor is used sufficiently frequently with a particular meaning, it loses what he terms its “characteristic flavour, or piquancy, its capacity to surprise”, and subsequently, hearers/readers encode the metaphorical meaning as one of the “standard senses of impression” (Cruse, 1986: 41). Dead metaphors, according to him, are those whose literal meaning may still be activated or brought to mind by the language user, but is not needed to interpret or understand the metaphor: they are often transparent (or still accessible: Deignan, 2005). The same ‘dead’ category however also contains metaphors that have become re-used to the point of achieving a singular meaning as a lexical item. Therefore they are no longer associated with the literal meaning of the single items in a phrase. In this sense they may be non-compositional, though not necessarily (Svensson, 2008). It may also become opaque if the original meaning is not associated with the new metaphoric meaning. In such cases, the metaphoric meaning is the most obvious sense and thus would be the first to come to mind; interpreting it no longer requires the same processes of interpretation as original metaphors.

Nacey⁵ has mentioned the importance of keeping such uses of metaphor outside of the discussion, claiming that if they are heavily conventional they are most often unintentional. The problem with this viewpoint is that there is no clear cut distinction between intentional use and factors such as transparency or compositionality: as long as an original meaning may still be accessible, whether it is actually called upon remains uncertain. Also problematic is the level at which a metaphoric meaning becomes more

⁵ Personal communication – Corpus Linguistics conference 2015, Lancaster University. (Susan Nacey, Hedmark University College, Harmar, Norway).

salient or commonly used than the literal. Furthermore, meanings change with respect to time, and whilst an older literal sense of an item may not be accessible to a younger user, both the older and the younger language user may still achieve the same level of understanding.

Deignan (2005) describes the boundary between the four types as “fuzzy” rather than “stark”, and notes two fundamental assumptions. Firstly, it is a boundary that many individual linguistic expressions cross over time: “it seems likely that all conventional linguistic metaphors must have been innovative at some point” (2005: 48). Secondly, individual speakers are likely to disagree over the newness of something. Both Cruse (1986) and Partington (1998) also reflect on the idea that dead metaphors encompass a vast array of metaphor types and behaviours, and more importantly, these behaviours are not definitive.

Partington (1998) is original in his emphasis on the audience or language users in the role of deciding a phrase’s level of fossilization:

It should be remembered that what is a dead metaphor and totally transparent to people working in a sector may be quite opaque to outsiders. How does someone who is not a member of a particular discourse community know if a given metaphor is alive or dead for that community? The answer is to examine the way metaphor collocates.

(Partington, 1998: 118)

His comment emphasises not only the need for genre-specific research into metaphor, but also the importance of time and context. What we may class as a heavily fossilised metaphor in today’s texts may be considered relatively original in a corpus of nineteenth century fiction. The idea that metaphoricity is at times dependent on factors outside of

the text or immediate textual environment is something that will be returned to in Section 2.2.

2.1.3 Current issues with metaphor categorization

For many years, metaphor theorists within a range of disciplines have been concerned with the distinctions between literal and metaphoric language. For many in the philosophical and rhetorical traditions, questions relating to metaphor included “What is metaphor and how does it differ from both literal and other forms of figurative language?” and “Why do we use expressions metaphorically?” (Searle, 1979: 92). For those seeking answers to these questions, the distinction between literal and metaphor language is contrastive. This distinction coloured (and continues to colour in some schools of thought) the ways in which metaphor was interpreted. This section briefly introduces key and relevant approaches to metaphor in fields other than lexis, such as the Primary Metaphor Theory in cognitive linguistics, and the Relevance Theory in pragmatics, before going on to discuss problems with a contrastive perspective on metaphor (metaphor versus literal language). Key terms often used within this perspective (for instance *basic*, *salient*, and *prototypical*) will be discussed. The section then concludes by focusing on the recent shift towards more sociolinguistic and interpersonal views on metaphor, largely as a result of corpus linguistic methodology.

From a cognitive stance to metaphoric language, Lakoff and Johnson’s (1999) Embodied Mind theory emphasizes the link between what we think, and how we frame our thoughts in language. Their theory makes the claim that “our conceptual system is grounded in, neutrally makes use of, and is crucially shaped by our perceptual and motor systems” (1999: 552) and that as a result, our understanding of the world, is framed in

terms of concepts shaped through our bodies. Their work largely centers on Grady's (1997) Primary Metaphor hypothesis - the idea that each primary metaphor has a minimal structure and arises "naturally, automatically, and unconsciously through everyday experience by means of conflation, during which cross-domain associations are formed" (Lakoff and Johnson, 1999: 119). Complex metaphors are formed by conceptual blending. Universal early experiences lead to universal conflations, which then develop into widely accepted and conventional conceptual metaphors. Whilst the theory acknowledges the interdependence between how we think and how we frame our thoughts in language, a focus on shared conceptual systems tends to reduce the individual and their previous experience with language. This will come in to contrast with other theories of language discussed in Section 2.3. The cognitive approach to metaphor also shifts attention away from language, and many researchers argue that there has been an accompanying shift in focus away from novel metaphors too (Noveck and Sperber, 2004). Cognitive linguists have focused on the many, conventionalised or 'dead' metaphors found in language because these are held to realise the conceptual mappings that we use to make sense of our everyday experience.

From a pragmatics-based stance dating back to Grice and Searle, metaphor comprehension can be described as a three-stage process. This entails 1. Deriving literal meaning; 2. Assessing that meaning against the context of the utterance; 3. If it does not make sense, seek an alternative meaning. A metaphor thus renders an utterance 'defective' and prompts one to look for another meaning (Noveck and Sperber, 2004: 74). Following the Gricean maxim of truth, people reject a meaning if it is not true and seek an alternative non-literal meaning by implicitly converting the false categorical assertion into a true comparison. The example *alcohol is a crutch* is given by Noveck and Sperber (2004). The Relevance Theory then comes into play within this approach, to help determine which interpretation is relevant to the situation (Gentner and Wolff, 1997). In the case of the

crutch example, the interpretation that alcohol is *similar to/like* a crutch is the correct one, based on the similarities of support or dependence etc.

The traditional idea that the distinction between metaphoric and literal language is based on truth principles however, requires two assumptions. The first is that literal language must always be true, and the second is that, conversely, metaphor must always be false. Implied in this latter assumption is the idea that metaphor must always have a literal interpretation. Gibbs (1994) explains that the many researchers who have attempted to formulate a precise set of rules for the identification of metaphor based on its various deviant features (Bickerton, 1969; Levin, 1977; Steen, 2007) would suggest that if a metaphor were interpreted literally it would be “semantically anomalous, conceptually absurd, or simply false” (Gibbs, 1994: 222). Many philosophers however contest the concept of truth heavily, largely because all language is symbolic and representative. Reddy (1969) points out that ‘perfectly sensible’ sentences can be used metaphorically. The example he gives is “the rock is becoming brittle with age” (Reddy, 1969: 242), which could either be used literally “in the context of a group of people on a geology expedition, or metaphorically in the context of a group of students walking out of the office of some staunch old professor emeritus” (Morgan, 1979: 137). Noveck and Sperber (2004) argue that this standard pragmatic model persisted in the literature “because its literal-first hypothesis resonates with an approach that assumes both semantics and syntax are primary while pragmatics is secondary” (Noveck and Sperber, 2004: 14). This was according to them, a common assumption in psycholinguistic circles particularly. Glucksberg (2004) and others have since demonstrated how metaphoric interpretations of sentences are carried out as automatically as other linguistic processes.

More recently, linguistic discussions on metaphor have begun to focus on social aspects of the interpretation process. This discourse shift takes on board ideas from cognitive theory about metaphor in thinking and the widespread, conventionalized nature

of much metaphor, but it also connects the conceptual with the linguistic, in theory and in empirical work. Gibbs and Cameron (2008) claim that metaphor performance is shaped by discourse processes that operate in a continual dynamic interaction between individual cognition and the social and physical environment. Thus the notions of truth, and violation of truth does not fit their approach to metaphor. Instead, metaphor is seen as a dynamic and on-line expression, created through the dynamics of the given discourse event. Their approach is based on dynamic human action more generally, which attempts to describe “how the body’s continuous interactions with the world, including other people, provide for co-ordinated patterns of adaptive behaviour” (Gibbs and Cameron, 2008: 65). In relation to metaphor, this means that understanding and interpretation emerges from both intra and interpersonal interactions. The concept of the ‘metaphoreme’ (Cameron and Deignan, 2006), based on Brennan and Clark’s (1996) notion of ‘conceptual pact’ highlights the centrality of a dynamic approach to interpreting metaphor. According to both theories, when a concept needs to be labelled for the first time in discourse, a speaker may provide an ad-hoc label for this concept, which may then be picked up and repeated by the conversational partner. In terms of the ‘metaphoreme’ specifically, this refers more widely to a bundle of lexico-grammatical, cognitive, semantic, pragmatic and affective features around a phrase that has metaphoric meaning. The term is used as a shared way of referring to the concept and is thus termed a ‘conceptual pact’. This agreement may only be temporary in use (a single conversation perhaps), or it may be re-used and recycled in further discourse events. Cameron and Deignan (2006) argue that the ideational content of a metaphor is not processed separately from its linguistic form:

the two are learnt together, stored together and produced together in on-line talk. Metaphorical language and metaphorical thinking are therefore interdependent, each affecting the other in the dynamic and dialogic processes of talking-and-

thinking.

(Cameron and Deignan, 2006: 675)

Cameron and Deignan (2006) have been able to show through corpus methods, that their 'metaphoreme' or "non-literal expressions with a relatively fixed form and highly specific semantics and pragmatics" (2006: 671) are very frequent in the data but are not well accounted for by current cognitive metaphor theory. With the advent of corpus linguistics and the more usage-based approach this offers to language analysis, metaphor theorists now have the ability to look at larger amounts of real data when making their claims. As a consequence of the introduction of corpora, truth and the violation of truth become less central to a theory on metaphor, largely because the focus shifts to an interactive and sociolinguistic one.

According to corpus linguists, issues of truth cannot be dealt with in isolation. An example can be demonstrated with the word *literally*. The phrase, *My heart bleeds for them, literally bleeds!*⁶, found in the British National Corpus (BNC) written fiction subfolder, exploits the notions of truth and literality. Without the word *literally*, the dependent clause standing alone would probably unquestioningly be labelled as metaphoric. However the word *literally* challenges that notion, as it is reaffirming the truth of the phrase. Knowing this, we still understand the original clause to be metaphorical, so we know to disregard the truth: instead, it is seen as a form of exaggeration. What it is that makes us know to interpret the phrase in such a way, (the fact that if the person's heart was bleeding, they would be unable to speak. Or perhaps, there is no reason for a heart to bleed *for* someone or something else. It cannot be causative), is what also makes us aware also of grammatical and lexical violations. The example stands to show that, despite a linguistic marker of truth, we recognise the

⁶ For all concordance lines, see appendix.

statement is metaphoric, through other, more important linguistic markers. Moreover, truth is governed by the context in which it appears (see Deignan, Littlemore and Semino, 2013; Svensson, 2008), which places value on interpretation within a textual context. This idea will be developed on in the coming sections.

Black's (1979) claim that there cannot be rules for 'creativity violation' and hence no metaphor dictionary holds true largely, because metaphor does not violate a single linguistic/semantic rule. Moreover, its scope in violating or bending the limits of semantics is what gives it its freedom and pervasiveness in language. Black (1993: 34) argues that not only is there incongruence between the literal and the metaphorically intended meaning, but that the metaphor would be rendered meaningless if interpreted literally. Although this looks like a version of the truth argument turned on its head, Black's emphasis is on meaning gained from outside of the structure. Ariel (2002: 362) also claims that when an utterance deviates from its expected or typical *context*, this is also often a sign of metaphoricity. Furthermore, the notions of concrete and abstract often play a role in definitions of metaphor/literal language, particularly if a word or phrase has both meanings; the concrete one generally has preferred status (see Svensson, 2008: 89). However, this is not a definitive criterion, and Svensson highlights this with a corpus investigation of *way*, more often used in its abstract sense (manner, fashion), than its concrete sense (avenue, path). Just as problematic are terms like *prototypicality* (Hudson, 1998), *salience*, *coreness* and *dependency* (Deignan, 2005), which are often used as identification markers of literal or metaphoric language.

Deignan (2005) claims that coreness and dependency are the central factors in distinguishing between conventionalized and dead metaphors:

If a conventionalized metaphor tends to evoke, at some level, a literal counterpart, it follows that the literal sense of the pair must be more 'core' than the metaphorical

sense, and the metaphorical sense must be 'dependent' on the literal sense in some way.

(Deignan, 2005: 41-42)

Evidence of dependency is found where the metaphorical sense is not freestanding and is usually qualified using the target domain words. Cruse (1986) describes such a notion using the example of *mouth*. Usually metaphorical instances of the word are post-modified by a target domain noun, such as in *mouth of the river* or *mouth of a bottle*. However, when *mouth* remains unmodified, it usually signals the literal meaning of the word: "At school, we're doing a project on mouths" (Cruse 1986: 72). According to both Cruse (1986) and Deignan (2005), this linguistic pattern is taken as evidence that the metaphorical sense of the word is dependent on the literal sense, which remains core.

Although salience remains distinct from literality, it is often referred to as characteristic of a word or phrase's literal meaning, and thus often acts as a marker of contrast and comparison with the word/phrase's metaphorical meaning. Most linguists would claim that salience implies that words or phrases have to be encoded in the mental lexicon, retaining prominence through frequency and familiarity. Salience is also deemed as subjective and unfixed "because the salient meaning of a word, collocation or idiom is the most dominant (prominent one) for an individual" (Giora, 2003: 40). Again, this statement brings to light the importance of an individual's exposure to and experience of language.

Salience is most often defined by two factors: historical priority and frequency (Steen, 2009). There are problems with both of these concepts. Firstly, the notion of 'historical' can be entirely dependent on the age of the language user. It also reduces the importance of the contemporary meaning, which is often the most frequent. Secondly, a word's frequency does not necessarily determine whether it is literal. Hanks (2008)

highlights this with the term *backfire*; more often used in its metaphorical sense denoting plans and tactics backfiring, than in its literal sense e.g. a car backfiring. The majority of idioms and indeed some metaphors (word or phrase) are more salient than their literal counterparts. Hoey (2009) cites the phrasal verb *dry up* as being more commonly found in its metaphoric sense, and furthermore, in an abstract rather than a concrete (relating to liquid) sense, for example, funds *drying up*.

The Pragglejazz group (2007) based at the VU University in Amsterdam have created a metaphor identification process (termed MIP and later developed as MIPVU⁷), which identifies metaphoricity in any item (grammatical or lexical). According to the test, when the word in question is used in comparison and contrasted with the item's most 'basic' meaning, it is said to be metaphorically used. Although they avoid the terms literal and salient, there are potential issues with the term 'basic' and subsequently the idea of comparing and contrasting all other meanings. Dependency is again a prerequisite for the Pragglejazz group, for comparing and contrasting two uses of a word, and the problem lies with dependency varying from person to person. It is also the case that some heavily fossilised metaphors are not at all dependent upon their literal counterparts. The conventionalised metaphor *to break one's heart* is an example, whereby our understanding and use of the metaphor is not (for many of us) dependent on us bringing to mind the image or notion of physically tearing a heart in two. The question arises of whether we can really decide a phrase's level of metaphoricity based on a use of the word or phrase's literal meaning, which may make no sense in the new context.

Salient or basic meanings are most difficult to pin down because of the subjectivity that lies at the heart of making judgments. Hanks (2004) gives the interesting example of *funk* and the difficulties faced by lexicographers in defining the term:

⁷ Incorporating the initials of their institution: VU University, Amsterdam

For someone born in the 1940s with a traditional British education, this is hard to answer by consulting intuitions. It turns out that the dance-music sense is eleven times more common in the British National Corpus (BNC) than the terror sense. This is a statistic that is potentially relevant for computational natural language processing of contemporary texts. The terror sense, according to OED, is first found in the 18th-century Oxford slang. Readers living in 2005 may associate it with archaic British public-school literature.

(Hanks, 2004: 248)

Similarly, Steen et al. (2010) come across problems with identifying the most basic meaning of *fit* with their metaphor identification process. Although the *fit = suitability* definition is nearly 400 years older than that of *fit = healthy*, they intuitively choose the latter as the most basic because of its relatively higher frequency. Also in relation to diachronic studies, stipulation of both MIP and MIPVU is that historical metaphors are not taken into consideration on the premise that the audience addressed is contemporary. Thus there is no margin for flexibility: choices and decisions on whether a word is classed as metaphoric remain static and fixed within their criterion.

Two fundamentally false conceptions have been brought to light in this section, emphasising the inability to clearly and definitively separate out metaphoric from literal meaning. Firstly, metaphoric characteristics are often treated as if they were inherent properties of words rather than individually determined (Philip, 2011), and secondly, the labels *literal* and *metaphoric* are still, at times, seen as contrastive. Instead, this research moves away from a traditional discussion on literality and what makes a statement metaphoric or literal. The focus introduced from corpus linguistics shifts the perspective onto why metaphor and literal uses remain distinct. Answers are sought to the questions: Why doesn't literality get in the way and make a metaphor unintelligible? and What is it that makes metaphors interpretable?

In his work on metaphoric meaning, Hanks (2004) borrows the term “meaning potential” (cf. Halliday, 1971). The term is applied to the potential of words to contribute appropriately to the meaningfulness of an utterance, but Hanks (2004) goes on to extend this to mean that “although the likely interpretation of most conventional patterns of words will be indistinguishable from a certainty, it is not an absolute. There are no literal meanings, only varying degrees of probability” (Hanks, 2004: 247). Gibbs (1994) provides the similarly suitable term “tension” for describing meaning arising from literal incompatibility. The notion of tension is a suitable one, which stands to highlight the unstable and transferrable element of meaning, almost like a rope being tugged in both directions alternatively *and* simultaneously. Metaphoricity is a gradient rather than a definitive characteristic of language and it is argued here that the lines between metaphorical and non-metaphorical are not always visible, and are often subjective and dependent on the wider context. More fundamental to this research is the argument that the focus of understanding metaphoricity and metaphoric meaning must shift from a purely textual one, to one that is user-driven, existing in the minds of the language user.

2.2 Metaphor identification

2.2.1 Identifying meaning in metaphor – A Neo-Firthian framework

Returning to Wittgenstein’s view that the meaning of a word or phrase is determined by the set of informal rules governing the use of the expression in social situations, meaning can be interpreted as a consequence of our ability to follow these informal rules. As such, meaning is the sum of our relationship with language, and its relationship with the world:

Wie wir uns räumliche Gegenstände überhaupt nicht außerhalb des Raumes, zeitliche nicht außerhalb der Zeit denken können, so können wir uns keinen Gegenstand außerhalb der Möglichkeit seiner Verbindung mit anderen denken⁸.

(Wittgenstein, 1922: 12)

According to Wittgenstein, language has an 'open structure', whereby *meaning* has the ability to subtly shift according to the subjective understanding of the language users and their circumstances of use. Philosophers of language working within this tradition claim that this openness and subjectivity is what reinforces socialisation amongst individuals. Speakers, as collective individuals, become members of a society and it is the creation of this community which monitors the collective uses of language (*cf.* Habermas, 1990; Gadamer, 2004). The importance of a society-influenced set of rules or norms will be discussed in more depth in 2.3; for now, it is Wittgenstein's ideas of meaning which are central to the research.

Influenced by Wittgenstein, J. R. Firth established a contextual theory of meaning, focusing on the idea of meaning as subjective and dependent upon the collective uses of individuals. More specifically, a contextual theory of meaning claims that "the formalization of contextual patterning of a given word or expression is assumed to be relevant to the identification of the meaning of that word or expression" (Tognini-Bonelli, 2001: 4). In light of this statement, meaning is not situated within the isolation of an item itself, but inextricably tied to its place in both co-text and context. Metaphor has the ability to exploit all of these conventions in which meaning can be attained, in order to create an innovative utterance. These exploitations occur at the level of the individual lexis as well as in the grammatical structure or colligational pattern. However,

⁸ "Just as we cannot think of spatial objects at all apart from space, or temporal objects apart from time, so we cannot think of *any* object apart from the possibility of its connection with other things" (trans. Ogden, 1981).

exploitations are also manifest at more abstract levels of meaning. In order to discuss this further, a brief introduction to a Neo-Firthian view of meaning and lexical behaviour must be presented in relation to metaphor. This section will discuss the terms *collocation*, *colligation*, and *semantic prosody/pragmatic association*, each in relation to metaphoricity. Nelson (2000) claims that these terms cannot be considered independent entities or concepts, rather that they are “interdependent and together create a network of meaning” (2000: 122). It is this network, extending out beyond the text, in which metaphoricity attains its meaning.

The term *collocation* refers to the lexical ‘company’ a word keeps and was brought into the field of linguistics by Firth in 1957 (see Pace-Sigge, 2013, for a full account of the term’s history), and extended by Sinclair (1991). Hoey (1993) specifically defined it as “the relationship a lexical item has with items that appear with greater than random probability in its (textual) context” (1993: 6). In terms of metaphor, collocation is an important aspect of identifying and analysing metaphoric language at the level of the lexis. In particular, Deignan (2005) claims that collocation patterns are important in considering how people use metaphor both conventionally and innovatively. This has implications for the processes involved in the comprehension of metaphors:

The study of collocation patterns seems to suggest that two forces, which tend to oppose each other, shape the linguistic force of metaphors and metonymies. One force is the need to express and develop abstract and innovative ideas through metaphor ... The other force seems to be the human need to communicate unambiguously, and therefore to reuse known sequences of words with meanings that are regularly associated with them.

(Deignan, 2005: 193)

Put simply, collocations provide giveaway information for metaphoric uses because people do not stray too far from expected conventions. Cruse (1986) further argues that

...the semantic integrity or cohesion of a collocation is the more marked if the meaning carried by one (or more) of its constituent elements is highly restricted contextually, and different from its meaning in more natural contexts, e.g. *heavy* in *heavy* drinker.

(Cruse, 1986: 40)

Here Cruse argues that the notion of consumption is a pre-requisite in this context. In such an instance, any other meanings associated with the item *heavy* are not called upon. In relation to metaphors, semantic cohesiveness is even tighter if the meaning of one of the elements of a collocation requires a particular lexical item in its immediate context. These become 'bound collocations' (similar to Partington's term 'fossilised collocations' in 2.2). Cruse (1986) gives the example: *to foot the bill*, whereby *foot* is strongly associated with *bill* (particularly within the specific structure shown). Cruse and Partington both agree that once speakers begin to identify a particular collocation as regular, the phrase becomes rigidly fixed and metaphor loses much of its originality, moving into the territory of fossilisation. Thus the particular collocation (not merely the semantic meaning of the words) become a fossilized unit.

More deep-seated than this, however, collocation is argued to be a psychologically driven concept. Partington (1998) claims that collocations are "not only a textual phenomenon but also a psychological one. The awareness of what is normal collocation is clearly an important part of a native speaker's communicative competence" (Partington, 1998: 139). Additionally Hoey (2005) indicates that collocation is a pervasive concept, with the ability to carry with it our mental knowledge of what a word means:

We can only account for collocation if we assume that every word is mentally primed for collocational use. As a word is acquired through encounters with it in speech and writing, it becomes cumulatively loaded with the contexts and co-texts in which it is encountered, and our knowledge of it includes the fact that it co-occurs with other words in certain kinds of contexts.

(Hoey, 2005: 8)

This statement by Hoey (2005) reveals the premise behind his theory of Lexical Priming, which will be discussed in more depth in 3.2. For now, it is enough to acknowledge that collocations and associations between items are deeply embedded in the minds of language users, dictating the ways in which language is subsequently used.

Developing on this, meaning is also dependent on grammar as much as lexis. Halliday (1985) claims that that meaning also lies in the sequence of words and that this meaning is similarly created through repetition. The term *colligation*, a concept also initiated by Firth (1957) but developed by Halliday (1975) amongst others, refers to "the grammatical company a word keeps and the positions it prefers", or more simply, what a word "typically does grammatically" (Hoey, 2000: 234). Again, the association is argued to be a psychologically driven one and allows us to recognise meaning based on the grammatical structure of an item or phrase, metaphorical or otherwise (see Pace-Sigge, 2013: 30-53 for a background to collocation and colligation as psychological concepts). Importantly, Sinclair links grammatical choice very clearly to a lexical necessity, paving the way for claims that "there is no longer sense in distinguishing between lexis and grammar" (Hunston, 2001: 15).

In terms of metaphoricity, Goatly (1997) claims that both collocations and colligation allow us to understand metaphoric meaning by drawing upon (some of) the usual associations of a word or phrase:

...there is the tendency for people to want to develop creative language versus the opposing tendency for language patterns to become conventionalized ... an unconventional act of reference or colligation is understood on the basis of some similarity, matching or analogy involving the conventional referent or colligates of the unit and the actual unconventional referent or colligates.

(Goatly, 1997: 86)

Thus the meaning of the metaphor is implicitly dependent on some association of the item with its more literal or conventional associations. Goatly (1997) claims more specifically of metaphoric verbs “that they can indirectly evoke imagery but only by being hooked up to their conventional colligates – we cannot imagine kicking without imagining a foot” (1997: 86). In this sense, metaphors are dependent on meanings not expressed in their metaphoric form. This suggests that meaning occurs at a more abstract level.

In relation to lexis, it is important to consider metaphoricity as occurring not only in individual words but lexical items. This notion draws upon an important distinction in the work of Sinclair (cf. 1991), and metaphor theorists such as Pragglejazz (MIP, MIPVU, 2007). Sinclair (1991) claims that meaning is derived from words in association rather than isolation. Furthermore “the meaning of words chosen together is different from their independent meanings. They are partly delexicalised. This is the necessary correlate of co-selection” (Sinclair, 2004: 20). Steen et al. (2010) claim however, that each word in a given text can be tested for metaphoricity (within that particular text and context), based on a criterion involving a contrast and dependency between that individual use and a more salient or common meaning of that given word. As has been discussed, this view approaches metaphor from a meaning-in-isolation stance. Within a neo-Firthian framework, meaning can only be derived from items in context. More importantly for the

current research, metaphors are often capable of forming within phrases. Thus meaning cannot always be defined by an individual word choice. This difference in view serves to illustrate the extent to which different theoretical approaches can impinge on our decision of whether we recognise metaphoricity.

Building on from these structural manifestations of metaphoricity, there exists a more abstract layer of meaning, not present in the lexis or the grammar on their own. Remaining within a Neo-Firthian framework of meaning, a word or phrase is itself capable of expressing implicit or hidden meaning. More specifically, Sinclair (1991) notes that “many uses of words or phrases show a tendency to occur in a certain semantic environment. For example, the verb *happen* is associated with unpleasant things – accidents and the like” (Sinclair, 1991: 112). Sinclair terms this semantic preference. Other comparable notions include *semantic prosody* (Firth, 1957, taken from the phonological concept), *connotation* (Philip, 2011), *resonance* (Black, 1962: 93), *pragmatic association* (Hoey, 2005) and *attitudinal affect* (Partington, 2004). Stubbs (1996, 2001, 2006) expands on original work by Sinclair bringing to light the varying levels of structure within semantic prosody or preference, most importantly pragmatic, discourse and textual functions, creating the term *discourse prosody*. Hoey (2005) works with the same distinctions as Stubbs, acknowledging *semantic association* as a semantically driven preference and *pragmatic association* as a more attitudinal, and at times discourse, feature. At the same time, he notes that ‘prosody’ is not a helpful metaphor in a theory of priming⁹ and ‘discourse’ covers more than is intended. Both terms *semantic association* and *pragmatic association* will be adopted in the current research.

It is useful to stress that both the concepts of semantic association and pragmatic association are increasingly abstract notions of meaning. Pragmatic association is important to our understanding of a metaphor, and subsequently, our own use of it.

⁹ Personal communication via email (17/09/15).

Knowles and Moon (2005) give a clear example of it in reference to the poem 'The Field Hospital' by Paul Muldoon. The terms *cold-blood*, or *hot-blood* are widely understood as conventional metaphors; however, Muldoon's use of the collocation *cold nor hot bloods* makes us react to the underlying connection between literal and metaphorical meanings as if these are creative metaphors. Part of this is due to the strong semantic prosodies (their term) present, as well as the collocation, independently of the grammatical structure being something novel. Whilst Cameron and Low (1999) claim that the power of poetic metaphor comes from the poet's ability to create many such original, one-of-a-kind mappings between mental images, the emphasis in this research is on the juxtaposition of language (semantic relations) at the level of the text, rather than on the conceptual domain (mental images being mapped).

Each of the terms discussed in this section are derived from corpus linguistic methods. As a lexically driven approach then, corpus linguistics will allow for a full analysis of lexical behaviours and characteristics associated with metaphor. If meaning is derived from context, as is the foundation of a Neo-Firthian/Sinclairian approach, then the analysis will provide an insight into metaphoric meaning more generally. This may provide clues to answering such questions as how do we identify a metaphor? And what makes us recognise one?

2.2.2 Importance of a corpus driven approach to metaphor identification

As highlighted, corpus linguistics has meant a shift away from the earlier questions involved in metaphor study (such as what makes literal and metaphoric language distinct), to more usage-driven issues, based on sociolinguistic and interpersonal context. Whilst a philosophical discussion on truth or literality can be illustrated with artificial examples, or

from structures which are seen as vanishingly rare (e.g. *he is a Lion*, Cohen, 1993¹⁰), corpus linguistics as a method is concerned with real-world data. As a consequence, the perspective on metaphor shifts to a user driven one where theory is derived from the data. Corpus linguists then are less focused on how creativity works or our ability to say something new, but instead data can offer new insights into such questions as what it is that stops literality from getting in the way of a metaphoric statement or what it is that allows us to recognise a metaphor. Rather than isolated examples, conventional instances of metaphor provide valuable data for such questions. Corpus linguistics have the resources to focus on repeated patterns and repeated instances of metaphor, and by their nature, reoccurring instances are clearly successful as metaphors.

The last decade has seen researchers follow a trend of more usage-based approaches, drawing their methods and their theories from the field of corpus linguistics (Koller, 2006; Semino, 2006; Partington, 2006; Deignan and Semino, 2010). Taking up the idea that meaning is derived from context, as proposed above, a usage-based approach means that research draws on the social and discourse contexts in which metaphors are used (Cruse, 1986), rather than abstract categories. Such developments, however, have brought about methodological issues, ranging from the categorisation of metaphorical language to the identification and extraction of such language from a large corpus.

As already noted, one of the most recent approaches to come into the foreground of corpus studies of metaphor is MIP(VU) (Pragglejazz, 2007). Its popularity exists not least because the identification processes they propose offer an objective and fairly straightforward methodology for identifying the metaphoric instances of language amongst large amounts of data. Most recently, Semino et al. (2015) undertook an extensive project on metaphor in the field of healthcare using the MIP procedure. One study coupled semantically associated metaphors within conceptual domains (e.g.

¹⁰ Later in the section this will be shown by Deignan (2005) to be a rare metaphoric structure

violence and journey) with the use of a corpus-assisted methodology. W-Matrix was used to generate items in semantically associated fields and domains, (e.g., the semantic field 'Warfare'), based on a sample text, before the researchers manually identified the metaphoric uses with the MIP procedure (Steen et al. 2007). They found that violence metaphors are not by default negative and journey metaphors are not by default a positive means of conceptualising cancer. Furthermore, they claim that a greater awareness of the function (empowering or disempowering) of metaphor use by patients "can lead to more effective communication about the experience of cancer" (Semino et al. 2015). Thus, their research has wide reaching implications within public health, bringing about awareness of the way that language is used in defining illness and recovery from illness. Semino et al.'s (2015) research stands out for combining cognitive linguistics and qualitative analysis of conceptual domains with a corpus-assisted, quantitative methodology, incorporating lexical analysis at the level of the text. Other studies have undertaken similar approaches (Knowles and Moon, 2005; Koller 2006; Partington, 2006) bridging the gap between heavily theoretical approaches to metaphor and practical data-driven methods.

As has been shown in recent corpus studies and theoretical works, categorizations of metaphorical language cannot address the fuzzy, ambiguous nature of metaphoricity by simply highlighting a set of metaphoric criteria making use of certain and definitive linguistic characteristics (Deignan, 2005; Partington, 2006; Philip, 2011). Deignan's (2005) brief account of the difference in behaviour of idiom and metaphor provides interesting evidence that idioms are used in much more rigid colligational structures than metaphors. Restriction of a metaphor to a single collocation is, according to Deignan (2005), evidence of an idiom. Deignan gives the example of the noun *cat*, which is typically only used metaphorically in the phrases *fat cat* and *cat burglar*. Interestingly, the converse applies; the collocation *fat cat/s* is very infrequent in its literal meaning. A reason for this is that

the phrase is not semantically accessible, i.e. there is no relation to any particular feline behaviour. In contrast, the adjective *catty* combines fairly freely and is used both attributively and predicatively, although the phrase does not tend to be used in a literal sense. Deignan (2005) demonstrates the use of collocation in less fixed metaphorical structures, using *pay* and *price*. Despite the ability of the collocates *pay* and *price* to have meaning in a literal sense, in the majority of instances Deignan claims that the collocation is restricted to a metaphorical domain, particularly when used with adjectives including *high*, *heavy*, *steep*, and *small* (2005: 211).

From a discourse analysis perspective, Partington (1998, 2006) provides an insightful account into metaphors relating to business journalism, based mainly on semantic relationships. Using a corpus-based methodology, Partington (2006) investigated the behaviour of systematic metaphors in written business discourse and in spoken news and political discourses. The research showed that by uncovering the network of systematic metaphors used in a particular discourse, "it was possible for an analyst to hypothesize how actors in an institutional setting (purport to) see their world and their own behaviour in it" (Partington, 2006: 258). Thus more generally, Partington's study makes claims for genre-specific metaphoric language. Although the study focuses upon external rather than internal patterns within metaphors, (i.e. grouping metaphors into domains based upon semantic imagery rather than looking at frequency and patterning within the phrases themselves), Partington (1998) discusses a cline in terms of strength and frequency of metaphorical language. What is relevant is that he calls for importance to be placed on where the extremities of the metaphorical cline blur (i.e. semi-fossilisation), in order to gauge specific traits/behaviours at either end of the cline:

There is a cline in the originality of metaphoric use, from the unusual, through the well trodden, to what is usually called the dead metaphor. The Lakoff and Johnson approach,

concerned as it is to demonstrate the all-pervasive nature of metaphor in language and thought, tends to concentrate exclusively on the well-trodden to the dead extremity of the scale: Argument is war, Ideas are objects...

(Partington, 1998: 117)

Thus it is the emerging patterns of the not so obvious, or conceptually analogous, metaphors that have the ability to provide the researcher with information of how meaning emerges, (develops, overlaps, extends). Corpus linguistics offers the best approach to undertake such research.

Deignan (2005) also emphasises the importance of semantic analysis through corpus methods. Semantic analysis steers away from the reduction of metaphorical language into replicable and set structures, which is what corpus software works with. Focusing on target domain uses from the same word class as the source domain, in particular, fails to take into consideration other fundamental patternings of metaphor. This claim comes in response to research on noun-noun animal metaphors. Animal metaphors have been given much attention in the past, but by restricting work to same word class metaphors, such as *he is a lion* (Cohen, 1993) and *Richard is a gorilla* (Searle, 1993), researchers have failed to account for natural usage and frequency that can be more easily accommodated in corpus approaches. Corpus data have subsequently revealed that such noun-noun utterances are fairly rare in naturally occurring data. Instead, Deignan (2005) claims that the majority of animal metaphors are used in situations where the target domain form is verbal, such as *to hound/weasel/ferret/horse* (2005: 48). This focus on word class in metaphor is an area not well trodden.

Another reason for not restricting a corpus search to the same word class vehicle and target is that a difference in meaning will usually be reflected in a difference in form (Sinclair 1991). According to Deignan (2005), this means that a metaphorical sense will

always differ formally at some level from its literal counterpart. Sinclair's work on *build* (1991) demonstrates this, by showing that the word tends to be transitive and is used without a particle when it has a literal meaning:

(1). *For at least two years, they had built homes for the elderly* (Sinclair, 1991).

On the other hand, Sinclair (1991) claims that the metaphorical use tends to form one of two patterns. Firstly, when the entity which is built is regarded negatively, the verb tends to be intransitive and used with the particle *up*:

(2). *It enables him to cover his tracks in the short term; in the long term his problems build up* (Sinclair, 1991).

When the entity that is built is regarded positively, that is, displays positive prosody or pragmatic association, the verb conversely tends to be transitive but with the same use of the particle *up*:

(3). *You can begin to lead a normal life, above all, build up a sense of personal worth* (Sinclair, 1991).

Although there is no difference in the parts of speech used in these examples, there is a detectable difference at a syntactic level. Deignan (2005) claims that it should be noted that sometimes these differences are 'a tendency' rather than always being clear-cut. Corpus-based methods allow one to determine the significance of frequency in patterns. This is also further evidence to support the importance of pragmatic association in the interpretation of metaphor. Deignan claims "metaphors are often chosen in order to

present a particular evaluative stance towards the topic” (2005: 1000). Louw (1993) has also shown how a general corpus search can be used to identify the typical evaluative force of a word. He then compares this to specific cases of a word in literature, and shows how breaking typical patterns can create an effect of irony.

In summary, corpus methods allow for a lexically-driven bottom-up and context-dependent approach to metaphoric behaviour. This stands in stark contrast to conceptually-derived semantic categories (Lakoff and Johnson, 1980; Glucksberg and Keysar, 1990) and other heavily theoretical approaches to metaphor. By analysing lexical behaviour found in real-world examples, the researcher is forced to confront the fuzzy aspects involved in metaphoricity, an indeterminate phenomenon, able to come into and out of view depending on a range of context-dependent factors. Moreover, corpus methods and analysis entail the acknowledgment that meaning is derived from and dependent on repetitive patterns of use. This idea of repetition goes some way to providing us with notions of *expectation* in language behaviour.

The following section will return to the theoretical aspects of metaphor from the perspective of creative exploitation. In particular, focus will be placed on how the reoccurrence/conventionality of an exploitation presents itself in lexical characteristics and subsequently how these characteristics prime language users.

2.3 Metaphor Analysis

2.3.1 Exploitation versus expectation

When a metaphor is created, this is said to be a new event, where a new meaning is created. Its innovation (based on exploitation or deviation) is seen as a linguistic creation in its own right. Furthermore, it is now the case that “the new meaning can be re-

identified as the same, since its construction can be repeated” (Ricoeur, 2003: 115). Ultimately, if adopted by a significant part of the linguistic community, the metaphor will attain a common meaning of its own. This section discusses the premise that replicability of a structure means that there is certain patterning within that structure that is characteristic of its uses.

Hanks (2004) and Hoey (2005) talk of tendencies and patterns within language use, which help us to recognise and understand meaning on a range of levels. These patterns are manifest in grammar and lexis, but also in secondary aspects such as semantic association and pragmatic association (as we saw earlier with metaphoricity). Moreover, it is these patterns or tendencies which give rise to meaning in language. These patterns are more pervasive than structured rules: they are unwritten norms (Hanks, 2004) or primings (Hoey, 2005), encountered and created through repetition. These norms are dependent upon community, genre and time, and have the ability to change.

Firstly, Hanks’ Theory of Norms and Exploitations (2004) poses the idea of a two-type system which governs our use of language. The primary system governs normal and conventionalised usage, whilst the secondary system governs the exploitation of normal use. Normal usage can be identified by evidence of repeated use, while exploitations can be identified because they show some “abnormality, aberration, eccentricity or other departure from the norm” (Hanks, 2013: 147). In relation to metaphor, Hanks’ theory is highly relevant in offering an explanation for metaphor’s deviant nature. Exploitations are central, according to Hanks, to the creative, dynamic nature of language involved in aspects such as irony, humour, and metaphor.

Within his book *Lexical Analysis* (2013), he refers to the image of a double-helix theory of language:

The set of rules that govern normal, conventional use of words is intertwined with a second-order set of rules that govern the ways in which those norms gauge change.

(Hanks, 2013: 411)

Hanks goes on to claim that much of both the power and the flexibility of natural language is derived from the interaction between the two systems of rules involved in this double helix. Most importantly, Hanks argues that both components are not sharply distinguished, but should be seen as poles along a cline. He explains that “some norms are more normal than others; some exploitations are more outrageous than others. And in the middle, there are alternations; lexical alternations, where one word can be substituted for another without change of meaning” (Hanks, 2013: 411).

It is important to make clear a point about metaphoric language concerning the two notions of ‘exploitation’ as they need to be seen as distinct. Metaphoric language, as part of its inherent nature, exploits some form of language norm, be it semantic, grammatical, or operative at a secondary meaning level. This exploitation is what draws the reader/listener’s attention to the phrase. Independently of this, at a diachronic level, there is another element to the norm/exploitation sense. When a metaphor becomes to a certain extent conventional, from multiple uses in a range of contexts, the metaphoric phrase/word begins to develop its own set of expectations. These may involve, amongst others, a specific type of situation the metaphor is used in, the desire to express a certain evaluative function, or the presence of expected collocations alongside the metaphor. In this sense, the metaphor becomes conventional. This conventionality can then be exploited in order to create something original. It is worth noting here that, similarly to Gibbs’ arguments in relation to literality, conventional use is what governs a norm, and allows us to recognise when something is not a convention. However, as Hanks makes

clear, conventional use is a notion that must be “stipulatively defined for each word, or use of a word, by explicit criteria derived from corpus analysis” (Hanks, 2013: 141).

In a review of Hanks’s Theory of Norms and Exploitations (2013), Sampson illustrates well the importance of acknowledging the difference between the individual (and their language norms), and the collective norms of a language society:

Each speaker seeks to conform his usage to the system he infers as underlying the usage of others, but each of these others is likewise working on the basis of fallible hypotheses about current usage, and new speakers – children – are constantly joining the community and developing their own models of the surrounding language from scratch. Nowhere is there a well defined standard, by reference to which a given individual’s language-model might be judged fully correct, or incorrect only in specific, limited respects.

(Sampson, 2013: 10)

Thus language ‘norms’ are a materialization of individual influences merging into a collaboration. This unit, or collective mental concordance, shifts and evolves, along with the individual users. Metaphoricity then, as a concept both of conformity to and deviation from norms, remains dependent on these individual and collaborative shifts in norms. This is as far as Hanks theory extends, psychologically.

In contrast, Hoey’s (2003 et al.) theory of Lexical Priming furthers the application of a psychological approach to the explanation of language conventions and norms. By way of an introduction, the theory presents a usage-based account for both the psychological motivation behind our understanding of language and our ability to use language fluently to communicate within a given context. Presently, the theory accounts for both spoken and written language within particular domains. The introduction of an

extended theory involving our psychological associations with words could possibly offer an explanation for how we recognise norms and creative exploitations in the first place. In relation to a pervasive phenomenon such as metaphor, where analysis of metaphoric behaviour and subsequent identification of metaphoric language remains largely problematic, Hoey's (2005) theory may provide an explanation for what drives us as language users to identify metaphor, based on expected patterns of language use.

More specifically, the theory explores the relationships between lexical items and grammatical patterns (amongst other things) and argues for a psychological association (or priming) of such patterns that enable readers or listeners to identify meaning. According to the theory, a word is learnt through our encounters with it in speech and writing, which in turn loads it with the cumulative effects of those encounters. As a result it becomes part of our knowledge of that word that it co-occurs with other words and the presence of these co-occurrences forms our knowledge of a particular word or phrase. This in turn subsequently determines how we go on to use that word or phrase in other contexts.

Hoey (2005: 13) puts forward ten priming hypotheses. These are divided into three sets, related to co-textual, contextual, and text-linguistic characteristics. These are summarized in Hoey (2009). The first set of lexical priming claims is that "whenever we encounter a word, syllable or combination of words, we note subconsciously the words it occurs with (its *collocations*), the meanings with which it is associated (its *semantic associations*), the grammatical patterns it is associated with (its *colligations*), and the interactive patterns it contributes to serving (its *pragmatic associations*)" (Hoey, 2009: 34). These are Hoey's terms for concepts developed within the Sinclairian/neo-Firthian framework (discussed in 2.1). The second set refers to contextual characteristics and our subconscious ability to note the "genre and/or style and/or social situation". Finally, the third set relates to the textual dimensions of lexical priming. More specifically, we

subconsciously note the positions in a text that a word or phrase occurs in (its *textual colligations*), the cohesion it favours or avoids (its *textual collocations*), and the textual relations it contributes to forming (its *textual semantic associations*)” (Hoey, 2009: 35). In summary, all of these particular features prime us as language users, so that we are likely to reuse items (words or phrases) “in the same lexical context, with the same grammar, the same semantic context, as part of the same genre or style, in the same kind of social or physical context, with similar pragmatic associations and in similar textual ways” (Hoey, 2009: 35).

In relation to the psychological claims, Hoey (2005, 2009) asserts that the claims about repetition priming and semantic priming support the claims of the theory: “the notion of lexical priming is derived from a well-established and well-studied psycholinguistic phenomenon known as repetition priming, whereby exposure to a linguistic string enhances the speed with which a subject will process the same string at a later point” (Hoey, 2009: 36) (also *cf.* Scarborough et al. 1977, who have researched repetition priming extensively). With regard to semantic priming, Meyer and Schvaneveldt (1971) found that the processing of a word accelerated when the subject had been exposed to a related word previously. Thus, both repetition priming and semantic priming support the idea that we are primed to account for words and phrases in the manner (repeated formulation or same semantic context) in which we are exposed to them. Pace-Sigge (2013) has traced the development of the concept of priming in the psychological and psycholinguistic literature.

Hoey (2005: 2-5) claims that naturalness in language use depends on a speaker or writer’s desire to conform to these primings. Crucially, once a priming has been created, it is itself subject to further primings. In an example from Hoey (2005), *winter* is primed to collocate with *in*, and the combination *in winter* is itself then primed to occur with the verb *be*. This is what he terms *nesting*. Furthermore, and echoed by Sampson’s comment

on the Norms and Exploitations theory earlier in the chapter, lexical priming is a product of an individual's encounters with the word; it follows thus that "everyone's primings are different because everyone's linguistic experience is necessarily unique" (2008: 9). Data taken from a corpus are only representative of that particular piece of text, which itself may be representative of a genre or text type, or particular newspaper or novel. Thus evidence of priming for a particular set of members of a speech community must be limited to the genre and domain from which the evidence has been drawn and their probable exposure to the domain and genre in question.

In terms of metaphor being seen as a deviation from an expected convention, the exploitation or deviation originally created (the reason for the term 'creative' language) is labelled by Hoey as a *crack* in a user's primings (Hoey, 2005: 178-180). The *crack*, in whatever linguistic form it appears, is tied to the individual user and their personal mental lexicon. Cracks are often experienced or shared by most users within a language community; something judged to be a metaphor by one reader is most likely to be judged as a metaphor by another reader also, but it is important to acknowledge that cracks in primings are nevertheless necessarily tied to our personal use and exposure to language. Our primings operate alongside our conscious knowledge of language use; both of these mental resources are operating simultaneously and are capable of influencing the other. In parallel to this idea of simultaneous conscious and subconscious language awareness is the two-way relationship between the producer of the metaphor (the writer or speaker), and the receiver (the reader or the hearer). On the receiver's part, there is the assumption that the writer intends to create the metaphor, and on the part of the producer, there is the assumption that the metaphor will be interpreted and understood correctly. The interaction is illustrated in the diagram below:

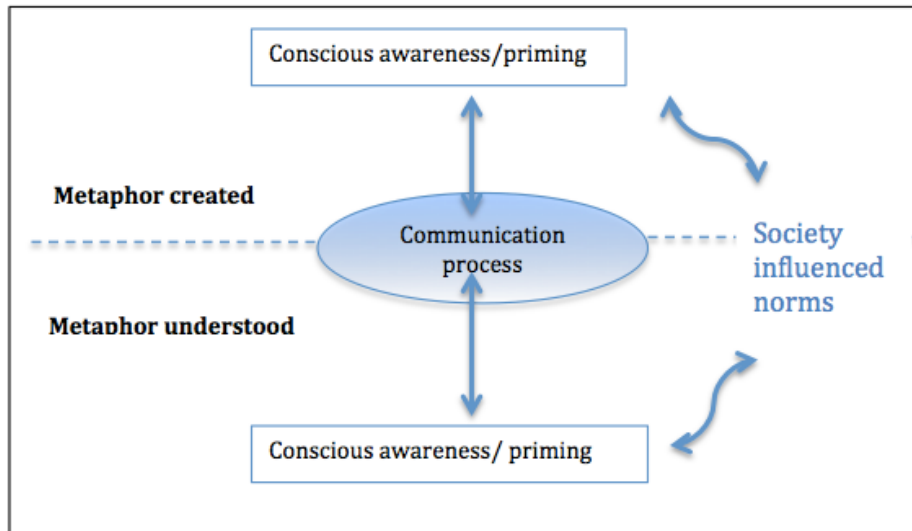


Figure 2. 1. Illustration of the primings involved in the communication process.

When we produce a metaphor, or any other type of language, we are influenced both by what we know of language consciously (in this case our store of known metaphors suitable for the purpose, the subject or genre of the conversation, or perhaps the type of audience), and by our subconscious knowledge of what language pieces fit together in a meaningful way. This may be much more subtle, in terms of what words best go together and more abstractly, what particular colligation appears most suitable or natural or what connotations are associated with certain phrase/word choices. Both of these sets of knowledge operate together, simultaneously. Primings are individual to the language user but collectively influenced by a language community or society's norms.

Consequently, the reader or hearer of the metaphor in question will understand and process what they read, as a result of their internal knowledge of language. Firstly, on a conscious level, they may be aware that a metaphor is being used, and perhaps infer the meaning from the explicit analogy, or they may already know the conventional meaning of the metaphor from its frequent use and subsequently transfer the meaning to fit the context.

One issue that Hanks (2013) brings forward, with regards to Hoey's (2005) theory, is one relevant specifically to metaphor. The Lexical Priming theory suggests that there are salient patterns in language and that where we perceive these (consciously or not), we seek to recreate them in our own language. Referring back to the idea of conventionality and exploitation, Hanks argues that a distinction needs to be drawn between what is salient cognitively, and what is salient socially. He claims that exploitations of certain linguistic norms are often cognitively salient. This means that they are often easier and quicker to recall because they stand out as odd or unexpected. In contrast, social (or statistical) salience may be defined or recognised as frequent usage (which can lead to priming). This is where the distinction becomes apparent: it can often be the case (particularly with metaphor) that some phrases are less frequent but more memorable. This has been shown with idioms (Deignan, 2005 and Philip, 2008). Even more difficult, according to Hanks, "are cases of vanishingly rare, but nevertheless cognitively salient expressions" (2013: 402). Hanks argues that taking this distinction into consideration should be a prerequisite for understanding not only the 'reinforcement' component of priming but also the 'cognitive salience' of rare but memorable primings, such as idioms. In response to this, Hoey himself has stated that "every rare but memorable expression is understood in terms of the receiver's pre-existing primings, but the memorability may reduce or eliminate the need for repeated encounters for the new expression to become a part of the receiver's primings"¹¹. Thus, cognitive salience may reduce the requirement for social salience or repeated encounters, but the subsequent usage (derived from that memorability) will consequently strengthen the primings.

3.3.2 Lexical Priming and Metaphor

¹¹ Personal Communication via email 10/11/2015

The final strand of this subsection discusses lexical priming in more detail in relation to metaphor research and potential applications. First, a subsidiary aspect of the theory (The Drinking Problem hypothesis) is introduced in 3.2.1. It is proposed that the hypothesis can be extended to account for metaphoric as well as polysemous language. Secondly, 3.2.2 focuses on how the lexical priming theory can contribute to a corpus based study of variation amongst metaphor uses.

The Drinking Problem Hypothesis

Once a metaphor is recognised by readers, it begins to develop patterns and traits in its behaviour. The original crack in the primings (the deviation that created the metaphor in the first place) has now been 'mended', so that the metaphor has built up its own concordances and primings, now as a single unit. Each new use is not a deviation but conformity to the pattern. These conformities may include the kind of grammatical structure the phrase belongs to or the lexis associated with it. When these primings begin to be recognized and expected, the metaphor can be said to be conventional to some extent.

As an approach to analysing metaphor, lexical priming may be able to account for the distinction between literal and metaphoric senses of a word or phrase from a psychological perspective. Specifically, an outcome of the theory, entitled the Drinking Problem Hypothesis¹², offers up this potential. The hypothesis centres on the assumption that different word senses will avoid the patterns associated with the other sense(s) of that word of which we are primed for. These patterns take the form of collocations, colligations and semantic associations amongst others. Hoey's (2005) account of the

¹² The name Drinking Problem Hypothesis comes from a scene in the 1980 film *Airplane!* outlined in Hoey (2005), in which the phrase 'drinking problem' is used humorously to refer to the difficulty a man has in getting liquid to his mouth.

hypothesis is further supported by a study of the polysemous senses of *drive* and *face* by Tsiamita, 2009. The implication is that metaphoric senses will also avoid the patterns (or primings¹³) of the literal sense(s), since a metaphor and its literary counterpart might reasonably be regarded as a special case of polysemy. Thus a study of the primings associated with each sense of a given item might not only provide support for the Drinking Problem Hypothesis (or rather, extend its influence on other non-polysemous senses of words), but also provide an explanation as to why on the whole we are successful in identifying metaphoric senses, something that is not explained in previous theories.

The hypothesis can be approached in relation to metaphor by testing the three sets of the lexical priming claims. Lexical characteristics can be explored in relation to contextual, contextual and text-linguistic features of both senses of a lexical item. By focusing on a single item, an investigation would allow for a full analysis of all exhaustive instances of one item within a corpus. Thus both metaphoric and non-metaphoric instances would be explored, as well as any problematic or difficult to identify cases. The analysis would also take into consideration items with phraseological features, including fossilised collocations, idiomatic instances of the item. Moreover, such an investigation would determine if the different senses of a single item have particular textual functions, such as the preference of a metaphor to be found in a particular genre if its meaning is more specific than its literal sense.

This approach would explain what other metaphor theories have missed so far: namely that metaphoric uses of language and their non-metaphoric counterparts must be analysed lexically, grammatically, semantically, and pragmatically as a consistent whole, in order to differentiate behaviours in patterns and meaning. If the hypothesis were to prove true for metaphor as well as polysemy, this would lead to the idea that metaphoric

¹³ Hoey notes that lexical priming is a property of the person, not the word. When talking of words being primed to collocate, this is short hand for saying that most speakers are primed for the words to collocate.

instances of words have (to an extent) a fixed set of choices in terms of grammar and lexis.

Interestingly, Deignan (2005) also touches upon this idea:

It is possible that when a metaphorical mapping first takes place, a linguistic expression becomes ambiguous between literal and metaphorical. Eventually the regular association of the expression with its metaphorical meaning means that speakers start to avoid using it with a literal meaning.

(Deignan, 2005: 212).

Accordingly, it is when a metaphoric sense becomes well used, or conventionalised, that readers may start to be primed to associate certain collocations, colligations, semantic, pragmatic and textual associations with the metaphoric sense. These primings in turn will become strengthened the more established the metaphoric sense is, and thus more removed from the non-metaphoric sense. This idea was given support in a study of the verb *to kindle* in 19th Century fiction (Patterson, 2014), whereby the more conventionalized uses of the verb as a metaphor displayed stronger associations or primings than novel or original metaphors using *kindle*, and were more distinct from the non-metaphoric sense.

Whilst the Drinking Problem Hypothesis (2005) will not shed any light on how to identify or definitively classify metaphoric language (as no theory so far can), it might facilitate a focus on the set of choices being made by a speaker/writer and the level of fixedness of metaphoric senses in relation to their non-metaphoric counterparts. This might make possible a lexically driven explanation of our ability to identify metaphorical meanings, based on our encounters with language.

Lexical Priming as a response to creativity

As has been discussed, metaphoricity can occur in a variety of ways, exploiting any number of conventions. This is the reason for it being pervasive. As has also been shown, an item may be identified as metaphoric in any number of ways and, more importantly, it may be used differently in different contexts or situations. Whilst the Drinking Problem Hypothesis may account for differences in lexical behaviour (and thus differences in our primings) between non-metaphoric and metaphoric senses of a lexical item, another strand of the theory will provide insight into the creative variety of manifestations of a single, original, metaphoric sense.

Creative exploitation is discussed by Hoey as “the result either of making new selections from a semantic set for which a particular word is primed or of overriding one or more of one’s primings” (2008a: 16). Thus we can talk of ‘overriding’ one’s primings in relation to metaphor use. Section 2 discussed the tension existing between exploiting a known use of an item (a characteristic feature of metaphor), and retaining enough meaning to achieve comprehension. Section 2.1 introduced the presence of a deeper conflict than simply that between the desire to create a novel metaphor and the desire to be understood. There is a second level of exploitation, occurring when a speaker or writer deviates from a now conventionalised metaphor. To reiterate, once the original exploitation of a metaphoric phrase becomes conventionalised to the degree of becoming expected and associated with a range of wider meanings (based on its collocations, colligational features, semantic preferences and prosodies), a degree of creativity may be lost in the formula/construction. Most importantly however, there is often the desire to reuse (in a new form) an already conventionalised metaphor, in order to still retain *particular* meaning(s) associated with that metaphor, built up through its repeated use, whilst altering or adding other meanings.

Once variations of a metaphoric form are created, (perhaps an altered structure or a new item in place of an expected collocation), the primings or associations which are retained from the original metaphor will theoretically provide the (psychological) link to the original use. The meanings and associations attached to that use will then be maintained. Philip (2008) proposes a similar notion in relation to what she terms 'canonical' (expected) and 'non-canonical' (variant) expressions. Non-canonical forms according to Philip (2008: 106) are inclined to occur within a "canonical context", where the most typical features associated with the canonical form and its extended unit of meaning are all present. In the present research context, this means that non-canonical forms or variations of a known metaphor will retain some, at least, of the expected primings associated with the original phrase. Philip further expands the idea:

...the phraseology external to the fixed expression shares the role in transmitting meaning, exerting most influence when the intended phraseology is weakened due to variation.

(Philip, 2008: 106)

Put more simply, the co-text, contextual, and text-linguistic characteristics (Hoey, 2005) around the item in question retain much of the information regarding meaning. If a speaker or writer has deviated from the original metaphor at a lexical level (a variation of grammatical structure or collocation for instance), it is the extra-linguistic characteristics (and the other unaffected linguistic characteristics), which become central to retaining some of the original meaning. Louw (1993) discusses a similar notion in relation to irony: "In order for a potential collocative clash to attract the ironist's interest, there must be a sufficiently consistent background of expected collocation against which the instantiation of irony becomes possible" (Louw, 1993: 157).

Philip (2011) attempts to explain how “creative variations of familiar phrases communicate meanings above and beyond those that are associated with the normal wording” (2011: 1). Her studies address a fundamental aspect of meaning, which she claims stands in contrast to some theories centred on corpus linguistics. More explicitly, she explores exploitations of linguistics norms such as metaphor and idiom as elements of the open choice principle operating *within* the idiom principle (Sinclair, 1991). Whatever element is substituted, its meaning is always read in relation to the canonical phrase. She calls this a “palimpsest effect” (2008: 104). In terms of metaphor, it is not necessarily the case that there is a conventional or ‘canonical’ expression, but instead, there may be a range of variants, centred on a particular semantic field or colligational structure. Returning to the Lexical Priming theory, it may be the case then that each variant shares similar primings, collectively forming a group of uses (a particular single metaphoric sense). In this case creativity is retained through variations or exploitations, but recognition of all the types of meanings we have been primed for in the original or collective sense is preserved.

If variant (or ‘non-canonical’) forms of a metaphor are found to retain original primings, the notion of lexical priming may offer an explanation for this. As language users, we are primed for meaning through a range of associations. Altering (or extending) a single association allows us to retain the intended meaning whilst manipulating it to our requirements as language users. Thus the study should provide an extended insight into what researchers term the ‘play-off’ between wanting to be original and wanting to be understood. Rather, it is not simply about wanting to be understood, but about wanting to retain a *particular* meaning, whilst creating something specific to the situation or context in hand. Philip (2008) claims “non-canonical forms are indeed unpredictable, but they seem to follow tendencies in their variability, suggesting that their apparent randomness is in fact fairly systematic” (2008: 105). If variations do tend to follow trends, this would

provide us with evidence of the idiom principle in operation. Furthermore, the analysis of various forms and exploitations of a metaphor would potentially tell us more about the ways we classify the world around us.

2.4 Summary of the chapter

This chapter has discussed metaphor from a range of perspectives, disciplines and approaches. In Section 1 metaphor was identified as a creative form of the language, associated with exploitations or deviations of more conventional linguistic forms. 1.2 introduced the notion that metaphoric language can be re-used to the point of its becoming conventionalised within the language and 1.3 discussed the difficulties there are in categorising metaphor and the distinctions that have been made between literal and metaphoric language. It was suggested that metaphor is too often seen as a part of a dichotomy with the term literal.

This paved the way for Section 2, which dealt with the extended unit of meaning. Neo-Firthian derived notions of collocation, colligation and semantic and pragmatic association place meaning within an increasingly abstract perspective, often dependent on factors outside of the text. Metaphoricity was discussed in the same manner, where its presence at times is dependent on external influences such as frequency, salience and individual exposure versus society's collective knowledge of meaning. The section problematised single-word focused approaches to metaphor; moreover, metaphoricity was explored as a property with the ability to come into and out of view. Section 2.2 discussed the importance of corpus methods with such an approach to metaphor, and the current lack of bottom-up, meaning-derived theories derived from corpus data.

Finally, Section 3 returned to the idea of exploitation versus convention, discussing current theories and research within this area. Hoey's theory of Lexical Priming (2005) was

proposed as an alternative approach to studying metaphoricity, providing an explanation for the motivation behind our use of metaphor. More specifically, lexical priming offers an approach to analysing metaphor that may account for two independent phenomena. The first is that metaphoric senses of an item may avoid the collocations (etc.) associated with the more literal uses of that item, in order to aid our understanding of the utterance within which the metaphor appears, and retain the distinction between the two senses (as has been shown with polysemous senses, Tsiamita, 2009). The second phenomenon accounts for the variation in a single metaphoric use. By taking account of all instances of meaning (primary, secondary, structural, semantic, pragmatic etc.), such an analysis may reveal that where deviation from the more conventionalised or fossilised use of a metaphor occurs, comprehension is retained through the 'other' primings. Hoey (2008a) states that more work needs to be done in relation to creativity and lexical priming. Metaphor by its very nature is creative. If primings are found, not only distinct from non-metaphoric senses, but also present amongst variations of a metaphor, the theory can indeed offer an insight into explaining such creativity in language.

Chapter 3 - Methodology

Introduction to chapter

This chapter details the methodological process for the research undertaken. Whilst corpus derived methods focus on patterns and tendencies within the language, one of the aims of the research project is to explore the range and variability of metaphoric characteristics and behaviours. As has been discussed, metaphoricity is pervasive in the language, and has the ability to manifest itself in a range of ways, at the level of the lexis and beyond. As a form of creative language, this is indeed one of its defining features. Thus, researching variation in metaphoric behaviour poses certain challenges for corpus linguistics. Furthermore, metaphor cannot be solely studied in terms of quantitative patterns without compromising on a full understanding of its meanings. Context is crucial in generating and identifying meaning, particularly in the case of metaphoric language. What follows is a discussion explaining some key theoretical and practical decisions, allowing for both a quantitative and a qualitative analysis, derived from a largely corpus-driven methodology.

Part 3.1 will introduce the corpus from which the data is taken and the corpus software chosen to extract the data. Part 3.2 will then focus on a central methodological issue concerning the identification and categorization of what will be deemed 'metaphoric' and 'non-metaphoric' language. Justification of the identification process is crucial to the final results of the study and any further conclusions or implications drawn from these. 3.3 will discuss the three proposed studies of single lexical items. These are *cultivated*, *grew* and *flame*. A brief discussion explaining the choice of each item will

follow. 3.4 will detail the assigning of instances to metaphoric and non-metaphoric categories for each study, and finally 3.5 will outline the analysis stage of the project.

3.1 The corpus and software

Inspiration for the corpus came from Michaela Mahlberg’s corpus of Dickens texts created at the University of Liverpool in 2009. The corpus was extended following an MA project on metaphor in Dickens and Hardy’s work, and has subsequently been expanded extensively for the purpose of the current research. The corpus now consists of texts written by English authors between 1800 and 1899. It will be referred to throughout the analysis as the nineteenth century corpus. In total, there are 416 texts with a running token size of 45,480,658. There are no more than two texts written by a single author, in order to gain as widely representative a collection as possible, eliminating any idiosyncrasy. The texts are divided into two subfolders: fiction and non-fiction. Each subfolder consists of between 22 - 23 million tokens. The table below illustrates the exact token size and percentage of each sub-folder:

Subfolder	No. of texts	Running token size	% of corpus
1. Fiction	184	22,979,640	50.53
2. Non-Fiction	232	22,501,018	49.47
CORPUS TOTAL	416	45,480,658	100

Table 3. 1. Number of texts and token size of each subfolder of the corpus

Whilst the fiction sub-folder consists entirely of novels written within this period, the non-fiction sub-folder is an amalgamation of multiple text-types. These vary in both form and content. In order to retain the potential for assessing any differences amongst non-fiction text types, the sub-folder has been further divided into five smaller subsections. These

are: historical /biographical; handbooks /manuals /travel; essays/lectures; journals /letters /memoirs; and religious texts. The token size for each subsection is given below:

Subsection	Text-type	No. of texts	Running token size	% of sub-corpus
2.1	Historical/Biographical	44	4,557,686	20.26
2.2	Handbooks/ Manuals/ Travel guides	54	5,245,462	23.31
2.3	Essays/Lectures	61	5,489,631	24.39
2.4	Journals/Letters/Memoirs	53	5,510,412	24.49
2.5	Religious	20	1,697,654	7.55
TOTAL		232	22,501,018	100

Table 3. 2. Number of texts and token size of non-fiction subsections

These divisions loosely reflect the most common text types found in Gutenberg’s online library¹⁴. The divisions are hybrid in their distinctions between topic and form; they aim to accommodate both distinctions whilst reflecting the most popular text types found. Some texts will suitably fit into more than one genre, but an effort has been made to select the most appropriate for each individual text. Where travel is represented twice in the subfolders, one concerns travel guides or information, whilst the second represents more reflective travel logs and journals. Religious texts, usually in the form of essays or lectures, have been categorized separately because of their genre and subject specific language, shown in the individually created wordlists. Religious texts comprise the smallest subsection, with the smallest token size, reflecting its specificity.

Previous work has been undertaken on figurative language in English nineteenth century writing in the areas of corpus linguistics/stylistics (Mahlberg, 2010; 2012), literary metaphor (Kimmel, 2008) and cognitive stylistics (Barbera, 1993, Stockwell, 2002, Boghian, 2009), making it a rich source for comparative and supporting research. Furthermore, focusing on the nineteenth century period allows scope for diachronic

¹⁴ www.gutenberg.org accessed between 01/07/2013 – 01/09/2013

analysis of changes in metaphoric behaviour in more contemporary corpora. The BNC (written-fiction) will be used as a comparator corpus throughout the analyses, in order to determine any corpus specific traits or behaviour.

More generally, the motivation behind choosing a time-restricted corpus largely centres on the theory of lexical priming. According to Hoey (2005) the theory is context dependent (including genre, situation, community etc.), thus any conclusions drawn from the analysis are bound to the type of text represented in the corpus. Partington (1998: 107-108) also suggests that one of the distinguishing features of genres is the types of metaphors that are found in them, which means that results from a genre restricted corpus study cannot be generalized without qualifications. Thus by restricting the corpus to the nineteenth century, but accommodating as many genres and text types as possible, the findings can be said to be representative of the time period more generally.

WordSmith Version 5 (Scott, 2009) is used to extract data from the corpus. An initial Keyword search identified words of unusually high frequency in the nineteenth century corpus in comparison with a more general and contemporary comparator corpus (the BNC). The Keyword function (Scott, 2009) compares the 'keyness' of items in one corpus, compared to a larger reference corpus¹⁵. Items with a significant 'keyness' appear more frequently than would be expected in one of the two corpora. The aim is to highlight high frequency items which are specific to the corpus. Suitable items are then chosen for investigation (see Section 3.3). The analysis makes use of WordSmith's functions, such as concordance lists, collocates, clusters and pattern data. It is hoped that a combined approach of all functions will allow for a detailed analysis of possible primings, including collocations, colligations and semantic, pragmatic and textual associations.

¹⁵ www.lexically.net/downloads/version5/HTML/index.html?keywords_info.htm

3.2 Metaphor identification process

The analysis and comparison of the lexical characteristics of metaphoric and non-metaphoric instances requires, in the first place, a methodological decision involving the classification of each item as metaphor. In order to be able to analyse the two groups statistically, they must be divided in such a way that they become, in effect, separate corpora. This entails the division of concordance lines into two clear groups of metaphoric and non-metaphoric instances. Attempting to make such a division, however, reveals a larger difficulty with identifying the distinction between word senses. Assigning a precise term to language dependent on contrasts in meaning and word senses, such as metaphor, conflicts with the pervasive nature of language: indistinct and vague boundaries between meaning senses are part of what allow meaning and indeed metaphor their inherent creative capabilities¹⁶.

The division cannot be undertaken objectively, and so it was decided to create a middle group to amass any unsure, ambiguous or weak or heavily conventionalized metaphors. This will help to keep the two datasets as clear and prototypical as possible. The creation of a middle group subsequently may serve also as a source of useful insights into the cases of less conventionalized or more problematic/complex metaphors.

Each list of concordance lines has been distributed to between three and six evaluators on separate occasions. Three participants have a background in linguistics but the others do not. They were asked to decide whether a given word was being used metaphorically within the context provided. Concordance lines were all set to 120 characters in length. If not enough context was provided to permit a decision, the participants could check more co-text by clicking on the concordance line to reveal more

¹⁶ Discussed at length in the Chapter 2.

text¹⁷. Participants were given three options for categorization. These were *metaphoric*, *literal* and *unsure*. Where there was discrepancy between any individual(s) and the remaining readers, the concordance was in any case placed in the *unsure* (henceforth *middle*) group. The intention was to create the assurance that all clearly identified metaphors have unanimously been agreed upon by no fewer than three individuals.

3.3 Investigations

From the keyword list, potential lexical items are explored in terms of their ability to be used metaphorically, their overall frequencies, and their frequency of use in both senses (metaphoric and non-metaphoric). Items are selected in accordance with these criteria. The analysis takes the form of three separate investigations of individual lexical items. More explicitly, the investigations consist of exploring in what senses (metaphoric/non-metaphoric) the items occur and what meanings they express. Each investigation focuses on applying the Lexical Priming theory (Hoey, 2005) to metaphoric language.

The lexical item approach is the same as the one taken by Lindquist and Levin (2008), and the opposite of the standard approach of many studies on metaphor, “which tend to start from a particular semantic field” (Lindquist and Levin, 2008: 145). This allows for an exploration of all possible uses of an item in a variety of behaviours and does not single out a particular type of metaphor, based on a single feature or characteristic. Moreover, it accounts for phraseological manifestations of meaning and possible idiomatic uses. Where a key item is singled out methodologically, the analysis will be exhaustive of all the item’s occurrences and more importantly, will concern co-textual as well as contextual and text-linguistic features. Each item will be studied primarily within the framework of its concordance line.

¹⁷ A function of WordSmith5 (Scott, 2008).

Items have been chosen from three individual word classes (verb, adjective and noun). Research has been undertaken in cognitive linguistics and conceptual metaphor on certain *noun is noun* metaphors (to be discussed in 3.3.2.), and research in specific semantic areas has also been undertaken with regards to different word class metaphors. However, little work has been undertaken on word class differences in metaphoric language from a lexical based stance. Whilst the objective is to analyse metaphoric behaviour more generally in comparison to non-metaphoric behaviour, the decision to represent three of the major word classes in the analyses offers the opportunity to compare lexical differences potentially attributed to word class. The table below gives frequency and token figures for each item chosen for analysis:

Item	Total Freq.	% of 19 th C corpus (1/10,000)	Token size as single corpus ¹⁸
<i>cultivated</i> (adj.)	774	0.17	21,600
<i>flame</i> (n)	1265	0.27	51,962
<i>grew</i> (v)	3823	0.84	138,231

Table 3. 3. Frequency of item and token size as a single corpus

3.3.1 Study 1: *Cultivated* (adj.)

The first study is an investigation of the lexical item *cultivated*. As outlined above, it has been chosen for its relatively high frequency, and its presence on the keyword list, making it ‘key’, or specific to the nineteenth century data. Furthermore, its ability to be used figuratively as well as literally makes *cultivated* an ideal candidate to explore (roughly half of the first fifty lines read showed a degree of metaphoricity¹⁹).

As discussed in the literature review, the metaphoricity of words and phrases is dependent on the word class. Most metaphor theorists would agree that adjectival

¹⁸ Each concordance line has 120 characters of co-text.

¹⁹ Identifying metaphoricity is discussed in Section 3.4.

metaphors accommodate a variety of functions (cf. Steen 1999; Deignan, 2005). Adjectives can provide additional strength to an already existing noun metaphor, taking its implied comparison and extending it. Alternatively, adjectives can create metaphoricity exclusively, often leading to a more compact form. This can be seen in the following example where 'society which is *cultivated*' is reduced to '*cultivated* society': *She was especially indignant at the talk she heard on all sides in cultivated society.* More complex is a combination of the two, where an adjective modifies a noun metaphor and at the same time carries its own metaphoricity. In this case we can say the noun/verb and adjective metaphorise each other. At times both the adjective and the noun can have equal influence, creating an entirely metaphoric collocation, such as *cultivated taste*. These will all be discussed in more detail with examples from the data in the following chapter. In total there are 775 instances of *cultivated* acting as an adjective in the nineteenth century corpus.

3.3.2 Study 2: *Flame* (n)

The second study is an investigation of the noun uses of *flame*. Again, *flame* meets the criteria in terms of item frequency, keyness and high frequency of metaphoric and non-metaphoric uses. Following a comprehensive analysis of verb and adjective metaphors, it follows that noun metaphors should be analysed and compared. In terms of noun metaphors, research in cognitive linguistics has largely focused on predicate noun metaphors, or *noun is noun* examples. Deignan (2005) claims that these instances are more rare than is assumed in the literature, (*Richard is a gorilla*, Searle, 1993), and has provided evidence from corpus linguistics. Thus more research into naturally occurring, corpus derived, noun metaphors is needed. It is the intention of the concluding part of the

analysis to compare the types of metaphoric behaviour found in each word class study. All noun instances have been identified manually and the total number of concordances is 1200.

3.3.3 Study 3: *Grew* (v)

The final item chosen for study 3 is the verb *grew*. The main reason for choosing a second verb is because the data from the initial study of *cultivated* were relatively few and larger conclusions could not be drawn. Thus the intention with *grew* is to recreate the study to determine how far the results are comparable or if indeed each item behaves uniquely, regardless of word class. *grew* meets the criteria in terms of item frequency, keyness and high frequency of metaphoric and non-metaphoric uses.

From a lexical stance, Deignan (2005) has highlighted that verb metaphors are more common than noun metaphors within particular semantic domains (most notably, animal lexis). Other research into verb metaphors, again undertaken by Deignan (2005), claims that experiencing emotion is often depicted metaphorically as experiencing physical motion. Findings from the author's MA thesis (Patterson, 2012) included that verb metaphors related to thought were most commonly depicted as MATERIAL processes rather than MENTAL. Thus, an analysis of the verb *grew* may reflect a difference in state (abstract/physical) between metaphoric and non-metaphoric uses, as well as a grammatical shift. All verb instances of *grew* in the nineteenth century corpus amount to 3812.

3.4 Assigning items to categories

The next step was to assign each instance of the items *cultivated* (adj.), *flame* (n) and *grew* (v) to one of the three categories (metaphoric, non-metaphoric or middle group). Any concordance line displaying more than one occurrence of the target word (*cultivated*, *flame*, *grew*) has only been kept once. There are multiple reasons for this: aside from creating extra instances of all words within the line (a problem for collocation and cluster analysis), the most important issue is that the other instances of the word within the same line may not necessarily be metaphoric (or non-metaphoric) also.

Figures for the distribution of instances of each item are given below. The percentage columns indicate the percentage of the total number of occurrences:

Item	Metaphor		Non-metaphor		Unassigned		TOTAL	
	Freq.	% ²⁰	Freq.	%	Freq.	%	Freq.	%
<i>cultivated</i> (adj.)	375	48.39	373	48.13	27	3.48	775	100
<i>flame</i> (n)	409	34.08	582	48.50	209	17.42	1200	100
<i>grew</i> (v)	2863	75.1	807	21.17	142	3.73	3812	100

Table 3. 4. Frequency of items assigned to each group (metaphoric, non-metaphoric, and unassigned)

The middle *unsure* group for each lexical item is not discarded. Within each group there are some instances of metonymy, meronymy, polysemy, and simile, as well as extended metaphors and more ambiguous and indefinable cases. The data in each group may reveal potential findings regarding fossilized metaphoric instances (those conventionalized to the degree of losing transparency or compositionality or simply not activating metaphoricity for any individual). Furthermore, the group may provide information as to where boundaries exist between tropes (for instance between polysemy and metaphor), and

²⁰ Percentage of total instances

why some cases of metaphor are more problematic than others. Each middle group of data will be discussed in the corresponding chapter for each investigation.

3.5 Analysis

The order of analysis (*cultivated* (adj.), *flame* (n) and *grew* (v)) has been chosen because as one of the intentions of the research is to analyse progressively more complex instances of metaphoric language. The fewer to greater number of instances within the problematic middle groups, as shown in the table in 3.4, suggests an increasing level of complexity in identifying metaphoricity (in line with the increase in frequency). This may be a sign of increasing complexity in the distinction between senses, and may also be a sign of less fossilization. In particular, *grew* has a greater number of instances within the unsure group than within the metaphoric group, suggesting a lack of clear distinction between its senses.

Firstly, the middle group is analysed purely qualitatively. Analyses will focus on why there are problems with identifying metaphoricity within these middle groups, paying particular attention to the surrounding co-text and context, and providing extra information where necessary.

The remaining datasets will then undergo quantitative analysis as two independent sub-corpora of 'metaphoric' and 'non-metaphoric'. The decision to use the term non-metaphoric rather than literal is in order to reduce the dominance of a dichotomist stance between the two groups, and instead to see them as a set that displays metaphoric behaviours, and a set that does not. The analysis will discuss more or less metaphoric meaning and more or less non-metaphoric meaning, seeing these as "end-points on a scale, rather than absolutes", a stance similarly adopted by Lindquist and Levin (2008: 145).

The sets of concordances lines are treated as if they were corpora and fed into WordSmith (Scott, 2008) as single sub-corpora. Thus, there are two corpora (metaphoric and non-metaphoric) for each of the three items *cultivated* (adj.), *flame* (n) and *grew* (v):

	Metaphors	Non-metaphors
Item	Corpus size (tokens) ²¹	Corpus size (tokens)
<i>cultivated</i> (adj.)	10,299	10,304
<i>flame</i> (n)	15,244	17,276
<i>grew</i> (v)	29,402	15,776

Table 3. 5. Metaphoric and non-metaphoric corpora sizes for each item

From these corpora, collocate, cluster, and pattern data are retrieved and analysed. The intention of the analysis is to explore the behaviour of the item in each instance within in its corresponding co-text, context, and where appropriate, textual functions. Thus phraseological units and grammatical structures will be explored, as well as single lexical items and collocates. As context is a fundamental aspect to understanding metaphor, qualitative analyses of metaphoric instances and larger sections of text will be carried out, in order to complement and at times accommodate the limits of corpus methods.

As discussed, the aim of the analysis is two-fold. First a comparison will be drawn between the metaphoric and non-metaphoric instances to determine the extent to which they *avoid* each other's patterns/behaviours. Secondly, variations of a single metaphoric use will be compared to determine the extent to which they *share* primings. The analysis of the middle groups of data may provide extra information on why metaphor is problematic to identify and the extent to which behaviour of senses (polysemy and metonymy) overlap. All analyses will be discussed individually before drawing upon all data to draw any potential conclusions.

²¹ Each concordance line has 120 characters of co-text.

3.6 Summary of chapter

It is hoped that the research will shed light on differences in lexical behaviour and characteristics of metaphoric and non-metaphoric instances of single items. It is to be stressed here that the choice to begin with single lexical items is a methodological choice only; the items' behaviours are dependent on their relationships with the larger co-text, and they are not analysed in isolation. The decision to work with individual items is to obtain an exhaustive list (as regards the corpus) list of instances in which the items occur, allowing for a full range of behaviours and contexts and the potential to identify abstract levels of meaning as well as those found at the text level.

The analyses are presented in three separate chapters. Chapter 4 will present the first preliminary investigation (*cultivated* as an adjective). This initial study will set the boundaries (methodologically speaking) for the second (*flame*) and third (*grew*) larger studies, set out in Chapters 5 and 6 respectively. Each analysis will begin with a qualitative discussion of the problematic middle group instances with the aim of shedding light on the "fuzzy" border (Deignan, 2005) between strong and weak metaphors and between other figurative tropes (e.g. polysemy, metonymy). The analyses of the metaphoric and non-metaphoric instances will then be presented and both a quantitative analysis and a qualitative discussion will ensue. A final summary in Chapter 7 will outline differences and similarities between the findings of the individual investigations.

Chapter 4 – Study 1: An investigation into the metaphoricity of *cultivated* (adj.)

Introduction to chapter

This chapter discusses results of the preliminary investigation of the thesis: a corpus-linguistic analysis of metaphoric and non-metaphoric instances of the item *cultivated* (adj.). *Cultivated* was chosen for meeting the requirements outlined in the methodology: namely its relatively high frequency and its presence on the keyword list, making it ‘key’ or specific to the nineteenth century data. Furthermore, its ability to be used figuratively as well as literally makes *cultivated* an ideal item to explore (roughly half of the first fifty lines read showed a degree of metaphoricity²²). The analysis focuses on the lexical differences in behaviour between the item’s various metaphoric and non-metaphoric uses. This in turn will provide information on the patterns of use associated with the two senses, in order to test the Drinking Problem Hypothesis. It is expected that the majority of instances associated with a metaphoric or non-metaphoric sense will differ sufficiently in their lexico-grammatical features to support the claim that our primings associated with the two senses are also distinct. The chapter is divided into two parts. Section 4.1 will discuss the instances that informants were unable to identify as clear metaphors or clear non-metaphors. If there was no unanimous decision between informants, the instance was automatically placed into this middle group. Section 4.2 will discuss the corpus analysis of the clear metaphors and non-metaphors.

Regarding the methodology, the concordance lines firstly had to be identified as verb or adjectival uses. Following Quirk et al. (1985), if it was grammatically possible to do

²² Identifying metaphoricity is discussed at length in 3.4.

one of four things with the item (turn it into the passive by adding 'by', state it in the third person singular verb form, form it with an 'ing' ending, or use with a modal verb), it was identified as a verb and removed from the group. Alternatively, if an instance could be preceded by 'seems' or the adverbial 'most', it was identified as an adjective. The following sections will present a detailed analysis of the lexical patterns associated with *cultivated* in its adjectival form only (metaphoric, non-metaphoric and those which are not clearly either in the middle group).

4.1 Middle instances of *cultivated* (adj.)

In total, 27 instances have either a level of ambiguity or, more often, convey a behaviour or meaning which lies somewhere between the clear behaviours expected of metaphor and those of non-metaphoric meaning. These instances comprise just 3.48% of the full dataset, meaning that over 96% of all *cultivated* instances were unanimously and thus unproblematically identified by informants as either a metaphor or a non-metaphor. This in turn suggests that there exists some level of patterns or features which distinguish the two senses fairly successfully.

The majority of these instances in the middle group lie between a non-metaphoric and a metaphoric sense of *cultivated*. More specifically, the blurred boundary occurs between the sense of *cultivated* in relation to tilled land or countryside (often non-metaphoric), and the metaphoric sense of a *cultivated* society or group of people. The problem regularly (but not always) stems from the semantic overlap of both society/community (i.e. a group of people) and the land in which a society/community lives (i.e. the geographical topology). In such cases, there may be a metonymic reference (whole for part relationship), where an item such as *country* is referring to parts of the country or land, or where *community* is referring to both physical and abstract properties of place and people

Another source of overlap arises when a phrase like *cultivated country* refers to only the abstract sense of *cultivated* (developed and civilised), but the physical image awakens a non-metaphoric sense of cultivation (fields). *Country* in such a case directly evokes a sense of farming more than would *city* or *metropolis*. Two examples are presented below:

(4.1) "...that pleasure which almost all feel who return to a verdant, populous, and highly *cultivated* country, from scenes of waste desolation, or of solitary and melancholy grandeur"

(4.2) "...covered with cattle, sheep, and goats, and occasionally a well, encompassed by a wall of broad flat stones, capable of affording a seat to a dozen people. On approaching the city, however, the country appears more *cultivated*, luxuriant, and rich".

In both cases, there is imagery associated with a non-metaphoric sense of cultivation and farming: in example 4.1, this is created with *verdant* and its contrast with *waste desolation*, and in example 4.2, the image of farmland implies cultivation and domestic activity. Yet, there is also a possible/potential ambiguity, arising from the association of human settlement and activity. In example 4.1, the term *populous* implies a sense of human development, in relation to land produce, but also bringing to mind images of maturation, sophistication and advanced civilization, in contrast to the primitive lands outside of the populated areas. Similarly, whilst the meaning of example 4.2 is most probably non-metaphoric (referring to the fertile and *cultivated* land), the items *luxuriant* and *rich* would more likely collocate with a metaphoric sense of *cultivated* (i.e. refined). The larger co-text surrounding example 4.2 reveals this particular instance to be part of a

larger discussion on the developed city of Tetuan and the contrast with the more primitive but fertile parts of the country outside of the city walls. The large majority of the middle group instances fall into such a category, of having a non-metaphoric meaning but an implicit metaphoric meaning alongside this.

There are also cases where *cultivated* is non-metaphoric in its reference to the caring/tending of physical land, but modifies a noun acting as a metaphor. There are only two instances of this within the data:

(4.3) “The purity of the air was always acknowledged by those who ever visited the island owing to the dry and highly *cultivated* face of the country”.

(4.4) “We can further understand how it is that domestic races of animals and *cultivated* races of plants often exhibit an abnormal character”.

In example 4.3, *face* can be identified as metaphoric: it is personifying the country. In this respect, the *cultivated* is modifying a non-literal noun. Or alternatively, it can be said that the items metaphorise each other. In example 4.4, the term *races* is most often used to describe people, rather than animals or plants. The term *cultivated* is itself non-metaphoric in its reference to plants, but perhaps problematically, it modifies a non-literal (or semantically extended) sense of a noun. Thus polysemy and semantic extension play a role in creating a sense of metaphoricity.

Other instances still are more ambiguous in their reference, and moreover are capable of having both senses at the same time:

(4.5) “There was a road there once, perhaps, when Cundinamarca was a civilized and *cultivated* kingdom; but all which Spanish misrule has left of it are a few steps slipping from their places at the bottom of a narrow ditch of mud.”

Here the collocation of *civilized* and *cultivated* assumes a metaphoric sense, but the imagery of the abandoned steps, *at the bottom of a narrow ditch of mud*, implies a land presently uncared for or tended to. It is possible that the author intended both meanings, in a bid to make more explicit the idea of a civilized and mature people, who are capable of tending their land and producing their own sustenance. Alternatively, the metaphoric sense can draw upon a physical, concrete image of farmed land, which acts as a tangible image.

This is the case in example 4.6 where a metaphoric sense is strengthened with imagery of non-metaphoric associations of cultivating, when the larger co-text is read:

(4.6) “Even in the well *cultivated* and thickly-settled parts of the United States of America, it is the general custom, and a very good custom it is, to pay the wages of labour partly in money and partly in kind; and this practice is extended to carpenters, bricklayers, and other workmen about buildings, and even to tailors, shoemakers, and weavers, who go to farm-houses to work.”

In this example, the image of farmhouses and farm work invoke the non-metaphoric image of looking after the land. *cultivated* in this example however is most probably a metaphor for the communities of built-up, civilised and worked areas of America. Possibly the instance can also be judged as semantic extension, referring to the people who cultivate the land.

Returning to the dataset, all 27 instances are assigned one of the above explanations: the most common being an ambiguity (intended or otherwise) between non-metaphoric and metaphoric senses. The middle group shows a problem of indistinctness occurring on two levels: firstly there is interaction and indistinct boundaries amongst the figure types themselves (metaphor, polysemy, metonymy - this is largely an issue of terminology); and secondly, there is interplay between the senses of an individual word or item. In this case, semantic extension or semantic drift may be a reason for the merging of language characteristics. The main reason for the ambiguity lies in the flexibility of the semantic references (creating an overlap of both people and land), specifically in items such as *country*, *nation*, *land* and *kingdom*. Removing all 27 problematic instances then, a total of 375 clear metaphoric instances (totalling 10,299 tokens constructed out of the concordance lines) and 373 non-metaphoric instances (totalling 10,304 tokens, again constructed out of the concordance lines) remain. These datasets have then been fed into Wordsmith 5 (Scott, 2008) as two separate corpora. The analysis is divided into keywords, collocates, clusters and patterns.

4.2 Analysis and comparison of the metaphoric and non-metaphoric datasets for *cultivated* (adj.)

4.2.1 Keyword analysis (metaphoric and non-metaphoric)

The Keyword function (Scott, 2009) highlights the 'keyness' of items in one corpus, compared to a larger reference corpus²³. A word is key if it occurs in a text:

...at least as many times as a user has specified as a minimum frequency, and its frequency in the text when compared with its frequency in a reference corpus is such

²³ www.lexically.net/downloads/version5/HTML/index.html?keywords_info.htm

that its statistical probability as computed by an appropriate procedure (either Dunning’s log-likelihood score (1993), or the chi-squared test) is smaller or equal to a p value specified by a user.

(Baker, 2004, 346-347).

Here, the function has been used to compare both the metaphoric and the non-metaphoric corpus by identifying keywords in each dataset when compared against the other. Scott (2009) claims that keywords provide a useful way to characterise a text or a genre. With regards to a direct comparison of the two datasets however (with no reference ‘norm’), any keywords identified may instead highlight distinctions in semantic associations between the metaphoric and non-metaphoric instances of *cultivated* and offer a starting point for a discussion of semantic differences. The Keyword function also provides a (statistically) reliable way of analysing the data more generally, before exploring colligation, collocation and semantic and pragmatic associations in more detail. Below are the keywords in the metaphoric data. First the raw frequency is given and the percentage of the corpus that the instances comprise. In the fifth and sixth columns, the RC frequency and percentages refer to the reference corpus. In this case it is the other dataset (metaphoric or non-metaphoric):

METAPHOR						
N	Key word	Freq.	% Of corpus	RC. Freq.	RC. %	Keyness
1	MIND	46	0.45	-	-	63.89
2	HER	45	0.44	-	-	62.50
3	HIS	73	0.71	14	0.14	44.04
4	TASTE	25	0.24	-	-	34.70
5	MAN	35	0.34	4	0.04	28.33
6	SHE	33	0.32	4	0.04	26.00

Table 4.2. 1. Keywords in metaphoric (adj.) dataset compared to non-metaphoric (adj.) dataset

The table reveals three ‘key’ nouns (*mind, taste, man*), and three ‘key’ pronouns (*his, her, she*). *Mind* and *her* are the most key with scores of 63.89 and 62.50 respectively. *Mind, her* and *taste* are not present at all in the non-metaphoric corpus, making them specific to metaphoric uses of *cultivated*. The lexical items *mind, taste* and *man* hint at *cultivated* being used to describe human perception and a sense of mental accomplishment or refined judgement. By way of comparison, the non-metaphor data is given below:

NON METAPHOR						
N	Key word	Freq.	% of corpus	RC. Freq.	RC. %	Keyness
1	PLANTS	43	0.42	0		51.52
2	FIELDS	37	0.36	0		51.34
3	LAND	46	0.45	3	0.03	45.43
4	COUNTRY	51	0.49	6	0.06	40.73
5	WILD	48	0.47	7	0.07	34.38
6	THE	747	7.25	550	5.34	31.95
7	PLAIN	22	0.21	0		30.51

Table 4.2. 2. Keywords in non-metaphoric (adj.) dataset compared to metaphoric (adj.) dataset

The divergence in noun keywords in particular indicates that semantic associations are very different between datasets. Table 4.2.2 reveals seven key items: five nouns (*plants, fields, land, country, plain*), all within a shared lexical field associated with non-metaphoric uses of CULTIVATING ORGANIC PRODUCE OR LAND, the adjective *wild*, and the determiner *the*. In comparison to the non-metaphoric verb analysis, where only *varieties* appeared, there are more items specific or ‘key’ to this adjective group, suggesting more evidence of patterns, semantically and structurally.

Plants and *fields* have the greatest ‘keyness’. A test of statistical significance on all keywords also reveals *fields* to be statistically more significant than expected. All items with a score of 5 or higher are given below. Where the score is highlighted in blue or green, the significant frequency is in the metaphoric or non-metaphoric data respectively:

Collocate	Metaphor		Non-met		Log likelihood
	Expected freq.	Observed freq.	Expected freq.	Observed freq.	
MIND	19	38	19	-	52.7
FIELDS	17.5	-	17.5	35	48.5
THE	253.44	222	253.56	285	7.82

Table 4.2. 3. Keywords with a Log likelihood scores of 5 or above

Whilst *mind* is more significantly frequent in the metaphoric set (with the highest log likelihood score), *fields* and *the* are significantly more frequent in the non-metaphoric set. All items are significant to the 99.99th percentile²⁴. Potentially most noteworthy is the presence of the grammatical item *the* in the non-metaphoric list. As a definite article, the item may reveal possible colligation/s specific to *cultivated* in its non-metaphoric sense. *The* may also signal a preference for concrete references, most probably to things in the physical and real-world environment (anaphoric reference) and/or textual cohesion. These will be explored further in the coming sections.

For now, the keyword analysis has provide initial avenues worthy of further exploration. Semantic associations are shown in both keyword lists, which remain distinct from one another. These are to do with mental accomplishment/judgement in the metaphoric set (mind, taste) and the physical, external environment in the non-metaphoric set (plants, fields, land, country, plain). There is also evidence of a human-related semantic field amongst the metaphors, expressed in the presence of personal pronouns and *man*. Finally the keyword *the*, shown to be statistically significant in Table 4.2.3, suggests possible differences in referents and grammatical structures associated with both senses. Section 4.2.2 will focus on collocation findings. It is expected that these will also highlight possible semantic associations.

²⁴ <http://ucrel.lancs.ac.uk/llwizard.html>. Accessed 9/11/2015

4.2.2 Collocate analysis (metaphoric and non-metaphoric)

4.2.2.1 Noun collocates of *cultivated* (adj.)

The first collocates to discuss are the lexical words, as these provide an indication of semantic associations of each sense of *cultivated*. The following table reveals the most frequent nouns (those with a minimum frequency of 5) in the metaphoric dataset. Frequency is measured as a total figure and frequency per thousand words (henceforth Freq. ptw):

METAPHOR					
R	Collocate	Total Freq.	Freq. ptw	Left Freq.	Right Freq.
1	MIND	38	3.69	10	28
2	TASTE	23	2.23	1	22
3	MAN	21	2.04	12	9
4	MINDS	16	1.55	1	15
5	INTELLECT	14	1.36	2	12
6	RACES	12	1.17	1	11
6	SOCIETY	12	1.17	-	12
7	PEOPLE	11	1.07	-	11
8	MEN	10	0.97	2	8
9	INTELLIGENCE	9	0.87	2	7
10	UNDERSTANDING	8	0.78	1	7
10	TASTES	8	0.78	1	7
11	WOMAN	7	0.68	3	4
11	EYE	7	0.68	1	6
11	CLASSES	7	0.68	-	7
12	WOMEN	6	0.58	-	6
12	LIFE	6	0.58	5	1
12	CHARACTER	6	0.58	2	4
13	GENTLEMAN	5	0.49	-	5
13	NATION	5	0.49	2	3
13	LANGUAGE	5	0.49	3	2

Table 4.2. 4. Noun collocates of *cultivated* (adj.) in metaphoric dataset (minimum freq. 5)

The large majority of the nouns above are associated directly with human concepts. There are items referring to MEN AND WOMEN (*man, men, woman, women, gentleman*),

COLLECTIVE GROUPS OF PEOPLE (*races, society, nation, classes*), PARTS OF THE BODY relating to PERCEPTION (*mind, taste, eye*), and finally, HUMAN QUALITIES (*intellect, intelligence, understanding, language, character*). Every noun, with the exception of *life* and *people* which are too general to classify semantically, fits into one of the above four categories, making the semantic associations of *cultivated* (adj.) in its metaphoric sense fairly fixed. These associations are also unique to the metaphoric data. Furthermore, none of the above collocates are present on the non-metaphoric list, making them specific to metaphoric uses.

Each of the four semantic categories also have members which are related but are not as frequent as collocates. Thus whilst not specifically characteristically associated with *cultivated* as a metaphor, they still help to strengthen the semantic associations. In the group of people defined by GENDER, there are also six instances of proper nouns (e.g. *Mrs Douglas, St Paul, Sir Philip*), as well as more general members (*lady, girls, boy, womanhood, himself*). In terms of COLLECTIVE GROUPS OF PEOPLE, there are *audience, family, laborious millions, associates* and *the wealthy*. In the group relating specifically to PERCEPTION, there is *feeling* and *voice*. The group referring to other HUMAN QUALITIES, however, is by far the largest group when including single occurrences. Other items include *thoughtfulness, refined pursuits, literary acquirements, appreciation, enjoyments, freedom* and *sensibility*. In total, concordance lines with one or more noun members of these four semantic associations amount to 60/375 or 16%. It is expected that other lexical words will extend these categories further, in the coming sections of the analysis.

Firstly though, the non-metaphoric noun collocates are listed:

NON METAPHOR					
R	Collocate	Total Freq.	Freq. ptw	Left Freq.	Right Freq.
1	FIELDS	35	3.40	1	34
2	PLANTS	34	3.30	-	34
3	LAND	32	3.11	3	39
4	COUNTRY	28	2.72	8	20
5	GROUND	21	2.04	3	18
6	PLAIN	19	1.84	9	10
7	VARIETIES	17	1.65	3	14
8	LANDS	13	1.26	-	13
9	GARDEN	9	0.87	2	7
10	GARDENS	8	0.78	1	7
10	VALLEY	8	0.78	2	6
10	PATCHES	8	0.78	6	2
10	TREES	8	0.78	5	3
11	PLANT	7	0.68	4	3
11	SPECIES	7	0.68	3	4
12	OAT	6	0.58	2	4
12	SOIL	6	0.58	4	2
12	FOREST	6	0.58	4	2
13	DISTRICT	5	0.48	1	4
13	STATE	5	0.48	-	5
13	WHEAT	5	0.48	2	3
13	SPOTS	5	0.48	1	4
13	FLOWERS	5	0.48	-	5

Table 4.2. 5. Noun collocates of *cultivated* (adj.) in non-metaphoric dataset (minimum freq. 5)

The most noticeable distinction is the semantic diversity between the two lists of nouns (Tables 4.2.4 & 4.2.5). In the table above, all items (with the exception of *species*, *country*, *state* and *district* which will be returned to) are concrete things. *Spots* and *patches* also refer in every case to physical areas of land. Disregarding *species*, *spots* and *patches*, the largest category accommodates all plant/organic life, which can be sub-divided into ITEMS WHICH ARE CULTIVATED (*flowers*, *wheat*, *oat*, *plant/s*) and ITEMS IN WHICH CULTIVATION TAKES PLACE (*forest*, *valley*, *land*, *ground*, *plain*). A semantic category can also be formed to accommodate AREAS OF LAND, which differ by degrees of size and abstract/concreteness: *valley*, *ground*, *patches* and *spots* are concrete and specific in their reference to an area of land; *district*, *county* and *state* refer more accurately to abstract boundaries, which may be geological, cultural or political. Other nouns with fewer occurrences but

semantically related to those above include *agriculture, desert, sand, grass, toadstools, horseradish, fig, mushrooms*. The majority of these are ITEMS WHICH ARE CULTIVATED, followed by ITEMS IN WHICH CULTIVATION TAKES PLACE. In fact, 1.68 semantically-related nouns occur on average per concordance line of *cultivated* (adj.) in a non-metaphoric sense (or 732 token instances). If the semantic category is extended to accommodate geological or geographical lexis such as CLIMATE or LANDSCAPE (*clime, temperature, weather* and *wind*) as well as any of the above semantic groups, the figure increases to 1.90 items per concordance line or per instance of *cultivated* (829 token instances). Thus *cultivated* (adj.), when used in a non-metaphoric sense, can be said to occur always (based on the average figure) with at least one collocate relating to organic life, landscape, and/or weather.

A more technical point of contrast with the metaphoric noun collocates is that there is a much more uneven left/right distribution: the total figures for left and right distribution in the metaphoric noun collocates are 20.76% and 79.24% respectively and in the non-metaphoric set are 12.72% and 87.28%. This unevenness is more prevalent amongst the most frequent collocates (e.g. *fields, plants, land* where over 90% of instances occur on the right of *cultivated*). This suggests a greater degree of fixed structures amongst the non-metaphoric uses and their noun collocates. More specifically, the majority of the eight most frequent collocates (those with a frequency of 17 or above) occur most often in R1 position. This hints at a colligation for noun collocates which will be explored in section 4.3.

In terms of noun collocates only, these have shown to be distinct in their association with metaphoric or non-metaphoric instances of *cultivated*. Moreover the large majority of nouns (collocates and less frequent nouns) reflect prominent semantic associations which will be returned to in the adjective/adverb analysis. Whilst nouns associated with one of the four main semantic categories occur in 16% of all metaphoric

lines, the nouns associated with the semantic associations in the non-metaphoric data account on average for every instance. Thus there is less variety amongst semantic categories associated with the non-metaphors. This in turn makes the set more fixed, possibly resulting in stronger primings associated with this use.

4.2.2.2 Adjective/adverb collocates of *cultivated* (adj.)

Next, the adverbs and adjectives associated with *cultivated* are presented. First those occurring with *cultivated* in a metaphoric sense are given:

METAPHOR					
R	Collocate	Total Freq.	Freq. ptw	Left Freq.	Right Freq.
1	HIGHLY	42	4.08	42	-
2	MORE	32	3.11	28	4
2	MOST	32	3.11	26	6
3	REFINED	17	1.65	7	10
4	INTELLIGENT	6	0.58	3	3
4	BEAUTIFUL	6	0.58	2	4
4	VERY	6	0.58	3	3
5	EVERY	5	0.49	3	2

Table 4.2. 6. Adverb/adjective collocates of *cultivated* (adj.) in metaphoric dataset

Immediately, the metaphoric set shows a positive pragmatic association amongst the majority of items (*intelligent, refined, beautiful*). There are also superlatives and items conveying a degree of comparison (*highly, more, most, very, every*). Thus the large majority of adjectival uses of *cultivated*, in its metaphoric sense, describe a situation of positive and unmatched refinement of a person or their character/perception. *Highly cultivated, more cultivated* and *most cultivated* are the most frequent collocations; between them, occurring over ten times in every thousand words. *Refined* and *beautiful* appear most often on the right: in these cases mostly following *and*. The rest of the items most often occur on the left and modify *cultivated* directly. In the cases of *highly, more,*

most and *very* the item is always modifying *cultivated* and conveying a pragmatic association of intensification, which itself creates the semantic association of REFINEMENT.

Table 4.2.7 below shows the adjectival/adverb collocates for the non-metaphors:

NON METAPHOR					
R	Collocate	Total Freq.	Freq. ptw	Left Freq.	Right Freq.
1	WELL	40	3.88	37	3
2	HIGHLY	18	1.75	18	-
2	WILD	18	1.75	11	7
3	MORE	13	1.26	9	4
4	LITTLE	9	0.87	6	3
5	MOST	8	0.78	7	1
5	EVERY	8	0.78	5	3
6	FERTILE	7	0.68	5	2
6	VERY	7	0.68	5	2
6	PARTIALLY	7	0.68	6	1
7	GREEN	6	0.58	4	2
7	RICHLY	6	0.58	6	-
7	SEVERAL	6	0.58	4	2
7	ENCLOSED	6	0.58	4	2
8	GREAT	5	0.48	4	1
8	BEAUTIFUL	5	0.48	4	1
8	LONG	5	0.48	1	4
8	SMALL	5	0.48	4	1
8	FAR	5	0.48	2	3

Table 4.2. 7. Adverb/adjective collocates of *cultivated* (adj.) in non-metaphoric dataset

Table 4.2.7 is over twice as long as Table 4.2.6 meaning that a larger set of adverbs and adjectives are reoccurring with the non-metaphoric uses of *cultivated*. An initial brief glance at the table above is enough to conclude that there is no pragmatic association as was the case in Table 4.2.6. The majority of items are physical in their description and rely less on perception than was the case for the metaphoric set (i.e. *refined*, *beautiful*, *intelligent*). Looking at individual uses of the above collocates within concordance lines reveals that items semantically associated with PHYSICAL, OBJECTIVE DESCRIPTION are *little*, *green*, *long*, *small*, *far*, *great* and *enclosed*. More specific semantically are

descriptions of PHYSICAL PROPORTION OR QUANTITY (*great, several, partially, long, small* and *little*). The majority of these (81.11%) occur on the left and modify *cultivated* directly. With the exception of *fertile* and *richly*, the remaining adjectives/adverbs refer to physical appearance such as LOCATION AND POSITIONING such as *enclosed* and *far*. Together with the aforementioned set related to size, these items comprise 13/20 items, suggesting that the non-metaphoric uses of *cultivated* as an adjective are most often grounded in the physical and concrete world (a trait most strongly claimed by Goatly, 1997). The choice of adjectives and adverbs display this semantic preference.

The most frequent collocation is *well*, most often modifying *cultivated* directly. It is unique to the non-metaphoric data and thus is the first point of discussion. Being unique to the non-metaphoric data as well as highly frequent (it is the seventh most frequent collocate in the dataset overall²⁵), it can be seen as a collocation uniquely associated with *cultivated* when used in a non-metaphoric sense. It occurs in 37/39 instances to the left of *cultivated*, most often (34 times) in L1 position. Instances are shown below:

must have been extremely well CULTIVATED, in order to have afforded
 and water, well-peopled and well-CULTIVATED, green with luxuriant pas
 n Bagh is an extensive and well CULTIVATED pleasure garden with pa
 xt stage very beautiful, and well CULTIVATED. The route lay in a paral
 ut green, well-wooded, and well-CULTIVATED: the weather well enoug
 tremity it is said to be very well CULTIVATED. Wady Fatme has differ
 ne Downham domains were well CULTIVATED; the line of demarcation
 sipation. A great part of the well CULTIVATED tarro-fields, which forme
 eat blights; open, exposed, well-CULTIVATED positions, when not too
 e country round about it, so well CULTIVATED; the land in such a beau
 Walking along its wide and well CULTIVATED terraces, you obtain the
 on this side appears pretty well CULTIVATED, being divided into fields
 e soil is good, and would, if well CULTIVATED, be very productive. Fron
 cape. The soil is fertile and well CULTIVATED, but being alluvial, it is i
 ibanus. This part was once well CULTIVATED, but the Metaweli having
 ntry around was pretty and well CULTIVATED, and nothing more. The
 Eldjy, where the soil is also well CULTIVATED. A few large hewn stone
 bund Kooffu is a level plain, well CULTIVATED, and studded with little v
 le-land, gently descending, well CULTIVATED, and watered by several
 it [Arabic]; the plain is here well CULTIVATED, but nothing is sown at

²⁵ According to WordSmith's Collocation ranking.

Concordance 4.2. 1. Selection of *well cultivated* occurrences in non-metaphoric dataset

As can be seen in Concordance 4.2.1, the majority of instances 19/37 (51.35%) occur at the end of a clause or sentence, most often marked by a comma or a full stop. This suggests a textual colligation. In terms of semantic association, the collocation expresses a sense of fertile or healthy ground, well farmed and managed. There are three instances of *very* to the left of *cultivated*, as well as *well-peopled* and *well-wooded* which emphasise this notion. Other semantically related adjectives/adverbs in the clauses shown in the screenshot above include *fertile*, *green*, *pretty*, *beautiful*, as well as items relating to intensification (*extremely* and *extensively*). Thus the collocation *well cultivated* or *well-cultivated* can be said to be embedded within further semantically associated language, and is unique to non-metaphoric uses of *cultivated*. No instances were found in the BNC (written section) which suggests that the collocation is specific to the nineteenth century period.

Interestingly, many of the superlatives and comparatives in the metaphoric list are reproduced in the non-metaphoric list but with lower frequency (*most*, *more*, *highly*, *very*, and *every*). A brief discussion of the items' positioning in relation to *cultivated* may serve to highlight distinctions between the items. Below, Table 4.2.8 presents log likelihood figures for two items featuring in both collocate tables with a significantly higher frequency in one set than the other. These are *highly* and *most*. *Most* has a log likelihood score over 15.13 and is thus significant to the 99.99th per centile²⁶. *Highly* is significant to the 99th percentile. Where the frequency for the individual left (L) or right (R) positioning of a collocate has a log likelihood score below 5, it has been omitted:

²⁶ <http://ucrel.lancs.ac.uk/llwizard.html>. Accessed on 4/11/2015

Collocate	Metaphor		Non-met		Log likelihood
	Expected freq.	Observed freq.	Expected freq.	Observed freq.	
HIGHLY (total)	20.99	42	30.01	18	9.89
HIGHLY (L)	29.99	42	30.01	18	9.89
MOST (total)	20	32	20	8	15.43
MOST (L)	16.5	26	16.5	7	11.65

Table 4.2. 8. Log likelihood scores for *highly* and *most*

The score for *highly* and *most* is in blue, signifying that their frequencies are more significant in the metaphoric data. They are significantly more frequent when occurring to the left of *cultivated*. *More*, *very* and *every* are not significantly more frequent in one dataset than the other and thus are the first items which appear to be associated with both uses of *cultivated*.

Beautiful is also found on both lists. Whilst the figures are small for both sets (5 instances in each set) their positions are different: the majority of instances occur on the right (R2) of *cultivated* in the metaphoric data but on the left in the non-metaphoric data:

on a well CULTIVATED mind, they produce the beautiful harmony of feeling, that leads 1465.00 er
nd without CULTIVATED intelligence, the most beautiful woman were little better than a 1537.00 raordin
is a fault. Those who find beautiful meanings in beautiful things are the CULTIVATED. For these there is
88.00 nk it the duty of noble women, who have beautiful natures and enlarged and CULTIVATED tastes
andid CULTIVATED geniuses rise upon simple, beautiful foundations hidden out of s 1209.00 red, from

Concordance 4.2. 2. All instances of *beautiful* collocating with *cultivated* in metaphoric dataset (within 5-item span)

wards of twenty miles an hour, through a very beautiful and generally well CULTIVATED country, to the city
aspect continued through the next stage very beautiful, and well CULTIVATED. The route lay in a parallel lin
as in a lake. The CULTIVATED ground, with its beautiful productions, interspersed with cottag 1273.00 coffee
e town called Kabba, situated in the midst of a beautiful and highly CULTIVATED country, bearing a great
rtile is the soil. We have come along a strip of beautiful country, richly CULTIVATED, lying along the banks

Concordance 4.2. 3. All instances of *beautiful* collocating with *cultivated* in non-metaphoric dataset (within 5-item span)

In the metaphoric data, *beautiful* belongs in 3/5 instances to the subsequent clause: suggesting a less immediate association with *cultivated*. In all five cases, *beautiful* belongs to a separate noun from that belonging to *cultivated*. *Cultivated* refers to *mind*, *intelligence*, *geniuses*, *tastes* or *people*. Thus *cultivated minds* etc. are associated with other things that are beautiful (*harmony of feeling*, *woman*, *things*, *natures*, *foundations*). In contrast, in the non-metaphoric data, *beautiful* refers in 4/5 instances directly to the *cultivated* ground or country. Thus *beautiful* is a characteristic associated with *cultivated* in the case of country or land.

To summarise this subsection, corpus data have provided further evidence, in the case of adjectives and adverbial collocates of *cultivated* (adj.), that metaphoric and non-metaphoric uses display different characteristics and behaviours. Where there is overlap (*most*, *more*, *highly*, *very*), positioning and frequency differ. Further tests of significance show *most* and *highly* to be more frequent statistically in the metaphoric corpus. Whilst the items associated with the non-metaphors are more physical in reference to appearance, those in the metaphoric set are more often related to perceived qualities (e.g. beauty or refinement). Moreover, the earlier noun collocate analysis has shown uniqueness amongst both sets of data: a strong tendency for at least one semantically-related noun to occur with every instance of *cultivated* as a non-metaphor suggests that the semantic associations are distinct enough to permit overlap in adjectives at no cost to one's understanding of whether the use is metaphoric or non-metaphoric. This is supported by the informants' agreement on categorisation. The following section will focus on personal pronouns as the keyword analysis revealed *her*, *his* and *she* to be more 'key' amongst the metaphoric dataset. Personal pronoun collocates may play an

important role in distinguishing between the two senses of *cultivated*, and possibly between metaphor and non-metaphor more generally.

4.2.2.3 Personal pronoun collocates of *cultivated* (adj.)

Below are the frequencies of personal pronouns as collocates in both datasets:

Pronoun Collocate	METAPHOR				NON METAPHOR			
	R	Freq. ptw	L Freq.	R Freq.	R	Freq. ptw	L Freq.	R Freq.
HIS	1	2.14	16	6	-	-	-	-
HER	2	1.65	13	4	-	-	-	-
THEIR	3	1.46	4	11	2	0.87	2	7
HE	4	1.36	1	13	4	0.87	5	4
THEY	5	0.97	4	6	4	0.48	1	4
SHE	6	0.68	3	4	-	-	-	-
WHOSE	7	0.58	1	5	-	-	-	-
WHOM	8	0.49	1	4	-	-	-	-
OUR	-	-	-	-	1	2.23	23	4
WE	-	-	-	-	3	0.87	2	7
THEM	-	-	-	-	5	0.48	1	4

Table 4.2. 9. Personal pronoun collocates of *cultivated* in both datasets

Table 4.2.9 shows a difference between metaphoric and non-metaphoric uses in both the frequencies and types of personal pronouns used. Most clear is the lower occurrence of personal pronouns generally, within the non-metaphoric dataset. Possessive personal pronouns are characteristic of the metaphoric dataset only (*whose*, *his* and *her* are unique to this set and *their* is almost twice as frequent as in the non-metaphoric set). Looking at the specific concordance lines, *his* and *her* in the metaphoric data most frequently modify *mind* or *taste/s* (18/22 instances of *his*, 10/17 instances of *her*). Female pronouns are also associated with a metaphoric use of *cultivated*: there are no instances of a female pronoun associated with the non-metaphors. This is possible evidence of semantic

differences between the two uses. In the metaphoric data, *he/his/him* have a combined frequency of 14.95 occurrences per thousand words and *her/she* have a combined frequency of 7.57 occurrences per thousand words. In contrast, in the non-metaphoric dataset *his, he* or *him* have a frequency of 4.37 occurrences per thousand words and there are only four instances of *she/her* (0.39 occurrences per thousand words).

Pronouns also have the potential to reveal differences in grammatical structure. The most fixed pronoun in terms of positioning is *he*, occurring in all but one metaphoric instance (94.5%) in right position. Most often, (in 16/18 cases) the item occurs in a new clause:

expected in the most CULTIVATED country; for he assured us that there was great
 and derided in the company of CULTIVATED men, he would never have exhorted people
 ent, and a keen delight in CULTIVATED society. He might be seen to special advanta
 re CULTIVATED, the more speculative intellects he had--and has--an almost supe 90
 Parliament for Surrey, and died a _millionaire_; he was a man of CULTIVATED taste
 an be expected from a muse so CULTIVATED?" He doubts whether it will be read all
 of which CULTIVATED preachers had been shy. He preached so that he made you fe
 of Conversation was still seriously CULTIVATED, he used to gather round his table in
 so wise; his mind is so CULTIVATED, and when he speaks, although his words are c
 lties would have been busy and CULTIVATED, if he had never in his life seen any bod
 he must be an improved and CULTIVATED man: he must be a man favoured by natur
 m or her self airs about a CULTIVATED eye; but he or she had the grace to put in a s
 a highly select and CULTIVATED audience, what he might suppose his hearers to kno
 of refined feelings and CULTIVATED mind. . . . He is very simple and agreeable in h
 s who live in a highly CULTIVATED society, and he knew enough at any rate to see t
 air intellects, and more highly CULTIVATED than he. But she did not often find a pair
 r up the problem. Highly CULTIVATED, however, he certainly was, and his society wa
 ess. Himself highly CULTIVATED in every sense, he watched with keenest interest ov

Concordance 4.2. 4. All instances of *he* collocating with *cultivated* in metaphoric dataset (within 5-item span)

This is a signal of textual colligation where *he* is associated with a subsequent process, rather than one occurring before or alongside *cultivated*. A reason for this is that the thing being *cultivated* is most often a person (or their mind or taste, also belonging to them) and thus the choice of pronoun modifying the person or thing is personal: *his/her cultivated mind*. Consequently the use of *he* is a form of textual cohesion linking back to this same person.

A finding specific to the non-metaphoric dataset is that all personal pronouns in the immediate environment of *cultivated* are first and third-person plural. They are possessive (*our, their*) and subject (*we, they*). Indeed, despite the smaller quantity of pronouns in the non-metaphoric data, the item with the highest frequency overall occurs in the non-metaphoric set (*our*), showing a proportionally higher usage than any other pronoun. In the verb analysis, it was suggested that the reason for the use of *we* and *our* may be related to the genres of the subfolders within the corpus, particularly within gardening handbooks. *Our* in the adjective non-metaphoric set is most often a collective reference (usually to England or Britons), such as *our own country, our farms, and our gardens*, where the tense of the clause in which they occur is, in almost every instance, present (18/19 instances). *Our* is also most frequently found in L1 position (19/27), as in the extended concordance lines below:

(4.7) "All the plants of tropical climates, the oil and wax palms, the sugar cane, &c., contain only a small quantity of the elements of the blood necessary to the nutrition of animals, as compared with *our cultivated* plants."

(4.8) "It is perfectly obvious that the atmosphere must furnish to *our cultivated* fields as much carbonic acid, as it does to an equal surface of forest or meadow..."

(4.9) "Again with regard to the carrot, the Professor says "that the hard-rooted wild carrot is really the parent of *our cultivated* varieties, remarkable as they are for the succulence and tenderness of their roots."

The individual texts where *our* is found in L1 position are mostly non-fiction: chemistry and biology lectures (6/19), gardening handbooks (5/19), and travel diaries (5/19). In these cases, the *our* refers most often to the plants and species native to Britain, often in comparison with another country's produce. As in example 4.8, some instances of *our* describe land and crop more generally. The use of *our* in conjunction with *cultivated* in 4.9 implies the stock belongs to humans, as a result of our domesticating/growing it. This is similarly the case for *their*, the second most frequent personal pronoun, which is used to describe the produce of another country or area:

(4.10) "The country gradually unfolded all its charms; the luxuriant growth of the trees, and the picturesque valleys, with their thickets of bread-fruit, orange, and cocoa-trees, their *cultivated* fields, and plantations of bananas."

Thus it can be said from the data and discussion above that personal pronouns also help to distinguish metaphoric uses from non-metaphoric uses, in the case of *cultivated*. The main difference is the lack of female pronouns and first person pronouns in the non-metaphoric dataset. The use of third person *our* and *we* signal a semantic difference between the metaphors and non-metaphors (i.e. the cultivating is referring to groups of people rather than individuals). First/second personal pronouns occur on average 5.83 times per thousand words amongst the metaphors and third person personal pronouns occur only 2.43 times (ptw). In contrast, those figures for the non-metaphoric dataset are 0.87 and 6.67 (ptw) respectively. Thus both types of pronouns are seen to distinguish the use of *cultivated* as a metaphor or a non-metaphor.

To summarise the collocation analysis so far, differences have been found amongst each of the nouns, adverbs/adjectives and personal pronouns, which explain how metaphoric uses of *cultivated* as an adjective are distinguished from non-metaphoric uses.

The noun and adverb/adjective analysis found differences mainly in the semantic associations associated with each dataset. The pronoun data shows genre and textual preferences associated with one dataset only. The following section discussing the ten most frequent collocates of *cultivated* (adj.) will develop upon these discussions and explore the textual and grammatical patterns in more detail.

4.2.2.4 Ten most frequent collocates of *cultivated* (adj.)

Within this section, the prevalence of grammatical items may provide a clue as to the structures in which *cultivated* is found, and the function it performs within a given clause or sentence. The table below shows the data from both datasets:

METAPHOR					NON METAPHOR				
R	Collocate	Freq. (ptw)	Left Freq.	Right Freq.	R	Collocate	Freq. (ptw)	Left Freq.	Right Freq.
1	THE	21.55	140	82	1	THE	27.66	195	90
2	AND	20.29	109	100	2	AND	17.18	81	96
3	OF	17.67	121	61	3	OF	16.6	117	54
4	A	13.69	115	26	4	IN	8.15	36	48
5	TO	6.70	35	34	5	A	6.41	50	16
6	IN	6.51	40	27	6	IS	4.76	35	14
7	HIGHLY	4.08	42	0	7	TO	4.46	26	20
8	MIND	3.69	10	28	8	WELL	3.88	37	3
9	IS	3.50	20	16	9	AS	3.49	13	23
10	AS	3.40	10	25	10	FIELDS	3.4	1	34

Table 4.2. 10. Ten most frequent collocates in metaphoric and non-metaphoric datasets

The appears as the most frequent item in both corpora, with very similar left and right proportions (63.06% and 68.43% of instances occurring on the left in metaphoric and non-metaphoric data respectively). *And* is the second most frequent collocate in both datasets with a frequency of 20.29 and 17.18 per thousand respectively. The difference in its left and right positioning in relation to *cultivated* is also marginal. The most frequent position

of *and* in the non-metaphoric data (R2), however, reveals a textual colligation which will be discussed following the concordance lines presented below:

st and waste around the CULTIVATED land, and therefore some of
e, and cocoa-trees, their CULTIVATED fields, and plantations of bar
e which belongs to their CULTIVATED forms; and hence all the vari
asant road, through well CULTIVATED fields and groves. I here saw
which glanced along the CULTIVATED valley, and dyed in purple ar
ch more readily than the CULTIVATED ones, and are, besides, earl
dy, half an hour from the CULTIVATED plain, and is surrounded by
erformed--the cities, the CULTIVATED plains, and all the varieties c
. In front there are a few CULTIVATED fields, and beyond them the
ese comfortable, green, CULTIVATED hills and the busy people bo
, lawns, glades, heaths, CULTIVATED farms, and ornamental seats
. In front there are a few CULTIVATED fields, and beyond them the
ces in their crossed and CULTIVATED descendant; and he would c
land, loch, hill-side, and CULTIVATED land, and say to himself-or
rot, growing far from any CULTIVATED land, and even in the first ge
with rich shrubs or highly CULTIVATED corn-fields and olive groves;
le to the development of CULTIVATED plants, and which must be fi

Concordance 4.2. 5. Selection of *cultivated X and* in non-metaphoric (adj.) dataset

When in R2 position, *and* is almost always preceded by a comma, marking a break in the sentence and the beginning of a new clause. In the selection of instances in the screenshot above, only two instances of *and* are followed by another noun; in the remaining lines *and* signals the start of a new clause. In total the figures are 6/30 (20.00%) of the structure *cultivated X and* are followed by a noun phrase and in 24/30 (80.00%) instances, the structure is followed by a new clause. This indicates a strong textual colligation which can be expressed as follows: *cultivated (lands/field/hills/farms etc.), + and (new clause)*. Furthermore, in 17/24 (50.17%) of instances, the following verb phrase gives extra information regarding the situation or position of the *cultivated* land (e.g. *...half an hour from the cultivated plain, and is surrounded by a most dreary barren War; ...In front there are a few cultivated fields, and beyond them the smooth hill of coloured rocks*).

The most frequent position of *and* in the metaphoric dataset is L1. Instances of

and in L1 (metaphoric) are presented below:

htown were different agreeable and CULTIVATED houses. There was Pakenham
hat domestic races of animals and CULTIVATED races of plants often exhibit an
nners, and warm benevolence, and CULTIVATED intelligence, but of simple piety
aculties would have been busy and CULTIVATED, if he had never in his life seen
or so small a town, of capable and CULTIVATED men. There are plenty of
guished for his noble character and CULTIVATED mind, conduced much to the
are everything that is charming and CULTIVATED, but one never sees enough of
, may satisfy a class of clever and CULTIVATED persons. It may be to them the
with little effort, or of a delicate and CULTIVATED taste, so as to separate with
nly among those of disciplined and CULTIVATED minds, skilled to separate truth
of mankind, and its disciplined and CULTIVATED state Civilization in the abstract,
, and resided with the elegant and CULTIVATED Evadne, the only
given up her own more elegant and CULTIVATED mind for all their enjoyments;
beautiful natures and enlarged and CULTIVATED tastes, to make themselves the
y person of good moral feeling and CULTIVATED mind, who did not appear to
ery evidently of refined feelings and CULTIVATED mind. . . . He is very simple
h that knowledge, duly heeded and CULTIVATED, I hoped to divine what I cannot
man: he must be an improved and CULTIVATED man: he must be a man
alth, wealth, power of intellect and CULTIVATED minds-- Joy and Love hand in
nds as are worthy of intelligent and CULTIVATED beings. So far as inclination is

Concordance 4.2. 6. Selection of *and cultivated* occurrences in metaphoric dataset

Cultivated is found in the metaphoric instances above as part of a combination of adjectives describing a single noun (*capable and cultivated men, clever and cultivated persons, delicate and cultivated taste, disciplined and cultivated minds* etc.). This structure, (adj.) + *and cultivated* + (noun), accounts for 37 out of 46 instances (80.43%) of *and cultivated*, showing a strong colligation. There is also evidence of textual colligation: the cluster (adj.) + *and cultivated* + (noun) most commonly occurs at the end of a sentence or clause, marked either by a comma (14/37) or a full stop (10/37). In total 64.86% of instances occur in this textual position.

By contrast, there is more adverbial modification of *cultivated* in the non-metaphoric data when *and* collocates on the left: 54.88% of non-metaphoric instances of *cultivated* are modified by an adjective or adverb when *and* occurs on the left compared to 23.36% of metaphoric instances. *And* + (adverb) + *cultivated* accounts for 30.49% of these and *and well cultivated* accounts for 36.00% of this figure:

ound them are woody valleys and well CULTIVATED fields. To the eastward of strawberry is of recent date, and the CULTIVATED varieties can in most cases s s hilly with a rocky soil, here and there CULTIVATED. At the end of five hours an ne country around was pretty and well CULTIVATED, and nothing more. The park ation. Walking along its wide and well CULTIVATED terraces, you obtain the fine the next stage very beautiful, and well CULTIVATED. The route lay in a parallel li banks two or three feet high, and with CULTIVATED fields in front, served them a ably once enclosed orchards and well CULTIVATED fields. At Ayoun are about fo neighbourhood seems fertile and well CULTIVATED. Industry is evident on every aliman Bagh is an extensive and well CULTIVATED pleasure garden with pavilion views where the peaked hills and the CULTIVATED farms were seen together, w required territory was swampy and ill CULTIVATED by the native Dyaks, who varie tions; hence the few houses and little CULTIVATED land without the limits of the w mushrooms in September and October; CULTIVATED mushrooms may be ha their head. Pretty little huts, and diligently CULTIVATED fields of taro, yam, and to maintain a wild condition; and hence CULTIVATED plants can only be kept u ed in the midst of a beautiful and highly CULTIVATED country, bearing a great rely beautiful, clear of wood, and partly CULTIVATED; and a number of Fellata with a few stone cattle kraals and some CULTIVATED lands down by the water, tween the rough wild upland, and the CULTIVATED country below. As you stand

Concordance 4.2. 7. Selection of *and X cultivated* occurrences in non-metaphoric dataset

The collocates (*of, is, to* and *as*) differ minimally in position, frequency and left and right distribution across the metaphoric and non-metaphoric datasets. *A* and *in* are however, worthy of a further exploration. Firstly *a*, despite having similar distributional frequencies (5.8% difference between left and right), has the largest difference in frequency per thousand (13.69 in the metaphor set and 6.41 in the non-metaphor set). A statistical test of significant frequencies also supports this difference. Below, Table 4.2.11 presents log likelihood figures for *A* (tested to the 99.99th per centile). The figure for left distribution is also given as it also has a score greater than 15.3 (99.99%):

Collocate	Metaphor		Non-met		Log likelihood
	Expected freq.	Observed freq.	Expected freq.	Observed freq.	
A (total)	103.47	141	103.53	66	27.84
A (L)	82.48	115	82.52	50	26.34

Table 4.2. 11. Ten most frequent collocates of *cultivated* with Log likelihood score of <5 in both datasets

As is shown, *a* is significantly more frequent in the sub-corpus of metaphoric usage. The higher use in the metaphors is perhaps counterbalanced by a higher use of the definite article in the non-metaphoric set. The figure for left distribution is also significant, meaning that *a (...) cultivated* is the most prevalent structure, hinting at a specific colligation. The largest minority (35.46%) are found in L1 in the metaphoric data. Examples of nouns modified by *cultivated* in this collocation *a cultivated* are shown below:

most sumptuous dreams of a CULTIVATED imagination. Contarini Fleming distinguishes the swearing of a CULTIVATED man. It grew to a climax, distinguished by our best idea of a CULTIVATED mind. "Next, it will not be distinguished by the craftiness of a fox. A man of a CULTIVATED mind, without an unshaken loyalty, while the existence of a CULTIVATED, though small, society, makes and sin, and in the absence of a CULTIVATED understanding, they cannot be distinguished by the ringing when necessary, of a CULTIVATED voice that reached the ears distinguished that the system planted a CULTIVATED gentleman in every parish in and the misfortune to possess a CULTIVATED ear. And yet the music of the who would appear to possess a CULTIVATED taste for the fine arts, was like composition does not satisfy a CULTIVATED taste. There is something unne physical secret. I say that a CULTIVATED intellect, because it is a good e and of Man, viewed through a CULTIVATED, and at the same time an imake them highly repugnant to a CULTIVATED eye." I begin to understand natures, but gave no offence to a CULTIVATED eye. The first sight of the roo scholars alone, or chiefly to a CULTIVATED few, and address themselves rce of no slight enjoyment to a CULTIVATED mind. Viewed in this light, seer than to voluntary effort. To a CULTIVATED taste there is a delight in perbusiness, instead of unfitting a CULTIVATED mind for scientific or literary on is too aesthetical. Unless a CULTIVATED taste be overpowered by per

Concordance. 4.2. 8. Selection of *a cultivated* occurrences in metaphoric dataset

The majority of nouns following the collocation are either relating to abstract qualities (*intellect, understanding, character, etc.*), or perception (*eye, taste, mind*), which echoes the earlier findings in the noun collocates analysis. In total, they make up 34/46 instances (73.91%). This can be contrasted to what happens when A is in L2 position in the same dataset:

Lectures," save that they appealed to a more CULTIVATED and less demonstrative class, and inner and with art in general--that is, of a more CULTIVATED and refined taste--would know that Lectures," save that they appealed to a more CULTIVATED and less demonstrative class, and a whole evening, should a woman of a more CULTIVATED understanding endeavour to give a balanced, by their equal influence on a well CULTIVATED mind, they produce the beautiful harvest one another. The mere reaction of a somewhat CULTIVATED spirit against invading dulness of the world. It is evidently written by a well-read, CULTIVATED, and refined woman, with warm the most enlightened of her sex, with a mind CULTIVATED to the highest degree, and acquainted student, had grown into the oracle of a highly CULTIVATED society, whose acquaintance was vivid in showing how greatly the head in a highly CULTIVATED race has been modified and shortened at Norwich in 1813, and brought up in a highly CULTIVATED, and even brilliant, literary circle. He people become nowadays who live in a highly CULTIVATED society, and he knew enough at a as the world's choicest heritage; and a lovely, CULTIVATED, refined woman, thus sheltered, a . Delivered one by one at intervals, to a large, CULTIVATED, and critical audience, they both d seen in Mrs. Douglas the effects of a highly CULTIVATED understanding shedding its mild ra

Concordance 4.2. 9. Selection of *and X cultivated* occurrences in metaphoric dataset

More often in this situation, the noun following the colligation *and X cultivated* refers to a person or a group of people, such as *race*, *society* and *refined woman*. Out of 15 instances of *and X cultivated* + noun phrase, 9 instances (60.00%) show this association. This is evidence of nesting, and despite the lower frequency of the latter colligation (*and X cultivated*), there is a characteristic difference between when *cultivated* is modified and when it is not. The modifying item (adjective or adverb) in *and X cultivated* also strengthens the association with refinement and improvement (e.g. *more*, *highly*, *lovely*). Thus the structure is important in terms of collocation, colligation and semantic and pragmatic association.

In comparison, *a* is more often found in a position further removed (L5) from the node word in the non-metaphoric data and more importantly, less fixed. Instances of *a X cultivated* make up only 21.21% of all collocation instances in the non-metaphoric data and reveal a semantically different use, as Concordance 4.2.10 shows:

arrived at such perfection in a more CULTIVATED field or genial clime. She was born at held. The path circled round a magnificent, CULTIVATED valley, hemmed in on almost without premium_ to weed on a loose CULTIVATED soil in the common manner, _eighte cations, and on the river side a well CULTIVATED garden, the products of which are sold d for two hours, we came to a small CULTIVATED plain. On this side, as well as on the houses, to the left--covering a richly CULTIVATED ridge of hills, which sink as it were in oaks and Zarour trees, with a few CULTIVATED fields among them. Kanouat is situated untry-seat. In front there are a few CULTIVATED fields, and beyond them the smooth hi untry-seat. In front there are a few CULTIVATED fields, and beyond them the smooth hi essential to the perfection of a landscape. CULTIVATED fields, gardens, and orchards, chow, the province of Kano. A highly CULTIVATED and populous country extends from rton: "Between us and it lay a finely CULTIVATED valley, extending as far as the eye c

Concordance 4.2. 10. Selection of *and X cultivated* occurrences in non-metaphoric dataset

The adverbs modifying *cultivated* within these clusters do not appear to show any shared semantic associations. *More, loose, small* and *few* refer to PHYSICAL CHARACTERISTICS, whilst *magnificent, richly, highly* and *finely* refer more to ABSTRACT JUDGEMENT.

Secondly, *in* is worthy of brief discussion due to the difference in distribution. Despite the relatively small difference in frequency between the datasets (1.64 per thousand words between the two frequencies) compared to other more starkly different collocates, *in* is more often found on the left of *cultivated* in the metaphoric data (59.7% of the time), but on the right in the non-metaphoric data (57.14% of the time). This finding potentially reveals a difference in function between the metaphoric and non-metaphoric uses. Specifically, the majority of non-metaphoric uses of *in* occur in R2 position (26.16 %). The majority of these (76.00%) form the colligation *cultivated* + (noun) + *in* (location/manner) as shown below:

quite practicable, it would increase the CULTIVATED land in England and Wales 490,000 acres. The soil was uncommonly fine; it was partially CULTIVATED, abounding in wood and water, and in some places in the most fertile soil. Our road lay over an uneven plain, CULTIVATED only in spots. After three hours and a half we were at the date-trees, and irrigates some CULTIVATED fields in the wider parts of the winding river. The people who live in a row of cottages with their well-CULTIVATED lands in front and rear of their houses. The garden from the one great garden of the whole CULTIVATED island in its yielding time, penetrate into the narrow banks two or three feet high, and with CULTIVATED fields in front, served them as an excellent soil to 4_s_ an acre per annum, on all the CULTIVATED lands in England, or to eight millions of acres in it, at half an hour's distance from the CULTIVATED plain, in the direction N.E., till we reach the

Concordance. 5.2. 1. Selection of *cultivated* X in occurrences in non-metaphoric dataset

This can be contrasted with the metaphoric data, where *cultivated* forms a part of a prepositional phrase beginning with *in*: *in* precedes *cultivated* in L2, L3 and L4 position in the majority of cases (13.43% in each case). Instances of *in* in L2 and L3 position shown below reveal *cultivated* belonging to a prepositional phrase:

as all people become nowadays who live in a highly CULTIVATED society, and he knew enough at a glance to may aid in showing how greatly the head in a highly CULTIVATED race has been modified and shortened under the most diversified circumstances, in the most CULTIVATED, in the rudest races and intellects. The conveniences that could be expected in the most CULTIVATED country; for he assured us that the man was born at Norwich in 1813, and brought up in a highly CULTIVATED, and even brilliant, literary circle. He learned, on my own strength, to read fluently in almost all CULTIVATED languages, on almost all subjects with great enthusiasm. And there is a great advantage in having a CULTIVATED person at command, with whom one can converse, which arrive at maturity at a later age. In the highly CULTIVATED and early matured races, the refinement of humanity, which never resides in any but CULTIVATED minds. It is something nobler than the refinement of character are such as we expect to find in the CULTIVATED lawyer, who turned the eyes of his : he does not see these types, he said to himself, in the CULTIVATED monotony of Oxford or London. She is a very pretty girl. His words are well chosen; they are fit in with CULTIVATED exactitude and polished precision. From it, the animal passions predominate. In highly CULTIVATED modern society, where the complexions are fixed to the hinder part of the head. In highly CULTIVATED races this habit is no longer followed. The mind in his whole head of hair and even in his CULTIVATED whiskers. CHAPTER XL National and

Concordance 4.2. 11. All instances of *in* in L2 and L3 position in metaphoric dataset

Although less prominent than the other findings, this suggests that in the majority of cases where *in* collocates with *cultivated*, *cultivated* forms part of a prepositional phrase and thus typically offers secondary information such as manner or place. This is a surprising finding as it means that contrary to expectation, the metaphoric uses of *cultivated*

performs a secondary function - the metaphor not characteristically being the main information of the clause/sentence. This could be a potential criterion for fossilisation: it could be the case that when *cultivated* is used metaphorically, it is expected or conventional. The two larger studies within this research may find this to be a trait of *cultivated* only, or it may support the findings for other metaphors.

Returning to the top ten most frequent collocates, *highly* and *mind* are the only items specific to the metaphoric data. These have been found to be statistically significant and have been discussed in the adverb/adjective and noun collocate analyses, but there is more to say in relation to colligation. As an adverb, *highly* is found only on the left of *cultivated*. 92.86% of these instances modify the adjective *cultivated* directly. The most common nouns following the collocation are *race(s)* and *society* (making up 25.64% of instances). The second most common item to follow the collocation is *and* (17.95% of instances), forming the colligation *highly + cultivated + and*. The similar colligation *and + highly + cultivated* accounts for 12.83% of all concordance lines. Adjectival phrases following *highly cultivated and* are: *early matured, artistic, more civilised, unoffending, and brilliant*. Adjectival phrases preceding *and highly cultivated* are: *most picturesque, well-mannered, naturally strong, high bred, finely gifted and agreeable*. Instantiations of both colligations create an impression of a person, a group of people, or an individual mind, with qualities of sophistication and refinement. Interestingly, with the exception of *agreeable*, all are adverb-adjective compounds associated with the latter colligation (*and + highly + cultivated*). The effect of elaborate extravagance can be said to be intimated through the hyperbolic language. In order to determine whether such associations are specific to the nineteenth century period, a comparison can be undertaken with the complete BNC written section. In the latter, there are only four instances of *highly cultivated*. Three of these are metaphoric (*mind, man* and *English voice*) and one is non-metaphoric (*garden*). There are no instances of other adjectives or adverb-adjective

structures used in conjunction with *highly cultivated*, suggesting it is specific to the time period of the corpus, and as mentioned earlier reflective of a recurrent theme of refinement, notably characteristic (in literature in particular) of the period (c.f. Wilkes, 2010 for a discussion of this).

To summarise the analysis of the most frequent collocates, certain grammatical items have been found to be more frequently associated with either the metaphoric or non-metaphoric use of *cultivated* (adj.). This has shown that colligations also differ between the two datasets. In particular, where grammatical items share similar frequencies in both sets of data, there are colligations specific only to one dataset. This provides strong support, firstly, for the claim that corpus data can identify differences metaphoric characteristics, and secondly, for the claim that grammatical construction plays an important role in identifying metaphor (as much as isolated lexical items shown in the earlier collocation analyses). The following section will consider further colligations and nesting revealed in the cluster data.

4.2.3 Cluster analysis (metaphoric and non-metaphoric)

The final section of the analysis will focus on clusters associated with and including the item *cultivated*. Tables 4.2.12 and 4.2.13 below reveal the most frequent clusters in the two datasets²⁷. The figure for occurrences in the other dataset is given in the right-hand column, in order to distinguish those exclusive to either set. Items in brackets do not occur in every instance (but do occur with a minimum frequency of 5). Brackets are used to combine similar clusters and thus reduce the length of the table:

²⁷ Provided by WordSmith5.

METAPHOR				
R	Cluster	Total Freq.	Freq. ptw	N-Met (Freq. ptw.)
1	THE MOST CULTIVATED	14	1.36	-
2	(A) HIGHLY CULTIVATED (AND)	13	1.26	-
3	(OF) CULTIVATED TASTE (AND)	11	1.07	-
3	THE MORE CULTIVATED (AND)	11	1.07	-
3	(AND) CULTIVATED MIND (AND)	11	1.07	-
4	OF THE CULTIVATED	10	0.97	1.36
5	OF A CULTIVATED	9	0.87	0.19
6	A CULTIVATED MIND	8	0.78	-
7	A CULTIVATED TASTE	6	0.58	-
8	AND A CULTIVATED	5	0.49	-
8	TO A CULTIVATED	5	0.49	-
8	A CULTIVATED EYE	5	0.49	-
8	AND HIGHLY CULTIVATED	5	0.49	0.10
8	HIGHLY CULTIVATED RACES	5	0.49	-

Table 4.2. 12. Most frequent clusters with *cultivated* in metaphoric dataset

NON METAPHOR				
R	Cluster	Total Freq.	Freq. ptw	Met. (Freq. ptw.)
1	OF THE CULTIVATED	14	1.36	0.97
2	(THE) CULTIVATED FIELDS (AND)	13	1.26	-
3	(OF) CULTIVATED PLANTS (THE)	12	1.16	-
4	AND WELL CULTIVATED	11	1.07	-
5	OF CULTIVATED LAND	10	0.97	-
6	THE CULTIVATED VARIETIES	9	0.87	-
7	OF CULTIVATED GROUND	8	0.78	-
7	OUR CULTIVATED PLANTS	8	0.78	-
8	OF OUR CULTIVATED	6	0.58	-
9	THAT THE CULTIVATED	5	0.58	0.10
9	TO OUR CULTIVATED	5	0.58	-
9	PATCHES OF CULTIVATED	5	0.58	-
9	FROM THE CULTIVATED	5	0.58	0.10
9	OUR CULTIVATED FIELDS	5	0.58	-

Table 4.2. 13. Most frequent clusters with *cultivated* within non-metaphoric dataset

As the noun collocate analysis provided a fruitful discussion in terms of semantic differences, the occurrence of noun phrases here seems relevant. Within the metaphoric data, there is *mind*, *taste*, *eye* and *races*, all forming noun phrases within the trigrams. However, there are far more noun phrases in the non-metaphoric dataset, and all of these

nouns (including *patches*), appear to refer to GROUND (*fields/ground*) or PLANTS (*plants/varieties*). Hence they are very restricted in their semantic associations and very different from the metaphorical uses of *cultivated* (adj.). In Table 4.2.12, the five most frequent clusters have collocates that would be expected, based on the individual analyses of noun and adverb collocates. The most frequent items following each metaphoric cluster are *mind*, *taste/s* and *and*. In the non-metaphoric set, these are *fields* and *plants*. Similarly, *of the cultivated* and *of a cultivated* were both discussed in relation to the analysis of the articles *of* and *a* in the top ten list, both appearing with more frequency in the non-metaphoric data (it appeared also on the keyword list, suggesting a significant difference in frequencies). *Of* appears in a higher number of clusters overall in the non-metaphoric set, despite its lower frequency overall. This suggests the presence of more fixed structures, namely those in the cluster list above.

Whilst *to a cultivated* is present in the metaphoric data, the cluster *to our cultivated* is specific to the non-metaphors. In each case the reference is to *plants* or *fields* and refers to either Britain, or the entire human population – *our* signifying a belonging or an owning, rather than wild growth. In contrast, *to a/of a cultivated* in its metaphoric sense refers to *minds* or *taste* and signifies a sense of perfected and nurtured acuity or perception, as opposed to instinctual or emotional judgement.

What is perhaps of more interest is the presence of *which* and *by* both occurring with frequency to the right of *cultivated* in the non-metaphoric set. This is a finding not revealed or discussed so far. Below are all instances of *which* in R2 position:

ashes left after the combustion of CULTIVATED plants which have grown upon all varieties of soil, and seems to have been that change of CULTIVATED lands which Tacitus ascribes to the ancient Germans' dissipation. A great part of the well CULTIVATED tarro-fields, which formerly surrounded Hanaruro, now descend of the hill. In place of the richly-CULTIVATED district which lay on the other side, a broad brook runs to rise from a smooth border of CULTIVATED land, which gently slopes down to the coast. At the fort. Their route lay through a wild, half-CULTIVATED country, which seemed to owe much to the hand of man. These and some other anciently CULTIVATED plants which have been long propagated by offsets, perhaps one-fortieth part of the surface is CULTIVATED, of which about two hundred thousand acres are cultivated. It was in the middle of a patch of highly-CULTIVATED ground, which bore creditable evidence to the

Concordance 4.2. 12. All instances of *cultivated X which* occurrences in non-metaphoric dataset

Within the lines in these data, *which* acts as a pronoun detailing extra information about the thing described as *cultivated*. In such instances, the manner or place of the action is secondary to the action of the *cultivated* thing itself. This can be compared with the earlier finding that the metaphoric uses of *cultivated* when collocating with *in* most often formed a part of the prepositional phrase, detailing the extra meaning of the sentence. It would be more expected that a non-metaphoric use would provide extra, secondary information in a clause than would a metaphor. A metaphoric use is most often providing central information in order to serve its function and create an effect that goes unmissed amongst readers (*cf.* Goatly, 1999). This is an unexpected finding and something which must be explored in the two, larger studies to come.

4.2.4 Conclusion to the *cultivated* study

The above analysis has shown that corpus evidence successfully reveals differences in terms of a range of lexis and grammar relations amongst metaphoric and non-metaphoric instances of *cultivated*. Moreover, textual, semantic and pragmatic associations have also been found to be specific to either metaphoric or non-metaphoric instances of *cultivated*. These findings in turn provide support for the idea that we as language users are primed both to use and to understand or recognise metaphors, based on a set of distinctive

features which separate them from their non-metaphoric counterparts. In order to summarise the analysis, the individual findings must be re-visited. First, the keyword analysis showed differences in the semantic associations surrounding both adjectives: as a metaphor, *cultivated* was more associated with abstract concepts specifically relating to HUMAN PERCEPTION such as *taste* and *mind*. The presence of *the* in the non-metaphoric keyword list suggested a prevalence of physical, concrete and specific references to *cultivated* things. The semantic associations were also physical, relating to the external natural environment (ITEMS CAPABLE OF BEING CULTIVATED and ITEMS WHICH DO THE CULTIVATING). These semantic sets were much larger than the metaphoric counterparts, suggesting a more fixed range of repeated collocates. The analysis of personal pronoun collocates also revealed stark differences in the types of pronouns associated with each dataset: the majority in the metaphoric set being first and second person, and the majority in the non-metaphoric set being third person. The small number of second person pronouns amongst the non-metaphors were always male.

Analysis of the ten most frequent collocates revealed a prevalence for *a* in the metaphoric data (over double the frequency in the non-metaphoric set). The clusters *a cultivated mind/taste/eye* signified an abstract awareness/perception belonging to a person, rather than a determined concrete physical reference. Modifiers of *cultivated* such as *most*, *more* and *highly* also suggested a pragmatic association in relation to its metaphoric uses, where the writer is creating a sense of exaggeration or hyperbole. Furthermore the clusters were often preceded by other adjectives, such as *picturesque*, *artistic*, *refined*, *highbred*, *agreeable* and *naturally strong*. The particular colligation *and* + *adj.* + *cultivated* and typified by *and highly cultivated*, appeared to create an elaborate and hyperbolic representation of refinement and sophistication of mind, specific to nineteenth century fiction. Pragmatic and semantic findings such as these add support to the earlier

analysis of colligation and collocation, helping to further distinguish between the senses on a secondary level of meaning.

4.3 Summary of Chapter

A range of lexico-grammatical features have been found through a corpus investigation which support the hypothesis of the research that corpus evidence can explain how a metaphor can be distinguished from a non-metaphoric use of that same item. More specifically, the results support the Drinking Problem Hypothesis, which states that different senses of a word will avoid one another's lexico-grammatical features in order to avoid ambiguity. All 373 instances of clear-metaphors and 375 instances of clear metaphors can be identified based on at least one lexical feature (collocation, colligation, semantic association or pragmatic association). As a consequence, as readers we are primed to associate these features with one sense or the other (metaphoric or non-metaphoric), which subsequently strengthens the differences between them.

As a metaphor, *cultivated* can be argued, qualitatively, to be a different lexical item from the non-metaphoric uses. These findings suggest that lexical, grammatical, textual, semantic and pragmatic associations within the language all play a part in distinguishing between subtleties of metaphoricity. This preliminary investigation will be followed by two larger studies (Chapters 5 and 6) in order to put the initial claims to the test. The first claim is that the Drinking Problem hypothesis will hold true for other datasets, and the second is that variations of metaphoric instances of *flame* and/or *grew* will still retain some shared meaning that helps to identify them as metaphors. It is also hoped that the two larger studies of *flame* and *grew* will also be able to test whether every metaphor has the same features or if each item differs according to its specific uses.

CHAPTER 5 – Study 2: An investigation into the metaphoricity of *flame* (n)

Introduction to chapter

The second investigation within this thesis will explore the lexical behaviour of *flame* (n) in both its metaphoric and non-metaphoric senses. *Flame* occurs 1170 times in the nineteenth century corpus. 34.96% of these occurrences have been assigned definite metaphoricity and 49.74% have been assigned a non-metaphoric label. The remaining 15.3% of instances have been identified as problematic for a number of reasons. The chapter will follow the same structure as the previous investigation of *cultivated*, beginning with the problematic instances in the middle group first. These will be discussed qualitatively. It is hoped that this discussion will shed light on the complexity of the noun as a metaphor and the degree to which its metaphoric and non-metaphoric senses are distinct. The remaining clear metaphoric and non-metaphoric sets will be analysed quantitatively using corpus linguistic methods in 5.2.

5.1 Middle instances of *flame*

5.1.1 Introduction to middle group analysis

The results from the reader participation test for *cultivated* highlighted three distinct problems with assigning metaphor/non-metaphoric labels to the concordance lines. Firstly, there were some instances that were ambiguous in their reference, where both the non-metaphoric and metaphoric senses could be meant at the same time, or there were cases where it was unclear which sense was meant in the context. Secondly, there was sometimes a certain degree of conventionality within the phrase, which made the

metaphoricity invisible to the reader. At times, some readers would notice a metaphor whilst others would not. Third and finally, in some instances, other sense relations such as metonymy or meronymy complicated the decision.

In a similar way, the instances of *flame* which have been placed in the middle group show variety in the types of problems they illustrate, and the degrees of metaphoricity/literality expressed or used in their interpretation. In this section (5.1) therefore, the middle group instances will be sub-divided into smaller sets, which display differences in use or behaviour. The 209 instances within this group make up a much larger percentage of the full data (15.3%), than did the middle instances of *cultivated* (3.48%). This suggests either greater complexity and possibly multiple meanings in the use of *flame*, or a lack of distinction between the two uses (metaphoric and non-metaphoric) of *flame*. The greater size of the dataset allows for a quantitative analysis, where appropriate, as well as a qualitative discussion of individual instances. The instances have been converted into a single .txt corpus and fed into Wordsmith in the same way that the clear metaphoric/non-metaphoric datasets have in each study. This means that a list of the most frequent clusters with *flame* can be generated for the middle group, which may shed light on reoccurring structures, phrases, or colligations, which are problematic or not clear-cut to readers. These will then be discussed qualitatively.

Firstly there will be a discussion of lexical items associated with *flame* in this group. Secondly, a discussion on animacy associated with *flame* will be presented, and thirdly, a deeper investigation will be given to a handful of ambiguous concordance lines from the data which require greater contextual or stylistic analysis. These are often the most original or creative types of language.

5.1.2 Lexical items

Lexical items, as understood by Sinclair (1991) to be a complex web of interactions of words and meaning, have been discussed at length in Chapter 2. Two of the most frequent clusters in the data highlight the importance of lexical items in a discussion of interpreting metaphoricity. One of these clusters is the most frequent trigram in the data, *in a flame*, and occurs 9 times out of 209 concordance lines (making up 4.31% of the total data). The individual concordance lines are given below:

er he'd been, and that he vanished away in a FLAME of fire; but I can't 'xactly swear to that mys
ming up. He looked at me, frowning, all in a FLAME. ""_My father_,"" he said--""_my father_--h
sacrificed, And all her spicy mountains in a FLAME. So dear, so due to Heaven, shall praise
d a wooded height, with the sun setting in a FLAME of gold, in front--we witnessed a rural sight
with shame, Squinted and grinned, then in a FLAME He vanished quite."" THE SPECTRE ARM
the firing did not cease, to set the town in a FLAME, and cut the women and children in pieces
morning the greater part of the city was in a FLAME, although the first blaze had been detected
alls, and kindling sparks that will act all in a FLAME from one end of the city to the other.""--P.
ort, I am convinced the nation would be in a FLAME, and you in far less danger of any attempt

Concordance 5.1. 1. All instances of *in a flame* occurrences in middle group data

With the exception of the first, second and fifth line, all of the remaining instances display the same meaning of being on fire. The three that have a different meaning will be discussed first. Line 1 and Line 5 both refer to vanishing in either a *flame* or a *flame of fire*. This implies a sudden or unexplained disappearance. The *flame* is most probably metaphoric and not implied to be physically present, but at the same time may be visually present to a reader (i.e. they perceive flames whilst accepting that they are not really, physically there). This raises important issues about perception and physicality, which are two types of reality. The question arises whether something which exists in regards its perception (or the reader's perception of it), can be called a metaphor. This will be brought up in relation to later examples regarding fantasy and the supernatural. Line 2 (*he*

looked at me, frowning, all in a flame) is again metaphoric. There is no reference to a physical fire, and the further co-text supports this. Its presence in the middle group (determined of course by my informants) can therefore be questioned, as its metaphoricity is fairly clear. This may have been a misreading or a mistake by an informant, which would have meant it being automatically assigned to the middle group. The final four lines refer to a city or more abstractly, a nation being on fire. In these instances *in a flame* is almost meronymic, as the single flame is standing in for a larger group or body of flames (in a technical sense). The presence of the lines in the middle group reflects a conflict of position amongst metaphor theorists and linguists generally, about the importance of lexical items. This was outlined in detail in the literature, specifically in reference to Sinclair (1991), who would claim that a single lexical item is distinct from its constituent meanings, and conversely, metaphor theorists such as Pragglejazz who claim that each individual word in a given text can be tested for metaphoricity within its given text and context. The issues arising from this conflict have been discussed at length, and will not be drawn upon here. However, it is sufficient for this analysis to mention that a phrase like *in a flame* obtains its meaning from its identity as part of a larger expression which, if broken down, would lose its single metaphoric meaning. A phrase like *the firing did not cease to set the town in a flame* is understood to mean that the town is on fire because of the interpretation of *in a flame* as a single lexical item. If the town were described as being situated *within* a flame, the possibility of metaphoricity would be lost, along with the original meaning.

As a lexical item, the meaning of *in a flame* has become well-established and consequently there is no dependency on a non-metaphoric or more common meaning. In this way, the phrase has a single meaning to readers. The fact that the majority of *in a flame* clusters occur in the non-metaphoric dataset confirms this. *In a flame* is present within the middle group only when there is an element of metaphoricity outside of or

away from the lexical item, but still affecting *flame* in some regard. In the four instances described above, the reference to a city or nation implies a case of metonymy, similar to that described with a *cultivated city or nation*. It is not necessarily the whole city on fire, and certainly it cannot be the nation, technically speaking, as this is an abstract concept. The line, *the firing did not cease to set the town in a flame*, is more metaphoric because the flame refers to gunfire. This could also be described as a case of semantic extension. Whether *in a flame* is a metaphor of the mayhem caused by the shooting, or actual fire engulfing the town as an effect of the shooting, remains unclear.

There are two remaining lines that behave differently from those discussed. The fourth line, *with a sun setting in a flame of gold*, refers to the flames of a sunset. This semantic reference to the sun is a frequent recurrence within the middle group data, and will be discussed in section 5.1.5. For now, it is of importance to note that the instance is more metaphoric than the others as there are no actual flames visibly present to a reader (though they exist in a scientific reality); it is another form of semantic extension, and again the issue of perception of reality arises. Finally, the line *and all her spicy mountains in a flame* needs more co-text to be understood. The line has been taken from Edward Young's nine-part poem *Night-Thoughts*. The co-text details Young explaining how his praise of God is '*more fragrant*' than all of Arabia's spice fields. The phrase *in a flame*, is used as a form of exaggeration of the strength and power of the spices, and is thus heavily metaphoric - the fields are described as so rich with fiery spices, that they are alight. The reason for its not being assigned to the metaphoric category may be due to a misunderstanding or a false attribution to a mountain fire.

Another reoccurring cluster, *into a flame*, also reveals a lexical item associated with *flame*. All instances are shown below:

ly after, the wooden steeple of St. Paul's started into a FLAME. The fire burned downwards furiously for four hours, t
knew, might at any moment of his absence start into a FLAME. His inglorious campaign had lasted just four months
be struck from flint and steel, nourished with care into a FLAME, slowly communicated to the dark wick, or whether s
s the cause of Heaven. The smouldering fire burst into a FLAME in Bohemia, a kingdom of the House of Austria, and

Concordance 5.1. 1. All instances of *into a flame* occurrences in middle group data

Two of the instances occur alongside the verb *start*. In both cases, *start into a flame* refers to a sudden and uncontrollable outbreak of fire. In these cases the reference is non-metaphoric if taken as a lexical item with a single meaning. The third instance, (*whether the fire be struck from flint or steel, nourished with care into a flame, slowly communicated to the dark wick*), refers non-metaphorically to a real fire also, but the modifying statement, *nourished with care*, creates a personification which could be identified as metaphoricity. Animate associations in surrounding lexis are a common feature amongst the middle group of data, contributing to, or at times being the sole signal of, metaphoricity. This will be discussed below. Finally, the third instance is the most non-metaphoric: *the smouldering fire burst into a flame* refers to an actual fire. The phrase *burst into a flame* is a lexical item with a single meaning and thus cannot be metaphoric (it is not dependent on a more common sense).

To summarise, two of the most frequent clusters in the data both have a single, non-compositional meaning in all cases, equal to 'being on fire'. They could thus be labelled as non-metaphoric if taken as single lexical items, behaving differently to *flame* as a single item. Other findings have also been revealed through discussion of these clusters. One of these is the recurrence of animate lexis associated with *flame*. This in turns provides the *flame* with a quality of animacy, subsequently personifying it or creating a degree of metaphoricity. Secondly, noun modifiers found in association with *flame* also have the ability to create metaphoricity, even when not associated with animacy. Goatly (1997) claims of metaphoric verbs "that they can indirectly evoke imagery but only by being hooked up to their conventional colligates – we cannot imagine kicking without

imagining a foot” (1997: 86). Thus it is the conventional and non-metaphoric meaning of the noun, verb or adjective, which creates the metaphoricity when used alongside an object like a flame. Finally, some concordance lines were semantically related in their depiction of the sun. In particular, depictions of the sunset or sunrise are often described in relation to flames in the data. It seems worth exploring these findings in more detail.

5.1.3 Animacy associated with *flame*

This observation of a *flame* being assigned animacy may be a marker of comparison between the middle group and the more clearly defined datasets. Concordance data illustrates the variety of nouns, verbs and adjectives describing or modifying *flame* in an ambiguously animate manner, which will be discussed here. Often this appears to be the decisive factor in placing the instance in the unsure group. Moreover, the overwhelming frequency of animacy within the immediate co-text of the middle dataset is enough to support a discussion on it, particularly in comparison to the other groups.

Some items are considered more metaphoric than others when associated with *flame*, and this is also the case for items displaying animacy. *Lurking*, and *shivering* for example, may seem more metaphoric when describing a *flame* than *mighty* does. This may be due to the abstractness of *mighty* in comparison to the specific action of *lurking* or *shivering*. Cameron (1999) provides the example LOVE IS A CRYSTAL as a stronger metaphoric concept than LOVE IS AN ENTITY. A second acknowledgement is that some of the items occurring alongside *flame* can be described as more animate than others, or indeed more commonly associated with animate beings. *Sickly*, *naked*, and *trembling* appear singularly associated with people or animals whilst *raging* is frequently used to describe other inanimate things, such as fire or the ocean²⁸. These two factors (strength of metaphoricity and strength of animacy) can, but do not necessarily, correlate. An instance associated

²⁸ See appendix for BNC searches for both *fire* and *ocean*

unequivocally with living things is the ability to die; yet a *never-dying flame* may appear to some to be less metaphoric than a *writhing flame*²⁹, which may bring to mind a more active process of physical, animalistic suffering. The reason may lie with conventionality, and the fact that we commonly see or hear the word *flame* described as *dying*, but never *writhing*. However, as a handful of metaphor scholars have already claimed, the level of conventionality does not *always* correlate to the strength of a metaphor (Thibodeu & Durgin, 2011; Svanlund, 2007; Deignan, 2005; Giora, 1997). Animate adjectives will be discussed first.

5.1.3.1 Adjectives displaying animacy

The first discussion will outline the use of adjectives used alongside *flame* whereby there is some degree of animacy attached to their usual meaning or their typical collocates. As mentioned, these items vary in their strength of both animacy and subsequent metaphoricity. At times, definitions from the OED will be drawn upon to bring to light distinctions in sense and use a particular item, though these are in no way accepted as definitive decisions. The table below gives all adjectives and verb-derived adjectives in the data that are associated with animacy, and found within a five-word window of *flame*:

Avenging, awful, cheerful, devouring, dying, fierce, fitful, darting, keen, leaping, lurking, mighty, never dying, raging, ready, + flame shivering, sickly, subtle, trembling, with'ring, writhing

Table 5.1 2. List of animate adjectives associated with *flame* in the middle dataset

²⁹ See appendix for BNC searches

The items can be subdivided into smaller semantic groups. The largest semantic group comprises items related to SICKNESS (*dying, fitful, shivering, sickly, trembling, writhing withering*). *Withering* is associated mostly with plant life but again connotes SICKNESS. Secondly there are those that describe HUMAN/ANIMAL BEHAVIOUR (*avenging; lurking; darting; leaping, writhing*³⁰). With the exception of *avenging*, these are all associated with physical movement. Thirdly, there are items attributed to HUMAN EMOTION/ANIMALISTIC TRAITS (*fierce, keen, mighty, cheerful, awful, ready, subtle*). It is perhaps this group of words that remains most problematic in terms of assigning metaphoricity. *Cheerful, awful* and *ready* are the most questionably metaphoric.

According to the OED, the primary meaning of *cheerful* is attributed to people only, but a second meaning does refer to a transfer of meaning to things or objects. This sense is not, though, stated as figurative. It is interesting to note, however, that the OED examples only include abstract things (e.g. *a cheerful hour*) and not concrete (e.g. *a cheerful flame*). A search of *awful* attributes the following three main meanings to the term: “to cause dread; worthy of commanding respect or fear; or solemnly impressive/sublimely majestic”. None of these uses appears to relate to only animate or intentional objects and thus a non-metaphoric meaning could also be assigned to an *awful flame*. Rather, *awful* is a judgement assigned to *flame*, which would imply that the meaning (*awful*) comes from the speaker or writer (they perceive the thing as *awful*). *Ready* has a figurative meaning in the OED attributed to an object or thing, which is “likely or liable to do something”. This meaning could be attributed non-metaphorically to anything which is capable of causing an effect.

Alternatively, focusing on the more abstract elements of meaning associated with the adjectives, a large number of instances display a negative meaning. More specifically,

³⁰ *Writhing* can be placed in two categories based on its alternative meanings of either tortuous pain or a twisting and turning movement.

some items can be grouped based on a common sense of COMMUNICATING TERROR (*avenging, awful, devouring, fierce, lurking, raging*). Below is a list of all **ing* items directly modifying *flame*. These give some indication of the extent of the negative pragmatic association associated with animate adjective modifiers:

a truth--I am no coward--but I doubt me of that *raging FLAME*. How know I that it will not utterly destroy me, fled those brief wild sparkles into a furious and *consuming FLAME*. Mr Renshawe was in fair circumstances--he veil of the mocking queen in little pictures of *scorching FLAME*. These are the words I heard: 'Keep your hand frequent o'er the vale was spread A sheet of *lightning FLAME*. De Vaux, within his mountain cave (No hurt the thunderbolt, or directing the devouring and *avenging FLAME!*'" Bless me, Copperfield!'- and then entered had been a witness of that terrible scene by the *leaping FLAME*. I recognised the pattern of the curtain, and the dim light along the horizon was changed to an *approaching FLAME*. Columns of smoke could be seen rolling a little hollow in the floor, where I had seen the *leaping FLAME*, but the fire was out now. They fell upon the wind drawing a cry from the laird. Out blazed the *lurking FLAME*. The boy had risen, and was now attempting to picture of iron and glass, in which one poor little *shivering FLAME* struggled with the March wind. The coachman y to exert mean arts to please him, and feed a *dying FLAME*, which nature doomed to expire when the objection yields to their execrations, and burns with a *smouldering FLAME*, even as when the earth comes between the sun and the moon, that should give forth sufficient light, without *communicating FLAME* to the inflammable gas which accumulates the shrieks of death, that wildly broke Through *devouring FLAME* and smothering smoke, Made the warrior's sword of the bed, I seemed to read, written in pale, *trembling FLAME*, the words: 'LET THERE BE NO MAN TO FIGHT WITH YOU, burning in its ire, Raged in his bosom as a *with'ring FLAME*, And scarce he knew he madly breathed he would devour them, unless they are delivered from its *raging FLAME* by some scheme of pardon for all, for which thank you the thunderbolt, or directing the devouring and *avenging FLAME* in any quarter, I may be permitted to observe through sunlight. She had cast off the terror of the *leaping FLAME*, the cold power of judgment that was even now her sinking frame, When with the quickness of *devouring FLAME*, A furious wolf from out the bordering wood

Concordance 5.1 1. Selection of **ing flame* occurrences in middle group dataset

Not only is there evidence of pragmatic association amongst the adjective and its collocation with *flame*, but also within the wider context of the concordance line. Other negatively associated items in the surrounding co-text include *furious, smothering, wildly, terror, sinking, devour, burning, nature doomed, smothering smoke* and *shrieks of death*. The majority of these occur on the left of *flame*. In the majority of cases, **ing flame* and the surrounding co-text suggest an active, uncontrollable, or malicious flame. This is emphasised through animalistic attributes and imagery assigning intention to the flame's behaviour. All references to flames are concrete and non-metaphoric, with the exception of two similes or explicit comparisons. Without the modifier then, the majority of instances would be non-metaphoric in their description.

Finally, the occurrences of *solitary flame* deserve discussion here. There are eight instances in total which are found amongst all three datasets (middle group, metaphors, non-metaphors), suggesting an ambiguity amongst informants as to its identity when used alongside *flame*. The ambiguity lies more specifically in the definition of *solitary* and its suitability in relation to *flame*, in an otherwise non-metaphoric context. An instance of *solitary flame* is shown below:

(5.1) “My lady stared dismally round at the range of rooms, which looked dreary enough in the wan light of a single wax-candle. This *solitary flame*, pale and ghost-like in itself, was multiplied by paler phantoms of its ghostliness, which glimmered everywhere about the rooms”.

There are various interpretation processes that may explain our understanding of a problematic (as identified by informants) collocate like *solitary*, where we do not know if it is congruent and non-metaphoric in its association. Revisiting the idea that metaphoricity is inherent within the word or phrase, one would argue that when a word is presented with a different meaning from that/those we know (stored in our mental lexicon), we must explain this by extending the known meaning(s) to fit the new metaphoric use in some way. Thus the word or phrase’s use is extended into territory it didn’t previously occupy. This means that our knowledge of that word has been widened or extended. The problem with this explanation is that, whilst the word now has another meaning (*solitary* can now be used to describe non-animate objects), our knowledge of *flame* hasn’t needed to change; neither has there been any interaction between the *solitary* behaviour and the thing that is described as being *solitary* (the flame).

Returning to the idea that metaphoricity is a concept belonging to our relationship with language as users, another interpretation is offered. Instead of focusing only on the

word in question and adapting or extending its meaning to fit the new use, the language user notices the new use because of a *crack* in their primings (Hoey, 2005: 11). The hearer/reader is aware that *solitary* is being used in a non-animate way, and *flame* is also being described in a non-conventional way (which, in contrast to *solitary*, suggests it is animate in some way). Thus there is a two-way relationship between both words *solitary* and *flame* and between their metaphoric and non-metaphoric uses. More simply, the new meaning of *solitary* is not arrived at by extending the normal or accepted meaning alone, it is understood through the process of interaction between the object being described in such a way and the description itself. Moreover, the metaphoricity is not inherent until the relationship is acknowledged - thus the metaphoricity is created or activated through the presence of both words.

A third method of interpretation is also explained by the Lexical Priming theory. Instead of accommodating the new meaning of *solitary* by extending its definition, and instead of extending both meanings of *solitary* and *flame* through their interaction together, there is a transfer of pragmatic meaning, such as pragmatic association, without the need to alter our understanding of any word meanings directly. In order to explain, a list of definitions of *solitary* is given. On consulting the OED, we can confirm that *solitary* has six main meanings, with the first and most common meaning referring to the absence of society or companionship of a person. A subdivision of this primary meaning states "standing alone or by itself", suggesting a broader encompassment of non-living things. This extended sense only refers, in examples at least, to abstract concepts (e.g. "solitary conjecture" in 1750; "solitary argument" in 1806). Later, in 1899, a further, separate meaning provides a reference to a concrete, non-abstract object "single, separate, not multiple e.g. a solitary bundle". Returning to the third possible method of interpretation, the hearer/reader may activate this or other personal knowledge of the word *solitary* through their mental concordance. Activation of the word knowledge may be through

semantic association (a search of the 19thC corpus reveals a strong association with places: *place/life/cell* or walking: *rambles/walks*), or perhaps through collocation (the most frequent nouns in R1 position following *solitary* in the corpus are *instance, man, and confinement*³¹). Once primings are activated, there is another level of interpretation occurring. The language user is aware of the salient or frequent meanings of *solitary* and also of pragmatic knowledge such as what feelings a solitary person or place invokes, or whether there is pragmatic association attached to a general use of the word. Thus they can then be assumed to understand the new metaphoric meaning by evoking those same feelings created by the original sense, through a transfer of pragmatic knowledge. This can be achieved without necessarily transferring or altering any lexical meaning. Put simply, the language user understands the meaning of a *solitary flame* to be that of loneliness and emptiness (for example), by activating the characteristics of a *solitary man*. Their understanding of *solitary* itself does not change to accommodate non-animate objects, such as flames; instead it invokes what may not necessarily be a conscious knowledge or awareness of individual meanings, but a feeling or emotion attached to the word as a result of previous primings. This particular method of interpretation may explain the ability of authors of descriptive literature, who can succeed so well to invoke a certain mood, without explicit awareness on the part of the reader of the means used to achieve this.

Although the difference between the interpretations is subtle, it is an important one to acknowledge as they assume different theories of language use. The idea of metaphoricity as inherent in the language would provide the explanation for the first method of interpretation (the extension of a word's meaning to accommodate the new metaphor), whilst the second and third methods of interpretation could be explained by

³¹ In comparison, in the BNC written fiction, the only nouns in the list of most frequent R1 position items are *figure* and *man*.

lexical priming. This would mean acknowledging the behaviour of words in context and in interaction with others, and importantly, allowing hearers/readers to rely on their own personal store of language.

5.1.3.2 Animate verbs

The second group expressing a degree of animacy alongside *flame* consists of verbs. The data can be grouped into two sets: one where something is being done to the *flame*, and the other where the *flame* is doing the action. The former group will be dealt with first:

<i>Excite, feed, grow,</i> <i>nourish, revive</i>	+ (THE/A) <i>flame</i>
--	------------------------

Table 5.1 3. List of animate verbs (base form) in middle group dataset where *flame* is object

There are five verb types and seven verb tokens (both *feed* and *excite* occur twice). Although the verb in each case is describing the action of the subject, (and therefore associated more explicitly with the subject), the action that is being carried out still implies a level of animacy on the part of the object. In order to feed a *flame*, it is implied that the *flame* must be able to be fed. This is where the issue of potential metaphoricity is thus created, and refers again to Goatly's (1997) analogy of not being able to imagine kicking without imagining a foot.

Whilst *excite* is associated with living beings through a level of consciousness, and thus could, arguably, be considered as a higher order of animacy, *feed, grow, nourish* and *revive* are explicitly associated with LIFE in a more primary form. These instances are shown below in their surrounding co-text:

29. "rced, and a quantity of scantlings and battens soon fed the FLAME. Everything indeed that could stimulate the fire was em"
30. "hoes or superannuated garments in their hands to feed the FLAME; for it was esteemed needful that every villager shoul"
31. "nt. To their astonishment, at that moment the wood grew a FLAME, and a hot rolling fire led on the advancing Buccaneer"
32. "lit flammas, grandior aura necat. (A gentle wind nourishes FLAME, a stronger, extinguishes), the words, grandior necat"
33. "nly smouldering, and only a breath is needed to revive the FLAME. Every Protestant I saw, and all the intelligent and enlig"

Concordance 5.1. 2. Instances of *feed*, *grow*, *nourish* and *revive* occurring alongside *flame* in middle group dataset

In each of these instances the *flame* is treated as a living being or object through the action being done to it. The verbs invoke a sense of restoration. In each case, the action done to the *flame* is shown as a positive and desired event. The pragmatic association of restoration could be extended to include *excite*, which implies in the instances a positive renewal of the heat or light:

(5.2) "...nozzle the bellows; covering the whole with coke, and then exciting the *flame* by blowing. This mode of operating produced somewhat better results..."

Moreover, there are cases where our understanding of the meaning of lexical items or phrases (in this case the verb in association with the object *flame*), alters the nature of the metaphoricity, or more accurately, our sense of where the metaphoricity lies. Interpreting meaning takes place on the level of the individual as well as at the level of the shared linguistic community, and our exposure to and use of language dictates our understanding or knowledge of a lexical item. Keeping within a pragmatic context, we can illustrate this idea with one of the instances from the data above:

(5.3) "...All held old shoes or superannuated garments in their hands to feed the *flame*; for it was esteemed needful that every villager should contribute something..."

Here, a Celtic rite is described, whereby a bonfire is to be kept burning as an offering³². The fire, or *flame*, is depicted as something sacred, which needs to be maintained, or *fed*. Depending upon the individual reader, there may be various and different processes aiding one's understanding, as was shown with *solitary* in relation to *flame*. The possible interpretations are pragmatically different, and whether conscious of their own choice or not, readers' decisions have the ability to colour their outlook in terms of metaphoricity. This idea will be revisited in the conclusion to the middle group data analysis.

We will now turn to the verbs where *flame* acts as subject. All verbs displaying a degree of animacy (either directly, or through more common collocates, colligations or semantic associations) are presented below:

	Verb
THE/A <i>flame</i>	<i>Announce, approach, catch, dart, devour, die out, express, essay, expire, favour, grow, leap (up), lick, mingle, mount, pirouette, pour, rage and roar, rise, sink, spring (up), stand, stream, stretch itself, struggle, throw</i>

Table 5.1 4. List of animate verbs (base form) in middle group dataset where *flame* is subject

This list is much longer than Table 5.1.3 (where *flame* is object). In total there are 26 verb types and 35 tokens. A large number of the verbs can be assigned to a category involving MOVEMENT (*approach, catch, dart, fall, grow, leap, leap up, mount, pirouette, rise, sink, spring, spring up, stream, stretch itself, throw*). With the exception of *fall, sink, and pirouette* all of the remaining verbs express movement upward or forward. The second largest category comprises those referring to HUMAN/ANIMAL BEHAVIOUR OR

³² Taken from *The Dove in The Eagle's Nest*, Charlotte Yonge.

EXPRESSION: *announce, essay, express, devour, lick, favour, mingle, rage and roar, stretch itself, struggle, and throw*. These are all behaviours or expressions attributed in their non-metaphoric sense to living beings, with a stronger or weaker degree of sentience. *Expire* and *die out* could also be grouped here, in the most basic sense of living beings and objects. There appears to be less negativity associated with all the above verbs, especially those relating to movement. Thus there appears to be a subtle distinction in the semantic and pragmatic associations between the verbs when *flame* is subject or object.

5.1.4 Nouns associated with *of flame*

Considering the reoccurring collocation *of flame*, there is a frequent colligational structure associated with it, from which further semantic sets can be determined. Below is a screenshot of all nouns preceding *of flame* in the dataset:

re. By this time the ship was one *body of FLAME*, from the stern to the main rigging, and
 ose loop of her girdle through the *circle of FLAME* which was a barrier against him. She
 ostlike ashes and their throbbing *cores of FLAME*. "I am waiting, Basil," said the youn
 re the flowers are no better than a *crop of FLAME-tongues* burning the soles of our feet?
 ess of the night, a strong clear *current of FLAME* rose steadily upwards from the earth,
 s and was caught up in a great *draught of FLAME*. In her movement the casket fell on th
 he valiant, the true, Tikki, with *eyeballs of FLAME*, Rikk-tikki-tikki, the ivory-fanged, the h
 n, so fierce, so fleet a race! With *eyes of FLAME* to Ranulph came each red and ruthles
 were already astir; Zillah urging *flakes of FLAME* up the chimney with a colossal bellow
 pes that covered that bosom a tiny *fork of FLAME* was flickering like a serpent's tongue
 was instantly swallowed up as in a *gulf of FLAME*, which raged, and roared, and shot up
 n by the angry reptiles; and a larger *jet of FLAME* than before burst from the brow of the
 nd made her sit down. A capricious *jet of FLAME* from a coal in the fire at this moment
 e in the scented, fire-lit room. And a *jet of FLAME* suddenly showed him the girl's face tu
 ertain us with fantastic and playful *jets of FLAME--but* then its light is full, united, and st
 forth from the pipes in great flaring *jets of FLAME*, uncovered by any glass, and broadly
 ttest whiff of bluish smoke, then a *leap of FLAME*, and soon another, till the paper burne
 ing but the great word FOOL in *letters of FLAME* in the air before her. CHAPTER XLVII.
 shing over Winchester eastward, a *line of FLAME* high in the atmosphere. Hundreds mu
 ing each other in a circle, with *nostrils of FLAME*; a hundred mountebanks, chattering a
 ard. It was an awful sight, that *pyramid of FLAME*, rising as it were from the bosom of th
 scene by throwing long flickering *rays of FLAME* upon the distant waters. _Sunday, the
 dare, and then stopped aghast. A *ring of FLAME* was round her waist; every limb was b
 rew down into the water a long *tap-root of FLAME*. Tom, curious little rogue that he was,
 became enveloped in an immense *sheet of FLAME*, that spread over nearly six thousand
 numbers, while the great yellow *sheets of FLAME* threw their lurid glare over the scene c
 s our bows threw it gently off in *sheets of FLAME* and 'tender curving lines of creamy' fir
 /oking station were sending up *spires of FLAME* into the stillness of the evening air. No
 ly laid, it will soon burn up; the *stream of FLAME* from the wood and paper soon commu
 as lit up; and in the sky the *streamers of FLAME* rose in and out and over each other, t
 ce, tempt them to look for the *strength of FLAME* and coruscation of lightning, and flash
 sky, with the smoke and little *threads of FLAME* going straight up into the heat of the a
 too high, hissed up into a long *tongue of FLAME*. The fire smoked feebly under a newly
 voice of invitation, its dancing *tongues of FLAME*, that called to them through the snows

Concordance 5.1 3. Noun modifiers associated with *of flame* in middle group dataset

Similarly to above, some of the nouns are associated with animate beings. These include *body, eye, tongue* and *nostrils*. *Tongue/s* and *jet/s* are the most frequent nouns used in this colligation, occurring four and five times respectively. The concordance lines of *tongue/s of flame* are shown first:

eliever, turned too high, hissed up into a long *tongue of FLAME*. The fire smoked feebly under a newly administered
 ing, hilarious voice of invitation, its dancing *tongues of FLAME*, that called to them through the snows of that dre
 r of the People. The clouds of smoke, the *tongues of FLAME*, that now began to mingle with them, the multitud
 as on fire--a broad hillside set with minute *tongues of FLAME*, swaying and writhing with the gusts of the dying

Concordance 5.1 4. All occurrences of *tongue/s of flame* in middle group dataset

Associated with this colligation are the adjectival modifiers *slight*, *red*, *minute*, *dancing* and *long*. Each instance depicts a movement of the *flame*. There is also an apparent collective weakness of the *flame*: *swaying and writhing*, *the fire smoked feebly*, but the data are too few to draw conclusions. The OED gives an early definition of *tongue* as figurative: “a symbolic figure or appearance as of a tongue, as those that appeared on the day of Pentecost.” From the year 1398 the meaning is more general: “anything that resembles or suggests the human or animal tongue by its shape, position, function, or use; a tapering, projecting, or elongated object or part, esp. when mobile, or attached at one end or side³³”. Finally, in 1816 there is another extension of the meaning to refer to “a tapering jet of flame³⁴”, which is the first reference to a general *flame* (i.e. not Pentecostal or religious). Thus the phrase appears to be conventional and moreover, specific to this period of time and onwards only. A search of the BNC-Written-Fiction reveals only six instances of *tongue* collocating with either *flame* or *fire*. From this result, the conclusion can be drawn that *tongues of flame* is a phrase conventional only to the nineteenth century dataset.

Below are the concordance lines showing all instances of *jet/s of flame*:

into foam by the angry reptiles; and a larger jet of FLAME than before burst from the brow of the demon statue
 er arm, and made her sit down. A capricious jet of FLAME from a coal in the fire at this moment lighted up the
 left alone in the scented, fire-lit room. And a jet of FLAME suddenly showed him the girl's face turned away, co
 true, entertain us with fantastic and playful jets of FLAME--but then its light is full, united, and steady; the hea
 belches forth from the pipes in great flaring jets of FLAME, uncovered by any glass, and broadly illuminating th

Concordance 5.1 5. All occurrences of *jet/s of flame* in middle group dataset

As with *tongue/s*, five of the six instances are modified: here, according to size or action of the *flame*. Items modifying *jet/s* are *playful*, *capricious*, *little*, *larger* and *great flaring*. With these adjectives there is a sense of swiftness or suddenness expressed in the *flame's*

³³ OED- Online. Accessed on 26/11/2015

³⁴ *Jet* also occurs in the nineteenth century data and will be discussed subsequently.

action. Phrases such as *at this moment*, *flashing out*, *suddenly*, and *burst*, provide supporting evidence. Also, all instances refer to the light from the *flame* illuminating an object. There is no reference to heat. As with *tongue/s*, *jet/s of flame* is also notably more frequent in the nineteenth century data. Out of 1,309 instances of *flame* in the BNC, there are only four collocating with *jet/s*. The phrase appears conventional in the nineteenth century data in its specific reference to the fast or unexpected movement of a real, physical flame, with relation to its quality of lighting up something or someone.

Both discussions on *tongue/s* and *jet/s* bring to light the issue of conventionality and more specifically its role in increasing or decreasing metaphoricity. All of the instances with *tongue/s* and *jet/s* could be seen as non-metaphoric lexical items due to their conventionality. This is realised through their frequency in occurrence, and specificity in meaning, and is supported by the dictionary definitions which refer to a meaning specifically associated with flames.

Many of the remaining nouns (and including *jet/s*) modifying *of flame* can be grouped according to a shared property of LIQUIDITY. This includes *jet/s*, *current*, *gulf*, *rush*, *stream*, *volume* and *wells*. *Body*, *heart*, *tongue*, *eyes* and *eyeballs* can be grouped under the hypernym of BODY PARTS. A third category relating to SPATIAL IMAGERY includes *column* and *spire* and a fourth category includes FABRICS: *threads*, *sheets*, and *streamers*. None of these instances suggest a feeble quality or lack of power within the *flame* as does *tongue/s*. In contrast, there is a sense of energy emanating from the *flame* in association with the majority of the nouns in the colligation. The *flame* is described in large quantities, also expressing its sense of power. In addition, the *flame* is often described as revealing itself: *broadly illuminating*; *suddenly showed*; *flashed out*; *lighted up*.

5.1.5 Descriptions of the sun as *flame*

This section has been placed towards the end of the analysis as it also adopts a less systematic and more qualitative approach to the data. Instances of the lines below have been presented earlier, but the semantic aspect has not been dealt with until now. Their shared semantic meaning relating to SUNLIGHT AS A FLAME groups them in no clearly defined structure. However, it does generate a reoccurring semantic feature that may distinguish the instances from either of the clear metaphoric/non-metaphoric datasets.

In total there are seven lines of data that depict SUNLIGHT AS A FLAME. According to the OED, the sun is “*supplied with light and heat by its radiation*³⁵”, and it is its composition which allows for a constant burning. In fact, the OED cites as the very first definition of *flame*: “*Vapour heated to the point of combustion; ignited gas*”, which would render the association of *flame* and sunlight as entirely congruent in a non-metaphoric sense. Whilst the sun can be described as being alight or ‘of flame’, the association is, more accurately, one of semantic extension. The seven instances from the middle dataset are shown below:

59. “ as we ascended a wooded height with the sun setting in a FLAME of gold, in front--we witnessed a rural sight, connected “
60. “ gh a great golden sunset was being enacted in purple and FLAME on the other side of the house. The child's eyes were dull”
61. “ound the sun lost that dulness on its disk and took a bright FLAME, and threw golden arrows everywhere; and the pastures”
62. “e I've noticed it is when the sun is going down in a blaze of FLAME, and it looks like--I don't know what.” “The heavenly Jeru”
63. “d the distant purple hills. The whole western sky was one FLAME of fire. Ruth forgot herself in looking at the gorgeous sig”
64. “s a hundred streams unfold, At once to pillars turned that FLAME with gold; Behind his sail the peasant strives to shun The”
65. “sical. The westering sun, which filled the atmosphere with FLAME throughout the day, was now wildly setting; and, as he sa”

Concordance 5.1. 6. Semantic set where *flame* = *sun* in middle group dataset

³⁵ OED – Online. Accessed on 26/11/2015

Within the lines, there are other lexical items associated with the sun, mostly in relation to its light, or position in the sky: *sun, gold, golden, sunset, disk, bright, Western sky, fire, westering sun, atmosphere, day, setting*. Three instances include the lexical item *in (a) flame*, or an extension of it (*in a blaze of flame*), and each of these describe the sun setting or descending in the sky. Some examples are more metaphoric than others, such as the disc of the sun *throwing golden arrows*, or the description of the sky as one *single flame of fire*. More generally however, all the above examples are describing the visual effects of the sun's rays, either on another object or the landscape. Thus in terms of metaphoricity there is very little being expressed. Instead, in each case there is a direct reference to a concrete, non-metaphoric object (the sun), and the behaviour or effect caused by it, described in terms of flame/s. *flame* here is interchangeable with the sun's rays.

There are a further four lines, which depict a natural phenomenon related to light (lightning, a shooting star, and the aurora borealis). Apart from the shooting star (created from flaming gases), the other two events are further extensions, made up only of light not flames. This makes them more metaphoric in their association with *flame*. The instances are grouped here together, as a result of their shared semantic association. If disregarded, some instances would fall in the clear metaphoric category (namely the lightning and aurora borealis examples), but the majority would fall into the clear non-metaphors.

5.1.5 Single occurrences of *flame*

The final section of the analysis details three original (in this data) instances of *flame* used in a potentially metaphoric context. They will be discussed in detail as qualitative examples of problematic metaphoricity.

The first instance chosen for analysis here is *broke into flame*, taken from the following extended concordance line:

(5.4) “The long-smouldering dissensions between the Northern and Southern States of the American Union at last broke into *flame*, and war was declared between them, in 1861. The burning question of slavery was undoubtedly at the bottom of this contest.”

Here, the phrase describes a conflict between the Northern and Southern states of America, but more literally it describes *dissensions* being set *on fire*. The incongruence of an abstract concept taking part in a physical act immediately signals the presence of a metaphor. Further, the use of the singular *flame* suggests a general, abstract state (conflict) rather than a physical, concrete occurrence of fire (i.e. multiple flames). Metaphorically *broke into flame* is describing the tumult between the groups of citizens, which historically, developed into civil war. In this respect, the instance could be attributed to the clear metaphoric group of data: the phrase *broke into flame* could be replaced with the less metaphoric phrase *turned into a fight*. However there is more inferred here, which creates a sense ambiguity. The notion of WAR implies a fiery conflict, with the use of guns, cannons and other fire-making artillery. Thus there is an element of literality maintained in the reference to the nations being on fire (i.e. breaking into flames). Additionally, the nearby inclusion of *burning question* and *long-smouldering* provide a semantic relation with the metaphoric image of a nation burning. Consequently, these larger semantic associations help to maintain and strengthen the image, creating textual cohesion on a semantic level.

The phrase could be determined as more metaphoric than non-metaphoric, but the point to be highlighted here is that there is not necessarily a right or wrong (or yes or no)

answer to the question of metaphoricity. The above example shows that by suggesting both non-metaphoric and metaphorical elements at work, the phrase creates a stronger, perhaps more memorable image: it has a real-world relationship with the image of WAR. This may be an ambiguity created purposefully on the part of the writer for a particular effect.

Ambiguity may also be momentary, unintended and even unimportant to the overall understanding of the text. Hoey labels this *benign* ambiguity (2014, personal communication). In its general sense, benign ambiguity refers to the circumstance or situation in which a phrase can mean one of two things, but both these meanings contribute sensibly to the overall meaning of the text. Thus no meaning or message is lost in communication. In relation to metaphor, if the reader/listener is momentarily unaware that a word or phrase being processed is metaphoric or they cannot determine if it should be interpreted as metaphoric or not, as long as the original meaning is still arrived at there is no adverse effect on the understanding of the text. The example of *smouldering* in the concordance line above turns our attention to both meanings (the metaphor and the non-metaphor). The overall meaning is still much the same whether we identify each and all of the above elements (*long smouldering, burning and broke into flame*) as metaphoric or not.

The second and third individual instances have been chosen to briefly illustrate a different type of ambiguity found within the middle group dataset. Whereas *broke into flame* demonstrated the importance of both individual interpretation on the part of the reader and the writer's intent to produce ambiguity, the instances below illustrate an ambiguity created within a particular genre within the corpus, specifically in relation to the item *flame*. The metaphoricity within these (and similar) concordance lines are some of the more difficult instances to define, often as they are made up of analogies or fables

or form parts of larger, illustrative allegories where the margins of the real and imagined worlds are less clear. Two such instances are shown in extended form below:

(5.5) “Lest I blaspheme my subject with my song. Shall Pagan pages glow celestial *flame*, And Christian languish? On our hearts, not heads, Falls the foul infamy: my heart! awake.”

(5.6) “A *flame* now approached and thrice encircled Beatrice, singing all the while so divinely, that the poet could retain no idea expressive of its sweetness. Mortal imagination cannot unfold such wonder.”

In the first instance, the flame is described as *celestial*, which provides a hint that the flame is divine or heavenly and thus not of the physical, real-world sense. Previous to the phrase, *Shall Pagan pages glow* provides more context referring to the scriptures or holy books of pagans. In this sense *to glow celestial flame* means to become sacred or divine and is indeed metaphoric. In the second instance the description is clearer in its non-metaphoric sense (describing physical action), but not truthful to a flame’s qualities or characteristics: a flame is inanimate and cannot sing. We can interpret the behaviour as concrete and occurring physically, but whether we understand the scenario to be fantastical (and part of a larger metaphor or analogy) or take it as truth (which stands in conflict with the reader’s view of the world), is left to the judgement of the reader. Thus the metaphoricity is ambiguous. Such examples illustrate the need for context and knowledge of the text type before interpreting metaphoricity. Difficulty arises particularly in religious texts, whereby an allegory or extended analogy may act as an over arching metaphor (which may or may not be interpreted as such by the reader), and which can further contain smaller embedded metaphors as has been present in the *flame* data. Text

type and extended metaphor will not be discussed here but it is an important consideration in the interpretation of metaphor, particularly when using corpus methods.

5.1.6 Conclusion to the middle group analysis

In conclusion, several factors have been discussed at length, which affect the interpretation of (or the degree of) metaphoricity. The study does not provide an exhaustive account, but a small, qualitative investigation into what is found in the present data, shedding light on why and in what circumstances readers may have a problem with identifying metaphoricity. Crucially, identifying problematic middle group instances, somewhere between a metaphoric and a non-metaphoric sense of an item, means identifying a grey area more generally amongst meanings and the ways in which meaning is expressed lexically. In order to accept this it is necessary to acknowledge that a level of subjectivity in interpretation exists.

In terms of the findings, firstly *in a flame* was found to be the most frequent cluster in the middle group dataset, often with the meaning of setting a town or city on fire. There were different degrees of metaphoricity in the individual instances based on the level of abstraction between *city* and *nation*. The item was treated as a lexical item to gain the full understanding, which in turn renders it non-metaphoric. This is because as a single item or chunk it has a single meaning. Secondly, the animate nature of the items used alongside *flame* were shown to play just as important a role in determining potential metaphoricity. It was acknowledged that whilst there are degrees of metaphoricity and conventionality, there are also degrees of animacy which can be more or less specifically associated with living beings. Often, some of the items' original meanings have undergone a form of extension (concrete or abstract). An example of this is *tongues* which in the nineteenth century became a common description of other entities with the same shape

as a non-metaphoric tongue (i.e. flames). These discussions on animacy led to an exploration of the types of nouns in the colligation noun + *of flame*, which are not necessarily animate but debateable in their literality (*current of*, *heart of* and *sheets of flame*). Often, the quantifiers can be defined as conventional (in particular *jets of flame*), which may also be a contributing factor to readers not identifying them as metaphoric in any unified or non-disputed sense. Most importantly, the adjectives and verbs that display a level of animacy and surround *flame* display elements of pragmatic association. The majority of verbs express a sense of positive restoration (e.g. *grow*, *nourish*, *revive*, *excite*). In each case, the *flame* is shown as a positive and desired occurrence and this is supported in the surrounding lexis. In contrast the adjectives largely display pragmatic association involving animalistic or base behaviour (*avenging*, *fierce*, *lurking*), often portraying a sense of terror and threat. This is supported by the types of collocates and lexis elsewhere in the concordance lines (e.g. *furious*, *smothering*, *wildly* and *shrieks of death*).

Finally, the analysis looked at individual instances of *flame* from the data. The aim of these smaller, qualitative discussions was to illustrate the importance of co-text and individual uses of words, as well as the nature of reader interpretation and writer aims. It may be, as shown for *broke into flame*, that there is an intentional ambiguity on the part of the writer. This may be working in parallel to or entirely independently of the reader's own judgements.

One factor shown within this analysis is that a confidence in dictionary definitions can be unhelpful in trying to identify metaphoricity. Dictionaries overwhelmingly concentrate on words rather than lexical items and, as has been discussed, focusing on a word disregards the meaning of the combined item. In some cases above, the phrase or item in question has entered the dictionary as a non-figurative association or reference and developed its meaning through semantic extension rather than by making a clear-cut

distinction between senses. This was seen with *tongue*, first only used in reference to a Pentecostal *flame*, before becoming an accepted and conventional description of *flame* more generally in the nineteenth century. An important consideration in any discussion of lexical metaphor is the point at which semantic extension and metaphoricity become distinct (i.e. when a sense is recognised as dependent on the non-metaphoric sense, rather than simply a development or extension of it). The analysis thus far has shown that there may not be such a point of distinction, and that individual interpretation plays a considerable role in the decision.

5.2 Analysis and comparison of the metaphoric and non-metaphoric datasets for *flame* (n)

In this section, the concordance data for each group of *flame* instances is compared and contrasted. The first group consists of the clear metaphors, which total 409 instances and comprises 34.08% of the total data. The second group comprises the non-metaphors, which total 582 instances and make up 48.50% of the total data. The chapter will follow the structure of the quantitative analysis in Chapter 4, beginning in 5.2.1 with an initial keyword analysis. 5.2.2 will then form the main collocation analysis, where lexical words collocates will be discussed (nouns, verbs, adjectives and personal pronouns). Section 5.2.3 will then summarise key findings related to semantic associations within each set of data, drawing on the findings from 5.2.2. The next section (5.2.4) will comprise an analysis of the top ten most frequent collocates. These form a new section because the analysis shifts focus from semantic relations to grammatical patterns. Colligations and instances of nesting will be discussed here. Finally section 5.2.5 develops this discussion further, exploring the cluster data from WordSmith.

5.2.1 Keyword analysis

As outlined in the previous chapter, the keyword analysis provides a broad and general view of the greatest lexical differences between the two datasets, in terms of their lexical frequencies. The findings show which items appear to be significantly more frequent in each dataset when compared against one another when the datasets are compared. This may help to predict possible differences in semantic associations and what general distinctions may be found in the individual collocation analyses. Firstly, the keywords are given for the metaphoric dataset. ‘RC’ refers to the reference corpora which in this case is the other dataset (non-metaphors):

METAPHOR						
R	Key word	Freq.	% of corpus	RC. Freq.	RC. %	Keyness
1	MY	69	0.53	26	0.20	39.27
2	LOVE	24	0.18	2	0.02	30.90
-	THE	551	4.24	1099	8.45	-43.01

Table 5.2. 1. Keywords in metaphoric dataset

Only two items are revealed as ‘positively key’ in the metaphoric data. These are *my* and *love*. Although *love* only occurs twice in the non-metaphoric dataset and thus is more specific to the metaphors, *my* is more key, or significantly more frequent, based on the statistical testing. *My* occurs as a collocate (within a five-word window) 1.51 times per thousand words in the metaphoric data, compared to 0.41 times per thousand words in the non-metaphoric data. As the *cultivated* studies have shown, personal pronouns and abstract nouns are both features characteristic of metaphoric senses. These will be explored in more detail in the following sections. *The* has a minus keyness figure, which means it is significantly less frequent when compared to the non-metaphoric data. It

appears almost half as often and has a frequency of only 15.15 times per thousand words in the metaphor data compared to a frequency of 27.67 times per thousand words in the non-metaphor data. The statistical test performed by Wordsmith5 does not indicate if this means a higher use amongst the non-metaphors or a lower use in the metaphors (they can only be compared to one another). The table below shows each dataset compared against the full nineteenth century corpus.

	R	Key word	Freq.	%	RC. Freq.	Keyness
MET	1	THE	551	6.13	782	7676.928223
NON-MET	1	THE	1098	8.45	782	15564.88184

Table 5.2. 2 Keyness of *the* when both datasets are compared to the full nineteenth century corpus

As can be seen, *the* is used significantly frequent in both datasets: it is ranked as the most key item amongst both the metaphors and the non-metaphors when compared against the full nineteenth century corpus. This may be due to the fact that the corpora (metaphoric and non-metaphoric) comprise a collection of concordance lines rather than a complete and thus more 'natural' text. *The* does have a higher keyness amongst the non-metaphors though, and thus it will be discussed in more detail in the ten most frequent collocate analysis in 5.2.2.4.

Below is the keyword list for the non-metaphoric data:

NON-METAPHOR						
R	Key word	Freq.	% of corpus	RC. Freq.	RC. %	Keyness
1	CANDLE	43	0.33	0	-	45.36
2	THE	1099	8.45	551	6.11	43.01
3	LAMP	37	0.28	1	0.01	31.56
4	SMOKE	31	0.24	1	0.01	25.57
-	MY	26	0.20	69	0.77	-39.27

Table 5.2. 3. Keywords in non-metaphoric dataset

My is similarly shown to have a minus keyness figure, which highlights a significant lower use in this dataset compared to the metaphoric corpus. This supports the high keyness score it is given in Table 5.2.1. Also expected from the metaphoric table, *the* is positively key in this dataset (compared to its minus keyness score within the metaphor corpus). *Candle*, *lamp* and *smoke* are also identified as keywords. *Lamp* and *smoke* occur only once within the metaphor corpus and *candle* is unique to this dataset. All three can be said to be characteristic of a non-metaphoric use, which is unsurprising given the semantic association shared between them and *flame* in its non-metaphoric sense. Also, given the partial dependency on candles and lamps for light in the nineteenth century, their presence in the keyword table could be expected when used alongside *flame*. A full collocation analysis will look at each of these items and their associations with *flame* in more detail.

5.2.2 Collocation

Unlike our procedure in the previous chapter, the collocation section will only discuss the lexical words (nouns, verbs, adjectives and personal pronouns). Discussion of colligations will be kept to a minimum as the focus is mainly on semantic associations identified through the collocates, although of course not all the findings can be divided so easily. Single or low frequency occurrence of items semantically associated to collocates will also be discussed here.

5.2.2.1 Noun collocates

Firstly, all noun collocates (with a minimum frequency of 5) in the metaphoric set are presented:

METAPHOR					
R	Collocate	Freq.	Freq. ptw.	Left freq.	Right freq.
1	EYES	14	0.92	8	6
2	LOVE	11	0.72	4	7
3	FIRE	9	0.59	3	6
4	FACE	8	0.52	8	-
4	PASSION	8	0.52	4	4
5	BREAST	7	0.41	2	5
6	HOPE	6	0.35	1	5
7	CHEEKS	5	0.33	1	4
7	BOSOM	5	0.33	3	2
7	LIFE	5	0.33	4	1
7	HEART	5	0.33	3	2

Table 5.2. 4. Noun collocates in metaphoric dataset (minimum frequency of 5)

On first glance, the items can be divided into two semantic groups: the first relating to BODY PARTS (*eyes, face, breast, cheeks, bosom* and *heart*), and the second referring to EMOTIONS/ABSTRACT CONCEPTS (*love, passion, hope*). *Life* is too general for this category but can also be described as abstract. *Fire* stands out because of its concrete, physical, non-human reference, as well as semantically related to a real, physical flame. A look at the concordance lines shows that the nouns in the first set most often depict the location of the *flame* (37 out of 44 occurrences). Furthermore, 30 of these 37 instances (81.08%) reflect a physical expression (metaphorically) of emotion or feeling. Thus flames in one's *breast* or *cheeks* or *bosom* most often conveys feelings of anger, passion, hate (etc.). The body part is metaphorically depicted as the PHYSICAL LOCATION of and thus semantically associated with a feeling or passion. The exception to this is *eyes* where half of the instances refer to an external *flame* (i.e. from a lamp or a candle) which is reflected in the eyes (or also on the cheeks in some instances), such as *and the fever flame glitters in her*

eyes. Overall, there is fairly even distribution (both right and left) of body part collocates occurring with *flame*, with the exception of *face*, which appears only on the left. Amongst the left positions (L1-L5) there is no single fixed position however. Prepositions would be expected to precede the body part collocates as the location of the emotion (as outlined earlier). In fact there are only three instances of *flame in his/her eyes* and one instance of *flame that burns in his heart*, though all the instances of *breast* collocating with *flame* are associated with a prepositional phrase. These are shown below:

eyes 244 of the flame in my **breast** through all those leaden tortur
 , to transfuse into your own **breast** that holy FLAME which inspir
 e FLAME she kindled in his **breast**; and, by _divine_ command, s
 mps the FLAME in his own **breast**, he had better not enter into a
 r dame Had kindled in your **breast** a FLAME, (Though Niebuhr he
 like a FLAME of love in the **breast** of Dutch and English adventur
 ure and holy FLAME, in the **breast** of this young man; and chang
 christian FLAME in her own **breast**." Callista sat down half uncon

Concordance 5.2. 2. All instances of *breast* + prepositional phrase + *flame* in metaphoric dataset

In each instance, the *flame* is always present in the breast of the character. The *flame* is depicted as *holy* (twice), as *Christian*, and as a *flame of love*. Thus, *breast* can be said to collocate with *flame* and are preceded by a prepositional phrase, whilst other body parts do not share the preference. *Face* and *flame* are most often joined by a prepositional phrase or a verb phrase, which will be discussed in the colligation analysis. This could be a finding more generally amongst these body part collocates as a consequence of them depicting the physical location of an emotion.

Focusing on the prevalence of abstract nouns in the metaphoric dataset, the table below gives an exhaustive list of all abstract nouns occurring more than once within the five-word window of *flame*. Here a stronger intimation of the semantic associations related to *flame* in a metaphoric sense can be gained:

METAPHORS		
R	Collocate	Frequency
1	LOVE'S	4
1	REBELLION	4
1	SOUL	4
2	FAITH	3
2	HEAVEN	3
3	REVOLUTION	2
3	SEDITION	2
3	WAR	2
3	TEMPER	2
3	DEVOTION	2
3	EXTINCTION	2
3	HATE	2
3	FREEDOM'S	2
3	ANGER	2
3	MOMENT	2
3	PATRIOTISM	2
3	JOY	2

Table 5.2. 5. Abstract nouns in metaphoric dataset (occurring twice or more)

Whilst the majority of items do not occur frequently enough to be identified as collocates, the table appears to show *flame* in a metaphoric context to be associated with a range of abstract concepts and emotions. There is a semantic divide between POSITIVE NOUNS (*joy, heaven, freedom, faith, devotion, patriotism, revolution* and *love*), and NEGATIVE NOUNS (*extinction, war, anger, hate, temper, rebellion* and *sedition*). It is perhaps more interesting that there are no neutral nouns on the list at all. *Flame* when used metaphorically, is mostly describing the inciting of an emotion or passion, whether good or bad, but never neutral. The majority of occurrences (52.38%) of these nouns are in positions R2 (14/42) or R3 8/42). Examples of each are listed below:

(5.7) "...graceful pillars of modesty; but, far from despising them, if the pure *flame* of patriotism have reached their bosoms..."

(5.8) "...and all their vast resources, would not raise the very slightest *flame* of sedition or of insurrectionary movement in England ..."

(5.9) "'Lilian! Lilian!" I murmured to myself that name; the *flame* of my hate was fed by my jealousy. "Ay!" said I, sternly..."

The first and second most frequent structure involving *flame* in the metaphoric dataset is *flame of* + abstract noun or *flame of* + pronoun + abstract noun, again suggesting a colligation to be discussed in 5.2.3.

Noun collocates in the non-metaphoric dataset can be compared to the metaphoric set, in Table 5.2.6 below:

NON METAPHOR					
R	Collocate	Freq.	Freq. ptw.	Left freq.	Right freq.
1	FIRE	26	1.51	15	11
2	CANDLE	23	1.33	6	17
3	SMOKE	23	1.33	16	7
4	LAMP	20	1.16	3	17
5	LIGHT	19	1.1	14	5
6	WOOD	9	0.52	6	3
7	AIR	8	0.46	8	-
7	FACE	8	0.46	3	5
7	MATCH	8	0.46	3	5
7	HAND	8	0.46	4	4
8	SPIRIT	7	0.41	4	3
8	EYES	7	0.41	1	6
9	HANDS	6	0.35	4	2
10	MOMENT	5	0.29	4	1

Table 5.2. 6. Noun collocates in non-metaphoric dataset (minimum frequency of 5)

As is shown, there is a stark difference between the types of nouns associated with the groups of metaphors and non-metaphors. As would be expected, the overwhelming majority of nouns in the table above semantically relate to a physical flame. This includes FIRE-BURNING MATERIALS, such as *wood*, FIRE-BURNING APPLIANCES such as *lamp* or *torch*, or PART OF A FIRE, such as *smoke*. *Spirit* refers to fuel and is thus concrete. The only abstract noun on the list is *moment*, which in each of the five instances refers to time and is shared with the metaphoric uses:

w of delight at the FLAME. At that moment, even this simple and familiar sound s
 ress Nutter and her daughter. The moment the FLAME burst forth, the spell cast
 d them, and the light shot up for a moment in a FLAME of murky orange. He shud
 nd a brighter FLAME arising at the moment from the fire, it illumined the intruder"
 ymph, this moment Semele, next moment not Semele, but FLAME and a Statue

Concordance 5.2.1 All instances of *moment* collocating with *flame* in the non-metaphoric dataset

It is worthwhile to note here that despite light often being a measure of time in the nineteenth century, as discussed in 5.1, the instances of *moment* above reflect an instantaneous event - something sudden and unrelated to the *flame*.

Whilst the collocates relating to the semantic group PARTS OF FIRE, such as *fire*, *smoke* and *light*, occur mostly on the left of *flame*, (e.g. *fire of the flame*; *light of the flame*; *smoke of the flame*), the large majority of instances of appliances, such as *candle* (17/23) and *lamp* (17/20), occur on the right of *flame* (e.g. *flame of the candle*; *flame of the lamp*). This is a semantic association coupled with colligation.

There are some collocates shared with the metaphoric set of noun collocates. These are the body parts *face*, *hand/s* and *eyes* and the abstract noun *moment*. *Hands* are most often warmed over the fire (5/6) and *hand* is most often (5/8 instances) held out to the *flame* or holding a torch or candle. *Face* and *eyes* are most often illuminated by the light

of a flame. In reference to non-metaphoric situations the body part is most often described in its position in relation to a physical, nearby *flame*. Body part collocates also appear to play a different role colligationally, as well as semantically. Body parts appear to colligate with prepositional phrases in the non-metaphoric data, whether it is on the left of *flame* (*the flame passed over his face*), or on the right (*raising her face from the flame*). Here the *flame* has a physical presence, often providing reference to location or light. This is not the case in the metaphoric data: there is more variety in the relationship between *flame* and the body part collocate: the face may belong to the *flame*, such as *the face of angry heaven's flame* or the *flame* may form a description of how the face appeared, such as *she saw Hilary's face, all flame and fire*.

To summarise then, the analysis of noun collocates has hinted at key differences in semantic associations with either sense of *flame*. Whilst abstract nouns are most clearly associated with metaphoric instances of *flame*, the majority of nouns in the non-metaphor corpus are more concretely and physically associated a *flame* (mostly as the source of the flame). The few overlapping collocates (*face, hand/s eyes, and moment*) are distinguished in terms of either semantic associations or colligations, or both.

5.2.2.2 Lexical verb collocates

Moving on to verb collocates, those associated with *flame* in a metaphoric context are presented first. Only lexical verbs are discussed in this section, as the focus remains on semantic differences. Differences if any in the use of modal verbs and passive/active aspects for instance will be discussed in 5.3 and 5.4:

METAPHOR					
R	Collocate	Freq.	Freq. ptw.	Left freq.	Right freq.
1	KINDLED	9	0.52	6	3
1	FANNED	9	0.52	8	1
2	BURST	5	0.29	4	1
2	FAN	5	0.29	5	0

Table 5.2. 7. Lexical verb collocates in metaphoric dataset (minimum frequency of 5)

Kindled and *fanned* are the most frequent items, each occurring 0.52 times per thousand words. Firstly, instances of *kindled* within the concordance lines are given below:

reby; by love's own FLAME ""kindled she was and blasted."" These, and
e. 520 He, the great Father! kindled at one FLAME The world of rationals;
to smother the FLAME she kindled in his breast; and, by _divine_ comm:
and the FLAME of hope is kindled in a moment. But alas! that very morn:
ury and Pride With incense kindled at the Muse's FLAME. Far from the n
was communicated, which kindled a FLAME in the bosoms of the more
Kitty, a fair but frozen maid, Kindled a FLAME I yet deplore, The hood-wir
as yet no other dame Had kindled in your breast a FLAME, (Though Nie
" And I believe my visit has kindled a FLAME of liberty in Harrodsburg, th

Concordance. 5.2. 3. All instances of *kindled* collocating with *flame* in metaphoric dataset

Three of the concordance lines refer to breast or bosoms as the location of the kindling. This activates the metaphoric sense by invoking the meaning of emotion or feeling. There are nine instances of kindling a *flame*, and one of kindling incense. There are four instances displaying negative pragmatic association (with reference to the larger co-text), but there is not enough data to claim any pragmatic associations. Perhaps of more interest are *fan* and *fanned*. Below are the concordance lines for the lemma FAN* as a collocate of *flame*:

' This contrition of the child's only **fanned** the **FLAME** of Tom's virtuous indignation
 ng letters to the papers, striving to **fan** the **FLAME** of controversy. Every evening he
 rs, an Evangelical writer sought to **fan** the **FLAME** by denouncing the absurdity of
 Richelieu, who, to weaken Austria, **fanned** the **FLAME** of civil war in Germany, as he
 esired. The incident of the day had **fanned** the **FLAME** that was burning the inside
 expression to his own soul, free to **fan** to the full the **FLAME** that burns in his heart
 d fond jealousies, the winds which **fan** the **FLAME** of love, when judiciously or artfully
 role month the **FLAME** of war was **fanned** by the newspapers, particularly by those
 p into a **FLAME** once more, and I **fancied** that there was that in me that by toil" 62
 dering discontent of the army was **fanned** into **FLAME** by the advance of the French
 rked. An occasion soon offered to **fan** this feeling to a **FLAME**. A Chinese army un-
 tland that this spirit had been first **fanned** into a **FLAME** in the bosom of the fair Fl
 to a passionate expression when **fanned** into sudden **FLAME** by talking about the
 he over. And Afy--but I won't curse **her--fanned** the **FLAME** against me by denying
 ess acted upon, or their wickness **fanned** into **FLAME** by which means I have no

Concordance 5.2. 4. All instances of FAN* collocating with *flame* in non-metaphoric dataset

Disregarding *fancied*³⁶ the majority of instances show a preference for the verb to precede *flame* (13 out of 15 instances). There are six instances of FAN* *the flame* and four instances of *fanned into flame*. FAN* *the flame of* + abstract noun occurs in four out of the six instances of FAN* *the flame*. There is also one instance of *the flame of* + abstract noun *was fanned by*. There is a pragmatic association involved with the majority of instances: not only does FAN* *the flame* imply an exacerbation or a stirring up of emotion in most cases, but the pragmatic association is always negative. Even in the case of love or other positively associated abstract nouns, the larger co-text always implies a negative pragmatic association:

(5.10) "the vain fears and fond jealousies, the winds which fan the *flame* of love, when judiciously or artfully tempered, are both incompatible with the tender confidence and sincere respect of friendship".

³⁶ There is no way to eliminate other FAN* verbs whilst retaining both the collocates *fan* and *fanned*

Thus it can be said that when FAN* collocates with *flame*, there is evidence of a semantic, colligational and pragmatic association, all associated with a metaphoric sense. Other verbs associated with the same colligation (Verb + *the flame*) are shown below:

VERB	
<i>blew, blows, burns, caught (4), choked, extinguished, fed, feeds, felt, flieth, increased, spread, tend</i>	+ THE flame

Table 5.2. 8. Verb + *the flame* in metaphoric dataset

The above verbs are divided semantically between those SUPPRESSING THE FLAME (*blew, blows, extinguished* and *choked*) and the remaining items, which are PROMOTING OR INCREASING THE FLAME (*caught, fed, feeds, flieth, increased, spread* and *tend*). Lexical verb collocates in the non-metaphoric dataset can be compared and contrasted with the above, in Table 5.2.9:

NON-METAPHOR					
R	Collocate	Freq.	Freq. ptw.	Left freq.	Right freq.
1	BURST	12	0.70	9	3
2	SEEMED	7	0.46	4	3
3	BURNS	6	0.39	5	1
3	SAW	6	0.39	6	-
3	BURNED	6	0.39	3	3
3	SPREAD	6	0.39	-	6
4	BURN	5	0.33	3	2
4	COME	5	0.33	3	2
4	LOOKED	5	0.33	2	3

Table 5.2. 9. Lexical verb collocates in non-metaphoric dataset (minimum frequency of 5)

The first distinction is the greater number of verbs (both tokens and types) in the above table compared to those in the metaphoric dataset. This suggests a greater variety in how the *flame* is described (i.e. what the flame is doing). *Burst* is the only item occurring on both lists and will thus be compared first:

d the following year. Sedition smouldered and burst into FLAME--not in one place alone, but at every end of that first waltz that the FLAME had burst out in my soul which was now consuming me. The smouldering fire of Mrs. Milroy's jealousy had burst into FLAME in the moment when she and the vengeance, now grown to a monomania, once more burst into a FLAME. At last he hired Carlisle and Grandin and he, with a sudden spark of fury ready to burst into a FLAME if I should answer "yes." "No," I re-

Concordance 5.2. 5. All instances of *burst* collocating with *flame* in metaphoric dataset

el of unburned coal (or wood) burst into momentary FLAME, and showed the flames. Lo you, the Carrousel has burst into FLAME!-Paris Pandemonium! Napoleon's blood became warm it would not burst into FLAME, as it ought to have done. After the water. The moment the FLAME burst forth, the spell cast over them by Mother Nature burst for a tearing rush. He saw a burst of red FLAME before his eyes, and wondered how could eruptions of FLAME burst forth from the interior of these stones? The smoke and FLAME now burst only at intervals through the gates, and the leaves shaken among dry leaves and burst into a FLAME. The whole process seemed to them above their heads till they burst into a FLAME. The smoke ascended in puffs, they smoulder first, and burst out into a frightful FLAME at last. Marguerite's oil gas was generated, and it burst into a fearful FLAME, setting fire to the handful of fuel on the fire. The burst of clear FLAME lit up his broad, dark,

Concordance 5.2. 6. All instances of *burst* collocating with *flame* in non-metaphoric dataset

Burst into a flame and *burst into flame* are present in both datasets. More often than not, the *flame* following *into* or *into a* in the non-metaphoric data is qualified with a modifier (momentary *flame*; a frightful *flame*; a fearful *flame*). This is not the case amongst the metaphors. Instead, the *flame* is born from an emotion in each case: *sedition*, *revenge*, *jealousy*, *monomania*, and *fury*. In these metaphors, the emotional energy is depicted as the metaphorical fuel for creating a fire (the outward or full expression of the emotion itself). In the non-metaphoric instances, the *flame* is either born from something physical (e.g. *unburned coal*; *Carrousel*), or is described in relation to something physical, often with

a prepositional phrase (e.g. *before his eyes; from the interior of these stones; through the gates*).

Other verb collocates associated with *a flame* are given in Table 5.2.10 below:

NON-METAPHOR		
R	FLAME cluster with verb	Freq.
1	BURSTS INTO A	3
1	BURNS WITH A	3
1	BURST INTO A	3
1	BURNING WITH A	3

Table 5.2. 10. *Flame* clusters with a verb in non-metaphoric dataset

Bursts (as opposed to *burst*) and *burns* are both unique to the non-metaphoric dataset. It is of interest that none of the clusters above contain *flame* as an item, despite occurring in the *flame* dataset. This is because of a large variety of intervening adjectives that pre-modify *flame* (*burst into a great/huge/blue flame*), as was also the case with *burst into* above. This may be a distinguishing feature between the two uses generally, and will be explored in the following section.

Finally of interest amongst the non-metaphoric verb collocates are *seemed* and *looked*. Both verbs are semantically related to PERCEPTION and it could be predicted, would be more likely to be associated with metaphoric instances, as was the case with *cultivated* in the previous study. Looking at the concordance data, the majority of instances of *seemed* occur in a separate clause from *flame*, most often referring to the light or visibility from a candle or lamp (e.g. *in which dimly burned a rushlight, whose flickering flame scarcely seemed to render visible the scanty furniture the room*). This is also the case for *looked*, where PERCEPTION is related to the light of the flame (e.g. *I struck a match and by its flame looked at my watch*).

To summarise then, whilst the majority of lexical verb collocates remain unique to each dataset, there is overlap with *burst*. However, both semantically and colligationally the instances in either set can be distinguished from each other (if not in the concordance line then with more co-text given). *Kindled, fan* and *fanned*, frequent in the metaphoric set, always refer to emotion. There is also evidence of negative pragmatic association with the lemma FAN* + *flame*. In the non-metaphoric set there is both more variety and higher frequency amongst items. Semantically, the verbs are related to MOVEMENT (*burst, spread, burn*) or PERCEPTION (*saw, seemed, looked*), the reason for this latter group being that *flame* is referring to light and thus visibility. Thus whilst physicality is still a characteristic of non-metaphoric instances (locative prepositions, concrete nouns, verbs depicting physical action), levels of abstraction, mostly referring to emotion, are characteristic amongst the metaphoric instances of *flame*.

5.2.2.3 Adjective collocates

Below the adjectives collocating with *flame* in a metaphoric context are presented in

Table 5.2.11:

METAPHOR					
R	Collocate	Freq.	Freq. ptw.	Left freq.	Right freq.
1	OLD	13	0.85	13	-
2	SACRED	9	0.59	7	2
3	PURE	6	0.39	5	1
3	HOLY	6	0.39	6	-
4	LIVING	5	0.33	3	2
4	LITTLE	5	0.33	5	-
4	FIRST	5	0.33	4	1
4	STEADY	5	0.33	5	-
4	STILL	5	0.33	3	2
4	NEW	5	0.33	1	4

Table 5.2. 11. Adjective collocates in metaphoric dataset (minimum frequency of 5)

The most frequent adjective in the table above is *old*, occurring 0.85 times per thousand words. Also of importance is the item's preference for left positioning only. *Old* occurs in 12 out of 13 instances in L1 position, signifying a strong collocation. The concordance data further reveal a particular meaning associated with the collocation: that of a human subject, most often female, and usually a lover from the past (*old* is used in relation to time rather than the age of the subject):

, and mentions us to Mr. Smith as 'An **old FLAME** of mine.' And shall I grieve that it is thus? :
dame de Florac. I suppose she was an **old FLAME** of the Colonel's, for their meeting was
s. One would think Dick accuses some **old FLAME** of Carlyle's--some demoiselle or dame he
keeper, had fortunately got next to his **old FLAME**, Sukey Worseley; while Phil Rawson, the
er little apartment in which he found his **old FLAME**. One of her gowns hung over the bed, and
dy o' Kirkbyres." ""I remember her--an **old FLAME** of my brother's." ""I ken naething about th
very person I wished most to avoid, my **old FLAME** Handassah, constituted the party. Fortuna
himself; and so, all things favouring; the **old FLAME** blazed up wildly, and the young gentlemar
ezer. ""You saw Levison taken up--your **old FLAME**----"" Afy stamped her foot in indignant
married--to a Lieutenant Osborne--a very **old FLAME**. ""Is he a man in a line-regiment?"" Captai
al frightened and affected at seeing his **old FLAME** in this condition. And she began, forthwith
ical animal. So John sat alone with his **old FLAME**. He had become resigned to her perpetual

Concordance 5.2. 7. All occurrences of *old flame* in metaphoric dataset

The large majority of people (aside from the *old flame* itself) within the lines are male (e.g. *Lieutenant Osborne, Mr Ebenezer, John, Carlyle*), whilst *old flame* itself refers to a female character. This is reflected in the greater number of male possessive pronouns on the left of the headword, and more female pronouns on the right (e.g. *the queer little apartment in which he found his old flame. One of her gowns hung over the bed...*). The use of *flame* is concrete (referring to a person rather than an emotion or concept) and thus stands in contrast to all other metaphoric instances of *flame*. Many metaphor researchers agree that there is usually some form of abstraction (vehicle or tenor) within a metaphoric transferral of meaning (c.f. Goatly, 1997). *Old flame* stands apart for being concrete in both vehicle (*flame*) and tenor (human subject). One reason for this concrete-to-concrete

mapping may be the high frequency of the phrase, which signals a single lexical item. *Old* is the fourth most frequent word in position L1, exceeded only by the function words *the*, *a* and *of*. Similarly it is ranked as the most frequent adjective in the collocate list. Thus *old flame*, as a single item, exhibits conventionalised behaviour as a metaphor. In contrast, there is not a single instance of *old flame* in any non-metaphoric concordance lines within the data.

A few of the adjectives in the table can be used to modify a real *flame* and retain a non-metaphoric meaning of the phrase. These are *great*, *little still* and *steady*. Mostly however, they are abstract or metaphoric in their meaning when used in combination with *flame* (e.g. *living*, *fair* – a non-metaphoric flame is not living nor can it be *fair*). The adjectives *sacred*, *pure* and *holy* are particularly interesting. A non-metaphoric physical candle flame in a church or religious setting could be described as *sacred*, *pure* or *holy* and still retain its literality (the flame is still real in the sense that it is there, in the church). However, the co-text given in the lines below suggest a more abstract meaning, with no reference to a concrete, physical flame:

(5.11) “All are but ministers of Love, And feed his sacred *flame*. Oft in my waking dreams do I Live o'er again that happy hour.”

(5.12) “...often put out not only the parlour fire, but that more sacred *flame*, the fire of domestic love. It is the greatest possible misery.”

(5.13) “...they awaken holy devotion: they teach how to ask: they kindle a holy *flame*.... 'Singing is the natural effect of joy in the heart...’”

Holy devotion is a human behaviour and suggests a level of abstraction (i.e. *devotion*), allowing for an abstract interpretation of *holy flame* in 5.13. Interestingly, example 5.12 makes reference to a non-metaphoric fire (*parlour fire*) before the use of *sacred flame* which is then used in contrast to the parlour fire. *Flame* here refers to *the fire of domestic love*. As expected there is an abstract noun to which the abstract/metaphoric *flame* belongs.

In order to form a comparison of metaphoric and non-metaphoric modifiers, the adjective collocates for the non-metaphoric instances of *flame* are given below as well as their distribution frequencies:

NON-METAPHOR					
R	Collocate	Freq.	Freq. ptw.	Left freq.	Right freq.
1	BLUE	17	0.98	16	1
1	BRIGHT	17	0.98	14	3
2	FLICKERING	12	0.70	10	2
3	RED	11	0.64	5	6
3	WHITE	11	0.64	9	2
4	COLOURED	9	0.52	-	9
4	ROUND	9	0.52	5	4
4	CLEAR	9	0.52	9	-
5	BROAD	6	0.35	5	1
5	YELLOW	6	0.35	6	-
5	GREAT	6	0.35	4	2
6	DEEP	5	0.29	1	4
6	HIGH	5	0.29	2	3
6	SMALL	5	0.29	3	2
6	SILK	5	0.29	-	5

Table 5.2. 12. Adjective collocates in non-metaphoric dataset (minimum frequency of 5)

There are 50% more adjectives in the non-metaphoric dataset. The large majority of these relate to the visual aspect of a physical *flame*. These include COLOURS (*blue, white, yellow, red, bluish, ruddy*), LIGHT RELATED adjectives (*brilliant, bright, clear, flickering lurid, lambent*) and or SIZE-RELATED adjectives (*broad, small, great, strong*). None of these are

found as collocates in the metaphoric set. The presence of colour related adjectives in the non-metaphoric concordance lines refers to a notion of perception on the part of the character or reader or both. In addition, most of the instances of *blue flame* (9/13) relate to a *weak* or *pale* or *flickering* flame. *clear* and *bright* similarly refer to visual aspects of perception. This was a semantic grouping also apparent amongst the verb collocates.

5.2.2.4 Pronoun collocates

It was found in the *cultivated* analyses that pronouns played a key role in distinguishing semantically between metaphoric and non-metaphoric senses of the item. The most striking finding was that personal pronouns were much more characteristic of the metaphors (particularly possessive pronouns), which also reflected the human aspect relating to *cultivated* as a metaphor (cultivating a feeling or a friendship, most often). Here we are concerned to discover whether the same is true of *flame*. Pronouns collocating with *flame* in both datasets are presented in Table 5.2.13 below:

Collocate	METAPHOR				NON-METAPHOR			
	R	Freq. ptw.	L freq.	R freq.	R	Freq. ptw.	L freq.	R Freq.
HIS	1	2.36	20	16	1	1.62	13	15
HER	2	1.84	18	10	2	1.27	9	13
MY	3	1.51	17	6	-	-	-	-
SHE	4	1.05	7	9	7	0.46	3	5
I	5	0.85	4	9	4	0.98	6	11
THEIR	6	0.59	4	5	8	0.35	3	3
THEY	7	0.53	5	3	6	0.52	2	7
HE	7	0.53	4	4	3	1.23	10	11
YOUR	7	0.53	7	1	-	-	-	-
ME	7	0.53	5	3	-	-	-	-
OUR	8	0.46	2	5	-	-	-	-
HIM	8	0.46	5	2	-	-	-	-
YOU	9	0.39	3	3	-	-	-	-
THEM	-	-	-	-	5	0.64	7	4

Table 5.2. 13. Personal pronoun collocates in both datasets (minimum frequency of 5)

As would be expected based on the *cultivated* study, there are more pronouns (both tokens and types) collocating in a metaphoric context. The possessive pronouns *his* and *her* are the most frequent in both datasets. These are fairly equally spread to the left and right of *flame* in both cases. First and second person pronouns are characteristic of the metaphoric set only (with the exception of *I* which occurs more frequently in the non-metaphoric data). Those unique to the metaphors are *my*, *me*, *you* and *your*. As was the case with *cultivated*, first person pronouns are more often associated with fiction and thus may reflect the finding that there are more metaphors amongst the fiction texts of the main corpus. A frequency count of *my* in both the fiction and non-fiction subsections of the corpus reveals a higher frequency in the fiction subsection than the non-fiction subsection (5.79‰ and 2.28‰ respectively). This is also the case for the other collocates only found on the metaphoric list: *me*, *you* and *your*.

Another difference between both groups is the high presence of pronouns in left position overall in the metaphoric instances. In non-metaphoric concordance lines, the most frequent owner of the *flame* is the candle, and secondly, the lamp. In contrast, the *flame* often belongs to a person when in a metaphoric context. This is supported by the use of personal pronouns occurring in conjunction with *flame* (as well as the high frequency of abstract nouns associated with human emotion in the metaphoric data). Another reason for the high frequency of pronouns in left position is the conventionalised phrase *old flame*. Here, the *flame* itself is in reference to a person or a lover. Thus a lover is often referred to in relation to his/her partner (e.g. *Clive's old flame*, *his old flame*). The table for the metaphoric dataset is replicated below, with the personal pronoun collocates associated with *old flame* removed:

METAPHOR				
Collocate	R	Freq. ptw.	L freq.	R freq.
HIS	1	2.09	16	16
HER	2	1.64	17	8
MY	3	1.38	16	5
SHE	4	0.92	6	8
I	5	0.79	4	8
YOUR	6	0.46	6	1
HE	7	0.39	4	2

Table 5.2. 14. Pronoun collocates with a change in frequency once *old flame* collocates are removed

The table shows that once old flame concordance lines are removed, instances of his, her and he become less frequent. However, the items are still more frequent than in the non-metaphoric set.

Also of relevance here is the reoccurrence of the use of the possessive in L1 position in the metaphoric data. These are not classed as collocates (minimum frequency of 5) but still reflect both semantic association and colligation associated with metaphoric instances of *flame*. They are presented in a separate table (5.2.15) below:

METAPHOR			
N	Possessive	Freq.	
1	LOVE'S	4	+ (modifier) FLAME
2	PASSION'S	1	
3	EXTINCTION'S	1	
4	MUSE'S	1	
5	FREEDOM'S	2	
6	ANGRY HEAVEN'S	1	
7	CLIVE'S	2	
8	AFFECTION'S	1	

Table 5.2. 15. Possessive + *flame* in metaphoric dataset

The table shows *flame* to belong to a number of abstract concepts, with the exception of *Clive's*. The flame in each of the other cases refers most often to a feeling or expression of

a feeling. In the example, *Beware the counterfeit: in passion's flame hearts melt, but melt like ice, soon harder froze*, *passion's flame* refers to its effect (passion's) on the heart. In each of the above cases, metaphoricity is signalled by the use of an abstract noun as possessive. In contrast, there are no instances of the possessive structure (noun's + *flame*) in the non-metaphoric data. Instead of the possessive, the non-metaphoric use of *flame* shows a strong colligation for *flame of the* (concrete noun referring to fire-making/sustaining device). This will be discussed in 5.2.4.

5.2.3 Semantic Association

This section will qualitatively summarise the semantic groupings reflected in the collocation and analyses of the metaphoric and non-metaphoric instances of *flame*. Semantic association has played a key role in the above analysis in determining between metaphoric and non-metaphoric instances. It has been noted above that the non-metaphoric instances of *flame* are surrounded by lexical items (nouns, verbs and adjectives) related to FIRE or FIRE-MAKING devices, or to the HEAT/LIGHT elements of fire. Items relating to PERCEPTION such as *looked* and *seemed* are also frequently present. These relate to the properties of the flame (heat and light). Some of the collocates such as *burst* were not exclusive to the non-metaphoric group. Others such as *kindled* are, surprisingly, found only in the metaphoric set. Below are two tables summarising the semantic associations relating firstly to FIRE, for both the non-metaphoric and metaphoric instances. All items are included, not only collocates:

NON-METAPHORS	
Semantic Associations	Items
FIRE CREATING/SUSTAINING DEVICE	Candle; lamp; light; match; candles; torch; furnace
FIRE MATERIAL	Fire; smoke; wood; match; spirit; gas; embers; hydrogen; wax; coal; brimstone; carbon; incense; kindling
HEAT	Heat; heated; intense; blaze
LIGHT	Light; bright; blue; white; red; clear; coloured; flashes; yellow; colour; ruddy; lurid; flash; lambent; purple; illuminated; brighter; brilliant; bluish; green; intense; tinge; reflected; shrank; violet; blaze; black-blazed; orange; glowing; flashed
MOVEMENT	Burst; flickering; burning; spread; burn; blown; extinguished; bursts; fanned fan; flicker; quivering; blows; blaze; blow; blew; flickered; kindled

Table 5.2. 16. Semantic associations of *flame* in non-metaphoric dataset

METAPHORS	
Semantic Associations	Items
FIRE	Fire; incense; kindling
LIGHT FROM FIRE	Sparkled; flashed; flashing; radiant; illuminated; light; ray; red
MOVEMENT/ACTION	Kindled; fanned; lighted; spread; consumed; feed; fed; extinguished; flickering; burning; burned; kindle; spreads; blown; blew; burns; melt

Table 5.2. 17. Semantic associations of *flame* in metaphoric dataset

As the analysis thus far has shown, there is much more imagery associated with FIRE within the non-metaphoric data. There is also much more technical lexis, particularly in relation to the category FIRE MATERIAL. The majority of semantic associations in the non-metaphoric data are contained in the LIGHT category. This includes lexical items expressing the visual perception of flames (e.g. *bright*, *white*, *blazed*). Within the metaphoric data there is a lack of colour-related words (with the exception of *red*, used in association with cheeks or bosom and referring to anger or excitement), as well as fewer light related items in general. Instead, the largest metaphoric category is that of MOVEMENT/ACTION of fire. This includes typically associated verbs that describe the

behaviour of a flame (e.g. *flicker*, *bursts*, *consumed*). Some of these have a metaphorical meaning when used alongside *flame*, whilst some retain a non-metaphoric meaning and the metaphoricity lies elsewhere (e.g. *the flicker of the flame danced across the wallpaper*, where only *danced* and *flame* express the metaphoricity). Within the metaphoric data, there are also no instances of specific FIRE-RELATED DEVICES such as a *lamp* or *candle*. These are fully characteristic of a non-metaphoric sense only (based on the data).

Although there are fewer semantic associations relating to fire within the metaphoric data, as would be expected, there are other associations present. One group previously mentioned is that of BODY PARTS. Items comprising this group are also present in the non-metaphoric data but to a lesser extent:

METAPHORS	
BODY PARTS	Eyes; face; breast; eye; heart; blood; tongues; breasts; hearts
HUMAN EMOTION	Love; passion; hope; rebellion; faith; revolution; sedition; scorn; tempter; devotion; hate; anger; patriotism
ANIMACY	living; alive; striving; communicated; feed; fed; quenched; leaped; licked; lives
NON-METAPHORS	
BODY PARTS	cheek; eye; feet; hands; hair; head; heads
HUMAN EMOTION	suffered
ANIMACY	threw; suffered; communicated; breathing; grew

Table 5.2. 18. A comparison of semantic associations reflected through collocates of *flame* in both datasets

Also, not shown here is the fact that many of the body parts in the non-metaphoric data (*cheek*, *feet*, *hands*), relate to the REFLECTION/HEAT of the *flame* upon the body. Thus the phrase retains a non-metaphoric, more physical meaning, despite a similarity in semantic association. In contrast, the descriptions are more abstract in the metaphoric data. An example is the reoccurring image of a *flame* in a person's breast or bosom (usually a *flame* of *love* or other emotion). Similarly, there are more nouns relating to HUMAN EMOTION (13 in the metaphors and only a single instance in the non-metaphors). Finally the

metaphoric data also presents a larger group of personified verbs, used to describe the behaviour or a characteristic of a *flame* (e.g. *feed, leaped*). Commonly, it is the personified verb which makes the concordance line metaphoric, as was also found in the middle group analysis (Section 5.1). The boundary between properties being exclusively associated with animate things and not being so associated is not clear-cut. Thus instances of flames alongside *communicated* have been identified by informants as both metaphoric (*by the action of the heat, or from matter communicated from the flame of the lamp, or from the air itself*) and non-metaphoric (i.e. *with a view to recover the lantern which suddenly stove in, and the spirits communicated with the flame, the whole place was instantly in a blaze*). The relationship between animacy and metaphoricity was described at length in the middle group analysis in 5.1 and offers scope for further discussion regarding metaphoricity. The following section will discuss the top ten most frequent collocates in both datasets. It is expected that the discussion will take a more grammatical turn, focusing on colligation, clusters and nesting.

5.2.4 Ten most frequent collocates

The most frequent collocates in both datasets are given in Table 5.2.19 below:

METAPHOR					NON-METAPHOR				
R	Collocate	Freq. ptw.	Left Freq.	Right Freq.	R	Collocate	Freq. ptw.	Left Freq.	Right Freq.
1	THE	15.15	152	79	1	THE	27.67	313	165
2	OF	11.09	66	103	2	OF	11.92	102	104
3	AND	8.40	62	66	3	AND	11.40	84	113
4	A	6.56	89	11	4	A	10.88	140	48
5	IN	5.05	36	41	5	IN	4.86	52	32
6	TO	4.2	42	22	6	TO	4.28	40	34
7	THAT	3.02	25	21	7	WITH	3.76	44	21
8	WITH	2.43	28	9	8	IT	3.07	26	27
9	HIS	2.36	20	16	9	AS	2.55	27	17
10	INTO	2.03	26	5	10	INTO	2.37	39	2

Table 5.2. 19. Top ten collocates in metaphoric and non-metaphoric datasets

Remarkably, the lists show little difference in the order of frequency of the collocates. *That* and *his* are specific to the metaphoric set, whilst *it* and *as* are specific to the non-metaphoric set. As noted from the keyword list, *the* is much more frequent per thousand words in the non-metaphoric data (27.67 compared to 15.15 per thousand words). Although *of* is similar in frequency, its occurrence is more evenly spread on the left and right in the non-metaphoric set. This suggests a possible colligation amongst the metaphors. Further exploration shows the item occurs in R1 position in 43.20% of all metaphoric instances (and in 70.87% of all right-hand occurrences). The second most frequent position, with only 12.43% of instances occurring, is L1. In contrast, in the non-metaphoric data *of* occurs in R1 in 30.10% of instances, followed by L2 in 16.51% of all instances. Thus there is stronger association of *flame* with *of* in the metaphoric data. Table 5.2.20 below shows all items following *flame of* in the metaphoric corpus with a minimum frequency of three:

METAPHOR			
R	FLAME OF + noun	Freq.	Freq. ptw.
1	FLAME OF REBELLION	4	0.26
2	FLAME OF LOVE	4	0.26
3	FLAME OF HOPE	4	0.26
4	(THE) FLAME OF PASSION	3	0.20
5	FLAME OF FIRE	3	0.20
6	FLAME OF LIFE	3	0.20

Table 5.2. 20. Clusters of *flame of* + noun in metaphoric dataset (minimum frequency of 3)

All items are nouns, thus forming the colligation *flame of* + noun. With the exception of *fire*, each of these are abstract and human related. Instances of *flame of* + abstract noun are shown in more detail in concordance lines below:

often, perhaps, at the last fading ray of the FLAME of genius, that may have almost dazzled the
 ade. 6. I came as he appointed, with all the FLAME of gratitude, and was told by his servant, th
 es of the letters are radiant with that steady FLAME of hatred which, ever since the hour of his
 ent; and came also the last flickering of the FLAME of his attachment to the Church of England
 han's cooler judgment has extinguished the FLAME of his irritability." "I think," said Tallyho, "
 the Wreck had got him once more, and the FLAME of his passion was quenched in an instant.
 here--thank the Lord in heaven--I caught the FLAME of Hisar's eyes on mine, as his blade went
 wishes; then, they instantly ignite, and the FLAME of hope is kindled in a moment. But alas! th
 le rose and stamped upon the place, and a FLAME of hope shot up in our hearts. _It rang hollo
 thus at once within his heart was lighted a FLAME of hope that illuminated all his being, makin
 t. But alas! that very morning, my flickering FLAME of hope was dismally quenched by a letter
 ion on the vigil of Easter (1282), spread the FLAME of insurrection over the whole island, and 80
 isdal, whisking round, peaking himself into FLAME of irritancy: "we have the risk; we are to ha
 bells rung, and London broke into a sudden FLAME of joy. Pepys, walking homeward about ten
 t out." And I believe my visit has kindled a FLAME of liberty in Harrodsburg, that shall burn for
 r is pulled over the old noddle, and the little FLAME of life is popped out. Don't you know elderly
 unexplained wonder--its analogies with the FLAME of life--the modifications it receives from the
 then went and stood in the pathway of the FLAME of Life. There was, I remember, to my mind
 all too plainly, dazzling his brain as with a FLAME of living fire. CHAPTER XLVI. UNTIL ETERN
 e passion for pepper seemed to burn like a FLAME of love in the breast of Dutch and English a
 still warm ashes, I might relume in her the FLAME of love. It is more cold within her, than a fire

Concordance 5.2. 8. Selection of *flame of* + noun occurrences in metaphoric dataset

The screenshot shows a wide array of abstract nouns such as *hope*, *irritancy*, *joy*, *liberty*, *life* and *love*. The action of the flame is often described in a sense associated with a non-metaphoric flame: often it is kindled, burned, spread, caught, extinguished or lighted. The majority of instances (36/72) of the cluster are preceded by *the* (e.g. *the flame of gratitude*).

In comparison, there are only three instances of the structure *flame of* + noun in the non-metaphoric dataset. Instead, there are 15 instances of *flame of a* + noun and 34 instances of *flame of the* + noun. Together, these colligations make up 82.26% of all instances of the collocation *flame of*. These do not show any abstraction and instead display a semantic association with *flame* in its non-metaphoric sense only. Reoccurring instances of *flame of the* + noun are shown below:

NON-METAPHOR			
R	FLAME OF THE + noun	Freq.	Freq. ptw.
1	FLAME OF THE CANDLE	10	0.58
2	FLAME OF THE LAMP	7	0.41
3	FLAME OF THE MATCH	4	0.23

Table 5.2. 21. Clusters of *flame of + noun* in non-metaphoric dataset (minimum frequency of 3)

Flame of the candle/lamp/match/torch refers specifically to a flame belonging to a concrete object, presumably visible to the writer, narrator, or characters in the case of fiction. To further illustrate the dependence on semantically related lexis amongst the non-metaphoric concordance lines, the table below shows every noun (both type and token, and not only collocates) occurring after *flame of the*. These can be divided into two semantic categories (fire creating or sustaining devices and types of fire):

	Fire creating/sustaining devices	Types of fire
FLAME OF THE +	furnace candle (x 10) torch (x 2) Spirit-lamp oxy-hydrogen blowpipe lamp(s) (x 8) Match (x4)	fire (x 2) dry brushwood bonfires gunpowder wood

Table 5.2. 22. All instances of *flame of the + noun* occurrences in non-metaphoric dataset

Returning to the top ten most frequent collocates table, the fourth most frequent collocate in both datasets is *a*. Despite this similarity in rank, the item is almost twice as frequent in the non-metaphoric dataset (10.88 per thousand words compared to 6.56). In both groups it occurs most often in L1 position, followed by L2 position. Whilst there is a 14.00% difference in L1 and L2 frequency in the metaphors, there is only an 8.51% difference between the same position frequencies in the non-metaphoric data. The remaining shared most frequent collocates show little difference in frequency and

left/right distribution. More interestingly, this is also the case for items specific to one dataset only. These are *that* and *his* in the metaphoric data and *it* and *at* in the non-metaphoric data.

Firstly, *that* has a frequency of 3.02 occurrences per thousand words in the metaphoric data, compared with 2.20 occurrences per thousand words in the non-metaphoric data. It occurs in no single position more frequently than another (17.39% of instances occurring each in L3, L2 and R1). Thus with no obvious differences in behaviour or frequency, it does not appear to reveal any tendencies or primings. Similarly, HIS occurs with more frequency in the metaphoric data (2.36 occurrences per thousand words, compared to 1.62 occurrences per thousand words). 30.55% of instances occur in L2 position suggests a weak colligation of *his* (modifier) + *flame*. Instances are given below:

per, had fortunately got next to *his old FLAME*, Sukey Worseley; while Phil Rawle apartment in which he found *his old FLAME*. One of her gowns hung over the and Miss Newcome, Clive found *his own FLAME* kindle again with new ardour. He but ministers of Love, And feed *his sacred FLAME*. Oft in my waking dreams do but ministers of Love, And feed *his sacred FLAME*." 6. It may be suggested that as their masters: neither he nor *his fair FLAME*, who was a lady's maid in another arshly, stooping over me, while *his fair FLAME* glanced onwards ""Yes, I _will_ c And hid his head for shame, As *his inferior FLAME* The new-enlightn'd world no ghtened and affected at seeing *his old FLAME* in this condition. And she began, animal. So John sat alone with *his old FLAME*. He had become resigned to her

Concordance 5.2. 9. All occurrences of *his X flame* in metaphoric dataset

The most common modifier is *old*. There are also two instances of *fair* and two of *sacred* (though the first half of both these lines are repeated). In the majority of cases, the flame appears to be a specific person (usually an old or former lover). Interestingly this is not the case with HER: there are four instances, three of which contain clause breaks within the cluster, and one of them refers to *her hymeneal flame*.

Finally in reference to the top ten most frequent clusters, *it* and *as* are specific to the non-metaphoric dataset. *It* occurs 3.07 times per thousand words, with no fixed positioning either to the left or the right of *flame*. This compares with the item occurring only 0.09 times per thousand words in the metaphoric data, again, with no preference for a single position. As shown in the table, *as* occurs 2.55 times per thousand words in the non-metaphors, compared to 0.18 times per thousand words in the metaphoric data. It occurs in L3 and L2 18.18% and 15.91% respectively in the non-metaphoric data, whereas in the metaphors it occurs most often in R1 (25.93% of all occurrences), followed by L3 (14.81%). Thus despite the higher frequency in the non-metaphoric set, there is a stronger preference for a fixed position in the metaphoric set.

We now examine whether the cluster data provided by WordSmith can identify more colligations, as yet unexplored, that help to distinguish the datasets.

5.2.5 Cluster data

All *flame* clusters found in the metaphoric dataset (with a minimum frequency of 5) are given in Table 4.2.23:

METAPHOR			
N	Cluster	Freq.	Freq. ptw.
1	(THE) FLAME OF (THE)	45	2.95
2	INTO A FLAME	10	0.66
3	A FLAME OF	8	0.53
3	IN A FLAME	8	0.53
3	FLAME IN THE	8	0.53
4	THE FLAME OF THE	6	0.39
4	THE FLAME THAT	6	0.39
4	OF THE FLAME	6	0.39
4	THE FLAME AND	6	0.39
5	AND THE FLAME	5	0.33

Table 5.2. 23. Frequent clusters in metaphoric dataset (minimum frequency of 5)

Whilst *the flame of* and *flame of the* have been discussed, *in a flame* and *into a flame* has not been examined thus far. Interestingly, both were also frequent clusters in the middle group of data (Section 5.1). There they referred to a range of concepts and situations with differing degrees of metaphoricity. Instances included emotion (i.e. anger), part of a character's face expressing emotion (e.g. cheeks and eyes), a city on fire, and the setting of the sun. Thus there was no associations other than the semantic reference to SUNLIGHT AS FLAME; they were placed into the problematic middle group for different reasons. Below, though, is a screenshot of all definitely metaphoric instances of *in a flame*:

I started to my feet, with my temper **in a FLAME**, reckless of all consequences, desperate
 cigar-boxes, and what not. "I went off **in a FLAME** of fire last night," says the Colonel, "and
 m!" interrupted Lady Isabel, her face **in a FLAME**. "Two great slaps upon her cheeks,"
 which set the University and Church **in a FLAME**. The cry, almost the shriek, arose that
 d fro--the rest of devils! My blood was **in a FLAME**; and rage, hate, despair, blew the
 maist ill to get sometimes gangs up **in a FLAME** a' at aince, like a bit o' paper." "Ay, w
 mention of the girl seemed to set me **in a FLAME**. I tried to turn Armadale's attention in th
 ced from room to room, with my face **in a FLAME**, and the people all staring at me. I can

Concordance. 5.2. 10. All occurrences of *in a flame* cluster in metaphoric dataset

Similarly there are references to EMOTION (*temper, rage, hate, despair*), and the BODY as an OUTWARD EXPRESSION OF EMOTION (*her face, my face, my blood*). The line referencing the university and church refers to an interpretation of a book, which outraged both institutions. In the second line, *I went off in a flame of fire last night*; the cluster refers to a temper or rage. Interestingly there is flame related imagery preceding the cluster (*cigar-boxes*), but this forms the preceding paragraph. All instances refer to negative emotion (rage, anger, despair, hate) as the cause. This is either direct, or implicit by the reference to body parts as mentioned.

Below are all instances of *into a flame* to compare with *in a flame*:

countrymen may gather and nurse *into a FLAME*. [Sidenote: Dinner at the Mansion House. The embers of my old ambition warmed up *into a FLAME* once more, and I fancied that there was that the men's minds are ready to kindle *into a FLAME*. That a Patriot, if he appear in the drawing room, fanned his slumbering discontent *into a FLAME*. There she was, sitting between a fellow countryman and a woman whose opinions that formed his crews broke *into a FLAME*. The grudges of the last voyage had been kindled to a monomania, once more burst *into a FLAME*. At last he hired Carlisle and Gray, two men whose opinions are very anxious to work it up *into a FLAME* against Government; but I cannot say that a sudden spark of fury ready to burst *into a FLAME* if I should answer "yes." 'No,' I replied; 'but where does the fire here? No guilty passion blown *into a FLAME*, No foible flatter'd, dignity disgraced, No factious spirit that this spirit had been first fanned *into a FLAME* in the bosom of the fair Fleming, but in France.'

Concordance. 5.2. 11. All occurrences of *into a flame* in metaphoric dataset

As in the middle group instances of the cluster, as well as the instances of *in a flame*, the same semantic groupings are reoccurring. There is again strong emotion or feeling, often negative, associated with the phrase. This includes the items *guilty passion*, *monomania* and *discontent*. However, this pragmatic association is not exclusively negative, as was the case above. References to love and passion are positive, such as *my old ambition warmed up into a flame once more*. What this finding demonstrates is that whilst *in a flame* mostly has negative pragmatic association, *into a flame* is less specifically negative and thus shows less of a pragmatic association. Perhaps more importantly however is the fact that both clusters occur in the middle group data with the same associations. This suggests that corpus evidence can provide a method for distinguishing between metaphoric and non-metaphoric use of an item. Whilst some instances of the cluster convey a stronger sense of metaphoricity, identification of the cluster itself reveals all levels of the metaphoricity, and more importantly, does not apply to any instances that are identified as non-metaphoric by the original informants. This is the first evidence in the study so far that suggests that features identified by the analysis of corpora can account for both strong and weak strengths of metaphoricity.

Below are the most frequent clusters in the non-metaphoric dataset as a point of comparison:

NON-METAPHOR			
N	Cluster	Freq.	Freq. ptw.
1	(THE) FLAME OF (THE)	40	2.31
2	(THE) FLAME OF A	26	1.51
3	THE FLAME AND (THE)	24	1.39
4	OF THE FLAME	16	0.93
5	IN THE FLAME	14	0.81
6	(THE) FLAME OF CANDLE	10	0.58
7	WITH THE FLAME	8	0.46
7	AND THE FLAME	8	0.46
8	SMOKE AND FLAME	7	0.41
8	OVER THE FLAME	7	0.41
8	FLAME OF THE LAMP	7	0.41
8	IN THE FLAME OF	7	0.41
9	IN A FLAME	6	0.35
9	FLAME FROM THE	6	0.35
9	THE FLAME IN	6	0.35
10	A FLAME OF	5	0.29
10	TO THE FLAME	5	0.29
10	A FLAME AND	5	0.29
10	THE FLAME WAS	5	0.29
10	BY THE FLAME	5	0.29
10	FIRE AND FLAME	5	0.29
10	AS THE FLAME	5	0.29

Table 5.2. 24. Frequent clusters in non-metaphoric dataset (minimum frequency of 5)

There are over twice as many frequent clusters amongst the non-metaphoric instances of *flame*. In total, the clusters make up 13.14 % of all the non-metaphoric corpus. This can be compared to the metaphoric data clusters, which make up only 7.09 % of the total metaphoric corpus. The ten most common clusters amongst the non-metaphoric data, with the exception of *smoke and flame*, all include *the*, either in reference to the *flame* or to the item to which the flame belongs. In the full dataset, there are 193 instances (85.02%) of *flame* associated with the definite article, either as *flame of the* or as *the flame*. This stands in contrast to 16 instances of *flame* used alongside an indefinite article or 12 instances with no determiner at all. The use of *the* suggests either a preference for

cohesion, and/or anaphoric reference in relation to *flame*. As a physical, concrete object, this is perhaps unsurprising, given that the flame will often be present in the narration or text.

Other non-metaphoric clusters worthy of discussion include *smoke and flame* and *fire and flame*. Instances of *smoke and flame* are shown below:

all that was inflammable in it had been burnt; *smoke and FLAME* now burst only at intervals through the gate
nber of small-arms. Harry, in the midst of the *smoke and FLAME* of the action, and the havoc of the bullets,
don Park stage black and cheering, too? The *smoke and FLAME* of Streatham now hid the three further stag
uminous coal, or the soft coal that burns with *smoke and FLAME*. I have been in a coal-mine where the carb
he gate and the tower were soon shrouded in *smoke and FLAME*, amid the shouts of the besiegers. CHAP.
er's God before her moved, An awful guide, in *smoke and FLAME*. By day, along the astonish'd lands The cl
ble objects were placed. In all probability, the *smoke and FLAME* (confined as they were to the room) had be

Concordance 5.2. 12. All occurrences of *smoke and flame* in non-metaphoric dataset

In each case, both items *smoke and flame* are non-metaphoric and are both present in the narration. The effect of the cluster is not one of exaggeration or overemphasis; it is descriptive. In the fourth line, the reference is specific to a type of coal when set on fire. In contrast to this, *fire and flame*, which is similar semantically as well as colligationally, has a different effect or purpose:

his recovery, had contrived in spite of *fire and FLAME*, sabre and carbine, trampling troopers and
ushing, singing, and dancing through *fire and FLAME--they* resembled rather the old Barsekars of
of terror. ""Who is there can endure *fire and FLAME* for ever, for ever, and for ever?"" ""Death is
destiny to which you are appointed? *Fire and FLAME* await you, to torment you through all eter
l me, through that which awaits you. *Fire and FLAME* will be your only companions, and the roa

Concordance 5.2. 13. All occurrences of *fire and flame* cluster in non-metaphoric dataset

Here, *fire and flame* appears more proverbial or idiomatic. It refers to one thing (fire), rather than two elements of a fire (as does *smoke and flame*). There is no apparent fire depicted within the wider context, and the phrase could be construed as metaphoric to an

extent, or as a marker of overemphasis. Stylistically, the phrase displays negative pragmatic association, particularly in relation to awaiting or enduring something terrible. In two lines, the cluster refers to hell. Three of the lines originate from the religious subfolder, suggesting the phrase to belong to a specific genre. Hell is also a place that for many of the intended readership was seen as true and real; thus, for some readers encountering such a phrase, the metaphoricity does not exist.

What is of further interest is that although *and* more commonly occurs in R1 position than L1 in the non-metaphoric dataset, there are no instances of *flame and smoke* or *flame and fire*. These lexical items appear to be in antecedent position of *flame* only, which marks a case of nesting. There are however two instances of *smoke* occurring after *flame* in the negative construction *flame and without smoke*:

(5.14) “We have the hard or anthracite coal, which burns with little or no *flame* and without smoke.”

(5.15) “And was lit up by a fire that burnt in its centre with a whitish *flame* and without smoke”.

These are both technical/scientific descriptions.

The cluster *in the flame* refers to physical location; a finding supported by the larger number of prepositional phrases occurring with *flame*. Below are examples of *in the flame*:

almly held letter and envelope *in the FLAME* of the lamp till they were consu
 sence by a tinge of brimstone *in the FLAME* of the lamps. Thus evident, by t
 f the cement, melting the end *in the FLAME* of a spirit-lamp, apply it as if fo
 will not hurt. Thou must stand *in the FLAME* while thy senses will endure, a
 be torn on the rack, scorched *in the FLAME*, or hung on the gibbet? is this
 water, and heated to redness *in the FLAME* of a spirit-lamp: after this they
 hout further salutation, 'Thrust *in the FLAME* of this furnace thy right wrist.' A
 heated cow and sheep horns *in the FLAME*; brought round about and close
 os of flesh, carbonadoed them *in the FLAME*, and ate them half raw with incre
 crates: if thou seest me stand *in the FLAME* and come forth unharmed, wilt
 eeth, and thrust his right wrist *in the FLAME* of the furnace. The wrist redder
 d by heating an umbrella-stay *in the FLAME* of a candle she had lighted, and

Concordance 5.2. 14. All occurrences of *in a flame* cluster in non-metaphoric dataset

There is much semantically related lexis to *flame* in the above lines, surrounding the cluster. This can be contrasted with *in a flame* in the metaphoric cluster list, which is only ever abstract. Thus the difference in the determiners signals the metaphoricity or not.

The cluster analysis reveals further differences in the use of prepositions and prepositional phrases in relation to *flame*. It was noted in the collocate analysis that a large proportion of the collocates in the non-metaphoric data form part of a larger adverbial prepositional phrase, signalled by greater amount of prepositional phrases situated on the left of *flame*. Thus *flame* is seen as forming a part of the location or circumstance of an action. Examples include *over the flame*, *by the flame*, *towards the flame*, *before the flame*, and *into a flame*. Examples of verb phrases preceding the cluster include the following:

(5.16) "Held the letter which had come too late *over the flame* of the candle"

(5.17) "and was imperfectly lighted by the *flame* of an occasional torch"

(5.18) "A mixture of oxygen and hydrogen were heated by the *flame*"

(5.19) “He was making imbecile attempts to light his pipe at the *flame*”

In the majority of these instances, a physical act is depicted, usually with relation to either the light or the heat of the *flame* as an aid, i.e. lighting a pipe, or perceiving something or someone. A prominence of prepositional phrases depicting manner or location was similarly found in the non-metaphoric *cultivated* analyses.

To conclude, the top ten frequent collocates, despite being grammatical items, signalled few colligations to distinguish the metaphoric uses from the non-metaphoric uses of *flame*. The cluster analysis has uncovered some colligations as well as supporting the earlier semantic association and collocation analyses. The most prominent difference between the sets is the prevalence of *the* amongst the non-metaphoric clusters.

5.2.6 Conclusion to main analysis

To conclude the study of *flame*, an outline of the key findings in each analysis (lexical collocation, semantic association, colligation and clusters) will be given. In terms of collocation, differences were found amongst all word classes. Many of the collocates formed semantic associations which were seen to reoccur through all remaining analyses sections. The notion of abstraction together with HUMAN EMOTION signalled metaphoricity in most cases. The collocation *old flame* was also found to be highly frequent and unique to the metaphoric dataset. It has a specific metaphoric meaning, and can be labelled as a lexical item, with a high degree of fixedness. The noun collocate analysis revealed that BODY PARTS was a semantic association common amongst both datasets, but whilst the majority in the non-metaphoric set form part of a prepositional

phrase detailing the location of the flame, or its effect on a person (*the flame glinted in her eyes*), with the exception of *bosom* this was not the case in the metaphoric set. The nouns were found in more creative structures, *such as the face of angry heaven's flame*. The use of the possessive, as in the last example, is also a common feature and specific to the metaphoric dataset. This, along with a greater use of possessive pronouns, suggests the flame is a more abstract concept, referring to emotion (often in a person), or being the expression of an emotion (belonging to rage, anger, love, or even freedom).

The discussion of verb collocates revealed some similarities between the datasets, particularly in relation to *burst* and other semantically shared lexis. The metaphoric uses often displays a negative pragmatic association, particularly with relation to *burst into* and FAN* *the flame of*. Often, the abstract emotion or concept is the only thing to distinguish the two instances and thus signals the metaphoricity. Finally, differences were found in the use of prepositional phrases: *flame* forms a part of a prepositional phrase within the non-metaphoric data more often.

Although the top ten collocate analysis did not reveal much colligationally, the cluster data revealed differences in the use of determiners. Both analyses revealed key differences in the shared frequent collocation *flame of*. Amongst the non-metaphoric data a fire-making/sustaining device such as a match, a candle or a lamp always follows the collocation. Whilst *the flame of* is also a frequent cluster amongst the metaphoric dataset, it is almost always followed by an abstract noun (*flame of hope, love, desire*) without a determiner. These often provoked a sense of patriotism or passion (*passion, love* and *patriotism* collocating with significant frequency). Some of the abstract nouns (such as *insurrection* and *liberty*) were original and appeared once only in the data. The ability to use the same metaphoric sense/use with an original abstract noun allows the writer to retain the same pragmatic associations attached to that metaphor, whilst manipulating the context or situation.

5.3 Chapter summary

In summary, key patterns have been found in the *flame* metaphoric occurrences, which are not found in the non-metaphoric data. These patterns include collocations (*old flame*), colligations (*flame of* + abstract noun or the use of the non-human, abstract possessive with *flame*, e.g. *Freedom's holy flame*), and pragmatic association (**ing flame* displayed an overwhelming sense of communicating terror e.g. *avenging, awful, devouring, fierce, lurking, raging*). Whilst these features are not identical to those found in each of the *cultivated* analyses, certain tendencies are beginning to emerge in the behaviour of metaphoric items in comparison to their non-metaphoric counterparts. The prevalence of personal pronouns as well as abstract nouns and concepts, are key in both studies and set the two datasets in each study apart. These findings of *flame*, together with the findings from the *cultivated* study, suggest that these patterns or behaviours play a role in distinguishing between (and making sense of) metaphoric uses of the language. Furthermore, the findings also go some way to supporting the idea that language users possess a separate set of primings surrounding both non-metaphoric senses of a word, and more importantly methodologically, these can be accessed using a corpus linguistic approach.

The findings place importance on 'uses' of a sense (metaphoric or non-metaphoric), rather than on the single dichotomy between the two senses. Perhaps of equal importance to the studies thus far is the discussion born out of the problematic instances of each item: metaphoricity was in evidence in this middle group of *flame*, mainly in four specific types of uses. These were: the cluster *in a flame*, verbs/adjectives describing the appearance or action of *flame* in an animate manner, other ambiguous modifiers not

congruently associated with *flame* (such as *sheets of flame*, *tongues of flame*), and imagery relating to the sun (which is more of a technical consideration, in how far we perceive flames when looking at the light of the sun). These groups behave in similar ways to the groups of uses found amongst the metaphors and non-metaphors in each study, showing specific and unique lexical characteristics. Thus, rather than existing on the perimeters of an analysis, as neither one thing or another, the middle groups of uses are crucial in showing that metaphoricity occurs at different levels, within the lexis and semantics. Often the metaphoricity was embedded within and indistinct from phenomena such as metonymy, personification, or semantic extension. Whether a phrase is fossilised or conventional also impacts on the language user's awareness of metaphoricity. More problematically, individual instances rested on a fine distinction between dictionary definitions and personal mental lexicons of a word. Subtle differences have the ability to colour the interpretation process, as was shown with *solitary flame* and *feeding the flame*. It is also the case that not all dictionaries will label the same uses as figurative or literal (nor will most language users consult a dictionary before interpreting a metaphor), which again supports the idea that personal experience is subjective and meanings are not definitive. More pervasive than this however is the idea that language reflects our world-views, and world-views are themselves subject to changes. Indeed, some linguists argue that indeterminacy of word meaning is a necessary condition for the growth of individual thought:

The 'world' to which individuals have to try to relate the words they encounter is itself changing in unpredictable ways, both subjectively (i.e. The individual is learning more about it), and objectively (natural conditions change, and human life is altered as a result of innovatory thinking by other individuals e.g. technologists or politicians). This means that the semantic fluidity or indeterminacy of language is a very good thing

(Sampson, 2001: 195).

The findings are beginning to reveal not only the pervasiveness of the fluidity of meanings and word senses, but that such fluidity is what gives our language its creative capabilities in the first place. The following chapter will put the lexical priming claims to the test further, and provide an insight into the question of whether every metaphor has the same features.

Chapter 6 – Study 3: An investigation into the metaphoricity of *grew* (v)

Introduction to chapter

The intention of this final investigation is to determine whether the findings from the studies *cultivated* and *flame* are confirmed or challenged in a yet larger study. Thus far, the use of personal pronouns, abstract nouns, and reoccurring semantic associations and colligations have been found to distinguish metaphoric uses from non-metaphoric uses of *cultivated* and *flame*. Importantly, a third set of data may provide triangulation and determine if the findings are characteristic features of all metaphors. Again, the problematic cases will be discussed first, before a full quantitative investigation into the metaphoric and non-metaphoric instances of *grew* as two separate corpora. The analysis will make use of the same structure as in the preceding chapters, investigating keywords, collocates, semantic associations, colligations and clusters.

6.1 Middle instances of *grew*

6.1.1 Introduction to the Middle Group

Out of 3823 total instances of *grew* within the corpus, 142 instances have been placed in the middle group, based on the inability of my informants to unanimously categorise each one as either metaphoric or non-metaphoric. These lines amount to 3.71% of all *grew* concordances found in the nineteenth century corpus. This can be compared to the middle group figure in the *cultivated* (adj.) analysis: 3.61 % and stands in clear contrast to the figure for the middle group in the *flame* analysis: 15.3%. Initially, it can be predicted that with a smaller middle group than was the case for *flame*, the metaphoric and non-

metaphoric instances will be more distinct in their uses. As with the previous analyses, instances of this middle group can be grouped together based on certain characteristics or features. These include repeated structures and semantically associated items including collocates. Because *grew* provides an overall larger dataset than before, these middle group items will be both qualitatively and quantitatively analysed, and divided into three distinct sets, displaying separate uses or meanings. The first of these discusses metonymy (6.1.2), the second discusses multi-word lexical items³⁷ (6.1.3), and the third and most complex discusses *grew* as *became* (6.1.4). This entails a discussion of how polysemy appears to make the item *grew* more complex at times in its distinction between metaphoric and non-metaphoric uses. Finally, single problematic instances, which appear as ‘one-of-a-kind’ occurrences, will be discussed last (6.1.5).

6.1.2 *Grew* - metonymy

One set within the middle group is linked to metonymy. This amounts to 16/142 instances or 11.23% of the group. In these instances, *grew* is often associated with a concrete referent (town or city), which is standing in for the population. All instances of this kind of metonymy are shown first in Concordance 6.1.1:

³⁷ Sinclair’s notion of ‘lexical item’ which will be explained in the section.

into cultivation, new centres of population GREW up at a distance from the original village. The
 ave to see the way in which, as the town GREW, additional provision was made for the
 d curve-edged tiles. That Roman London GREW slowly there is abundant proof. In building the
 Roman walls. Other towns of later origin GREW up about the chief residence of a Saxon king,
 ief of the Zulus. Of the native town which GREW up round the king's kraal there is now not a
 their increase and prosperity; the colony GREW and flourished. Years rolled on, and the childr
 te, probably in Heptarchic times, a town GREW up on the peninsula between the river Avon ar
 et towns disappeared. And the big towns GREW. They drew the worker with the gravitational
 y; through Battersea bridge; and the City GREW around them, and the shadows of great
 ubt, but a free assembly. When the City GREW great such a Parliament became impossible.
 er. [Illustration: Bristol Cathedral.] Bristol GREW not only by the enlargement of its own border
 a thousand years, during which the City GREW and flourished exceedingly, one Lud became
 wly. Slow and stately as an oak London GREW and GREW, till now nearly four million souls
 nd stately as an oak London GREW and GREW, till now nearly four million souls represent its
 might be almost abolished. But the City GREW: the wards became densely populated: then
 es, 'the King's town of Tenby' henceforth GREW and prospered unmolested. In 1402 Tenby wa

Concordance 6.1. 1. All occurrences of *grew* displaying metonymy (concrete) in middle group data

In these cases, the growth implies not the individual growth of a single person, but the
 collective growth of people in TIME (generation) and SPACE (sprawl). The city, town or
 colony thus stands in for a larger organic, human whole. To illustrate the problem in
 identifying these instances as metaphoric, attention is directed to the similar instances in
 Chapter 4 with *cultivated country*. Here, the decision depends on the extent to which a
 human group can be classed as a singular organic unit of growth. This problem is also in a
 similar vein to that of *growing blind* and the extent to which the meaning of growth can
 be extended to its non-metaphoric sense (biological), when there is a more salient
 meaning simultaneously present (i.e. becoming blind). The effect of the possible
 metaphor in both cases can be speculated on. In the first instance, the metaphor suggests
 the inevitability and naturalness of steadily or gradually growing blind. In the second case
 it is the organic characteristics evoked by a single group or body of people, naturally
 developing, reproducing, and thus enlarging the place of dwelling. The metaphoricity
 here is further extended in the abstract reference to GROUPS OF PEOPLE rather than

concrete places. These instances amount to 12/142 instances or 8.45% of the group and are show below:

of the Oxford writers. A distinctively English party GREW up, both in Oxford and away from it, strong in example of a town whose ecclesiastical organization GREW with the gradual increase of the town, in a way w
er sense, the children of one father in one house, GREW into a more extended family, the _gens_. Such v
he bloody dew Of a score of brats, as his lineage GREW. \93Footing and flaunting it, all in the night, Each
bes, races, nations, leads us to believe that they GREW in this way. Natural kindred was the groundwork
ainst Vansittart, was a fortune at Court; and there GREW up thus around the Prince a class who cultivated
ized. The congregations both in town and country GREW larger and larger, and it was most difficult to find
on. The swarm to which Juba pointed GREW and GREW till it became a compact body, as much as a fur
uch admiration. The swarm to which Juba pointed GREW and GREW till it became a compact body, as m
small European community, first founded in 1652, GREW up and spread slowly eastward and northward al
entered. It was just such a party that continually GREW up at Hollywell, for Mr. Edmonstone was so fond
ether. Thus several small republican communities GREW up. Each would have preferred to manage its affa
s of the province. As the population of the Colony GREW--and between 1840 and 1853 it nearly doubled it

Concordance 6.1. 2. All occurrences of metonymy (abstract) in middle group data

Here the growing refers to GROUPS OF PEOPLE (congregations; populations; organization; party etc.) and their upward/outward growth in space as well as time. The problem of growth in relation to a singular unit versus a single body is still present. However, the non-metaphoric use of growth holds more relevance in this abstract sense of people or communities rather than cities: we can talk of a species *growing* or a field of grass *growing*. Both these instances depend on a collective body of singular, organic individuals. Interestingly, the lexical item *grew UP* appears to have a distinct use, referring to the town/city growing older, temporally rather than physically.

6.1.3 *Grew into* and *grew to*

The two groups to be discussed here convey particular collocations: *grew into*, of which there are four instances and *grew to*, of which there are three instances. Together these amount to 4.93% of the group. Taking the former set first, all instances refer to people

(three instances refer specifically to children growing older). This suggests both temporal and spatial reference (i.e. growing older and taller):

affection that Leo bears to me. The child GREW into the boy, and the boy into the young man, who
Cherry and Polly Honeycomb. Later she GREW into an excellent Mrs. Malaprop.[500] This good
the truth than most mothers, for he soon GREW into a famous specimen of a countryman; tall and
me, if but to show how the pedantic Boy GREW into the large-hearted Man, and even Bishop: but,

Concordance 6.1. 3. All occurrences of *grew into* in middle group data

All four instances of *grew into* can be interchanged more or less with *became* (to be discussed in further detail in 6.1.4). In the second concordance line, there is less dependence on the spatial element, as the character is described as undergoing a change more implicitly related to age than appearance: she is described as becoming more like a Mrs Malaprop³⁸, a trait which is associated with older age. This makes the collocation more metaphoric in form.

The second collocation is *grew to*. Here, the instances all refer to a temporal and spatial transformation, implying a physical and age-related growth:

s way many years passed, and the Prince GREW to manhood, and hardly anyone remembered
Monaghan. One died young, but the other GREW to be a very noble animal indeed.
was besides extremely pretty; so when she GREW to be sixteen, it was to be supposed,

Concordance 6.1. 4. All occurrences of *grew to* in middle group data

The first line (*grew to manhood*) refers to both a spatial and a temporal transformation, whilst the second line (a transformation from a *young* to a *noble animal*) implies physical and mental maturity. Finally, the third concordance line refers to a growth towards the age of a sixteen-year-old (and implicitly the stature/height simultaneously), which is again spatial and temporal. If both structures *grew into* and *grew to* can be classed as lexical

³⁸ Character taken from Richard Brinsley Sheridan's play *The Rivals*, 1775

items, with specific meanings, the metaphoricity is challenged. Such a structure points to a fixed use of the sense combination which is not dependent on the sum of its constituent parts, and thus has no alternative meaning from which to subvert or on which to draw. This is an issue that was discussed with reference to the relevant literature in Chapter 2.

6.1.4 *Grew as became*

6.1.4.1 Introduction

The largest set to discuss within the middle group is where *grew* can be interchanged with *became* and is discussed last because of its complexity. These particular instances make up almost two thirds of the middle group data (90/142 occurrences), and can be further divided into smaller sets based on semantic differences. It should be noted first that not all instances of *grew* that can be interchanged with *became* have been assigned to the middle group: some were categorised as metaphoric by the readers, (*grew angry*; *grew heated*; *grew dark*), and some were categorized as non-metaphoric (*grew taller*). Whilst *grew* can be viewed as being polysemous, as will be discussed in the following section, the discussion will show that this explanation would be an over-simplification: indeed, the relationship between polysemy and metaphoricity/non-metaphoricity, as will be shown, is often hazy. Moreover, the degree of entrenchment or fossilisation of a particular use of a word also goes some way to determine how it is defined or viewed by an individual.

For *grew*, the OED lists two primary uses concerning the non-figurative sense:

1. To undergo the process of development characteristic of living plants;
2. Of living bodies generally: To increase gradually in size by natural development.

There is also a use (“Of things material or immaterial: To increase gradually in magnitude, quantity, or degree”), which more abstractly refers to non-organic entities and in 1811 a still later use is apparent where *grew* = *became* (“To cause to develop *into*”). The actual use cited however is still associated with organic things (“It requires a length of time to grow the boys, now on his foundation, into men”).

Because *grew* as *became* is marked as a separate sense and more abstract than the two primary uses above, instances of the data which express a *became* sense (where they can be interchanged for *became*) will be discussed separately. These instances are divided into three distinctions. Firstly, there are those that display positive or additional (i.e. outward/upward) transformation: *grew bigger* and *grew corpulent*, where both the *became* sense and the primary non-literal sense are being called upon simultaneously. Secondly, there are instances displaying a negative (i.e. degenerative) form of transformation: *grew weaker* and *grew thin*. This second group is less strongly tied to the primary, non-metaphoric sense as there is no increase in size, as described in the OED definitions. A third group, relating to age (*grew older*) and also capable of being exchanged for *became*, will be dealt with lastly.

6.1.4.2 *Grew* displaying a physical and positive quality

This first set groups together 26 instances of *grew* in the context of what is labelled as a ‘positive’ physical transformation or development of an organic species or being. These comprise 42.62% of all *grew* as *became* instances and 18.31% of the middle group. A semantically POSITIVE/ADDITIVE GROWTH refers to any sense of upward or outward

development or growth. Here *grew* in its non-metaphoric sense is most fully realized³⁹.

These instances are shown below:

"The country, too, was good, so they settled here and GREW strong and powerful, and now our numbers are like t
up, all the creepers seemed to start into fresh life, and GREW strong and vigorous. On a patch of green grass near
st was executed with tenderness and fidelity; the boy GREW in strength, and ripened in intelligence, and being ac
ver wanted pluck. The 'King' then lounged about town, GREW fat, lost his all, and withdrew to Dublin, where, in Me
t 16.) of the Jungle." Mowgli obeyed faithfully. And he GREW and GREW strong as a boy must grow who does no
Jungle." Mowgli obeyed faithfully. And he GREW and GREW strong as a boy must grow who does not know that
everything that such men see and do. He says that he GREW fat, and bald, and grave; he wrote for the grave and t
se, and gathered among the sheaves like a Ruth. She GREW stout and hardy, and, in spite of her gipsy bonnet, a
short while to Lady Isabel. As the year advanced she GREW stronger, and in the latter part of the summer she m
ce for us entirely." I said, "Yes, you villain, you gentry GREW fat on robbing your master." "Don't call it robbing," h
ow cell and allowing him only bread and water. Moses GREW fat in his dungeon, at which Jethro was quite astonis
en must have been lovely in her youth; for though she GREW rather stout in after life, yet her features, as shown in
fascination. He filled up every corner of her heart. She GREW fat and flourishing, even cheerful; so cheerful that s\
or washing or any way; and when Phoebe came, and I GREW strong again, I set off. It was very lonely; through the
s little pause, by some means, to see Richard when I GREW strong and try to set him right. "There are better sub
the tax-gatherers.' * * * * * The first walk I took when I GREW stronger and was able to get about was up to Aunt J
g to her sister-in-law, Mrs Jamieson. When my father GREW a little stronger I accompanied him to the seaside, \
d her name the first which his lips uttered. As then he GREW gradually stronger, and the bed was deserted for the
ll in return. And at last, with his fretting and crying, he GREW quite lean and thin. But one day among the rocks he
"that this trader happened to touch at the island. As I GREW stronger my anxiety to return home became more a
His figure scarcely ever altered through life. He never GREW corpulent, never inactive; but retained his zest for his
ewer, and the fat green grazing grounds on either side GREW wider and wider in their smooth and sweeping range
ey had been about a month in the Caribbean sea they GREW fat, and the fishing commenced. Salt turtle was the
appreciated this treatment; he rolled in it, revelled in it, GREW shiny and fat, and glistened with happiness. I den pe
e warm bright sun, a wonderful change came over it. It GREW strong and firm; the most lovely colours began to sh
enough. Yet 'twas not time lost, for every day my leg GREW stronger, and like a wolf which I saw once in a cage

Concordance 6.1. 5. *Grew* displaying POSITIVE/ADDITIVE, PHYSICAL GROWTH (middle group data)

The set shows instances of *grew* which all refer to a person growing in size (to varying observable degrees). At the same time, the more abstract *became* sense is also present: *growing fat/corpulent/lean* could be interchanged for *becoming fat/corpulent/lean*, as they mark a gradual transformation of state. What is important is the physical correlation between each of these instances and the primary, non-metaphoric meaning of *grew*. The 13 instances of *grew strong/stronger/in strength* are perhaps less distinctly associated with the non-metaphoric sense of *grew*. An increase in strength implies an increase in muscle, and as organic matter muscle does literally and physically grow. However, the growth is not always visible. The metaphoricity can be said to increase as the degree of explicit growth, or at least *perceived* growth, is reduced. More importantly in such cases,

³⁹ OED – Online. Accessed 26/11/2015

the non-metaphoric sense may not necessarily have been foremost on the writer/speaker or reader/hearer's mind.

In other words, the instances of *grew strong/stronger/in strength* rely more on a sense of perception rather than physical transformation. There is not always upward or outward movement implied: instead, the transformation is more abstract, or at times holistic (both physical and abstract). One of the 13 instances of *grew strong, stronger/in strength* refers to *creepers* growing strong, which implies a growth in the thickness of their vines or stalks. By contrast, the other 12 instances refer to people growing stronger, often in the context of recovering from an illness or in relation to a child growing. Both of these imply *grew* in a holistic sense of renewal or development. This may be visualized physically, in an outwards or upward movement (such as *the child grew taller*). Yet it might also indicate a more abstract development, such as a person recovering from illness (*he grew stronger everyday*). We may perceive a change in appearance, but not necessarily physical evidence of growth.

6.1.4.3 *Grew* displaying a physical and negative quality

The second set of *grew as became* instances shows *grew* in the context of a NEGATIVE PHYSICAL DEVELOPMENT/TRANSFORMATION of an organic species or being. There are 17 instances, amounting to 26.23% of all *grew as became* instances and 11.97% of the middle group. As has been mentioned, these instances also call upon a physical development or transformation (which could be interchanged with *became*), but the development is one of deterioration rather than the characteristic traits related to non-metaphoric growth (upwards or outwards). Thus, referring back to the two OED definitions, the first one ("To undergo the process of development characteristic of living

plants”) is still acknowledged here, yet the second one (“Of living bodies generally: To increase gradually in size by natural development”) appears to be no longer valid. One reason for these instances being assigned middle group status by the informants however, may reflect their semantic relationship with the instances shown in Concordance 6.1.5 (POSITIVE/ADDITIONAL GROWTH) above. If *she grew fat* is to be identified as problematic by informants, then it follows that *she grew thin* would also be placed in the same semantic set. Ultimately, there is still an implied sense of growing, supported by the gradual rather than instant transformation (i.e. *becoming*) marked in each line:

the streets heard no more of his songs. He GREW lank and thin, and stuttered and limped more pain was the cause of poor Bobby's death. He GREW thin and pale; his voice was no longer heard in lo repeated; but it lasted till the old gentleman GREW infirm, and incapable of continuing his journeys. T as far as man ever went and returned. He GREW as weak and helpless as an infant, until at last he d spasms succeeded each other, till she GREW so weak that she was unable to undress herself t he thought they would choke her, and she GREW so sick with the pain of self-denial that she could a great deal of vexation and trouble, and I GREW thin. But I shall soon be well again now." A pause han when you left home," he remarked. "I GREW thin with vexation; with grief. He ought not to have serpent acquired tresses of hair, the man GREW hairless; the claws of the one projected into legs, ossing his path in the jungle, for as Akela GREW older and feebler the lame tiger had come to be g drawn in good time, for as Mr. Aldobrand GREW weaker, he became a prey to delusions, saying t them grotesque with age. Then the forest GREW thinner. "You see that hawthorn?" said my guide ng us than the times require since Peder GREW old and blind, and you were missing, and Hund h l their brains GREW big, and their bodies GREW small, and they were all changed into turnips, wit he analogy of the turf, the blades of grass GREW thinner and thinner, till at last the soil was so ste : kept to his room for several months, and GREW as thin as a post. Whilst he was lying sick in this

Concordance 6.1. 6. *Grew* displaying NEGATIVE PHYSICAL GROWTH (middle group data)

In other words, if physical development implies *growing bigger/taller/wider/fatter*, then each of these opposite pairs (*grew smaller/thinner* etc.) could reasonably be viewed as extensions of that semantic group. Here we see evidence of collocations extending themselves within the same semantic set. Furthermore, if the case is one of extending one’s existing primings to accommodate the new meaning (*weak, feeble* etc.), it could be argued that there can be no metaphoric intent at work. The intention is not apparently

one of creating an original metaphor, instead - it is to extend an existing use of *grew* (which in this case could be argued is more non-metaphoric than metaphoric) to accommodate a new group of semantically related imagery.

Regarding *grew sick*, there is in evidence a cline to which *sick* belongs, involving both physical characteristics and emotion or perceived feeling. Whilst *sick* can be understood in relation to *strong*, it can also be seen as semantically related to a wider range of items such as *tired/depressed/hungry/frustrated*. In these cases, the use of *grew* is more problematic as it is describing a *perceived* change of behaviour, state, or emotion, rather than a physical growth. Whilst the effects may still be physical such as aggression associated with anger or frustration, there is no literal growth implied. Thus such phrases as *grew sick, tired, depressed, hungry, or frustrated* are dependent on the *became* meaning of *grew* only. Here, we are seeing the meeting of two semantic sets with *weak* a member of both: namely the ability of *weak* to be both physical and mental in nature. As a result of this, phrases such as *grew sick* have the potential to straddle both sets, retaining metaphoric and non-metaphoric meaning, to varying degrees of strength. If *grew sick/sickly* is understood in opposition to *grew tall/fat/broad/big*, it is associated with the non-metaphoric sense. If by contrast, other members of its own semantic set are brought to mind (*grew weak, feeble, tired, restless*), the metaphoricity is dependent on the reader/speaker's reading of *grew* as *became*, and the degree to which the *became* sense is metaphoric. Context may of course activate both semantic groups at the same time.

To summarise, semantic extension and the ability of items to straddle different sets of uses or meaning provide support for the argument that metaphoricity has the shifting ability to weaken or strengthen. This may be dependent on the reader or hearer's own mental lexicon and what they call to mind on hearing a phrase, or on the ability of a writer or speaker to manipulate or extend semantically related uses of an item or a

phrase. This ability to manifest itself in extensions of meanings and sets of meanings is what bridges the gap between the instances of language that users would term as clear-cut and unambiguously non-metaphoric or metaphoric. In this respect, we see metaphor not always as the intentional creation of a new analogy or world-view, but at times as the stand-in or extension of existing semantic possibilities.

Finally, the only instance in this NEGATIVE GROWTH set which does not imply growth in the same way as any of the other instances, is *grew blind*. This is more accurately reflecting the sense of *became*, rather than that of non-metaphoric *grew* only, as it does not bring to mind any of the characteristics of non-metaphoric growth. It can be presumed that the informants identified a problem in its classification as metaphoric or non-metaphoric because of its identity as a case of idiom or lexical item. Although *old* will be dealt with separately in the following section, for now the instance *Peder grew old and blind* implies a physical and organic deterioration, within an extended period of time. The notion of time here is important in distinguishing from other uses of the *became* sense. One could argue that in order to become blind, one's eyes must grow less well or on a purely biological level, perhaps lose the ability to grow or renew cells. The reference to a non-metaphoric sense of grow perhaps ceases to be valid, and the single instance *Peder grew old and blind* would in the majority of cases be *viewed* as a metaphoric reference. Alternatively, the *old* may be described equally by *grew* or *became* (or both), but the *blind* may only be described by the *became* sense (*grew old and became blind*). The conventionality or idiomaticity of the phrase is perhaps what stops it from being identified as clearly metaphoric.

The above discussion has shown that *grew* has semantically related uses where it has the ability to mean (or be replaced with) *became*, whilst simultaneously meaning *grew* in its primary non-metaphoric sense, related to organic development or growth (e.g. *grew big*, *grew strong*). If there was no shared association between the *became*

sense and the primary non-metaphoric sense of *grew*, there would be no ambiguity in the question of metaphoricity. This is the case for non-organic instances (without the ability to grow and thus only referring to the *became* sense), such as *grew dark* and *grew noisy*. We can acknowledge that there is no real relationship between the evening *growing dark* and a person *growing tall*, but the case is not so straight-forward because there are instances present which do straddle the two meanings, such as *growing sick* or *growing old*. This, it can be assumed, is the root of their complexity and thus ambiguity and thus the difficulty for the informants to decide easily upon their identity as metaphors or non-metaphors.

6.1.4.4 *Grew* as temporal

The third and final set of *grew* as *became* instances relate to growing in the sense of AGE OR TIME. As mentioned, most of these instances (*grew older*; *grew old*) can be interchanged with *became*. Similarly, there is still a physical quality involved in growing old in both plants and animals, but phrases such as *he grew old* and *when I grew old enough* are only temporal. It should be noted that the five instances of the specific phrase *grew in years* have been agreed upon by all informants as metaphoric. Presumably the explicit description of years as a unit of *growing* marks the phrase out as metaphoric.

Returning specifically to *grew old/older*, there are 61 instances in total, making up 42.96% of the middle group. Growing old or older implies a physical change (in many features such as height, hair colour and length, body shape etc.). This association of physical growth alongside time is similar to that occurring with *growing weak* in the previous set:

verage men stuck where they were, and GREW old in a routine of service, or, what was perhaps w
 d it with garlands every Sunday, till she GREW so old that she could not stir abroad; then the little
 n ever put forth. I suppose no man ever GREW so old as not to feel younger in Spring. Yet, poor o
 d in their plumage. As the young cocks GREW old, one of them assumed yellowish-white hackles,
 , and was gentle and inoffensive. As he GREW old, it was determined to leave him in London. The
 swing" until he was satisfied. But as he GREW old it became evident that the "Professor" was bey
 g us than the times require since Peder GREW old and blind, and you were missing, and Hund had
 was told that that was a secret. When I GREW old enough to understand the meaning of the word

Concordance 6.1. 7. Selection of *grew old* occurrences in middle group data

his own statement, gained by the delay; as he GREW older he gained more knowledge of the history of the
 ame more reconciled to European dress as he GREW older; and that the inhabitants of the two islands gen
 ine, the engraver had improved but little as he GREW older.) Shortly after the death of his father he married
 who considered it must all be in vain when he GREW a little older; but no obstacle was placed in my way;
 d a horse and gun to go out shooting when he GREW a little older, and, above all, the company of his darli
 e escaped from under the poet's razor.] As he GREW older, this wonderful power became impaired so far
 haps counsel. He was sensible of worry as he GREW older; but he never relaxed his efforts to do what any
 d that they constantly increased as the globe GREW older. The master-form or type of the era was the fer
 ark and threatening. His brother's name as he GREW older he rarely mentioned; and if he did volunteer it to
 would be a great comfort to Mr. Weston, as he GREW older-- and even Mr. Weston might be growing older
 patent with spirit, and begat two sons. As he GREW older, ambition seized him; his sons should be gentl

Concordance 6.1. 8. Selection of *grew (X) older* occurrences in middle group data

Grew old and *grew older* are shown separately in Concordance 6.1.7 and Concordance 6.1.8. However, the screenshots show no remarkable differences in the two collocations. Within the instances in Concordance 6.1.7, there is a sense of reaching a certain physical/temporal new state marked by phrases such as *so old that* and *old enough to*. Phrases such as *it became evident* and *it was determined* also convey a sense of finite growth or maturity. In contrast, *grew older* in Concordance 6.1.8 more often implies a constant mental development (e.g. *sensible of worry*, *seized by ambition*, *reconciling or improving*). Thus there appears to be a different semantic association for both instances. The eighth line in Concordance 6.1.8 interestingly refers to the world growing older. This example also depicts a physical or spatial transformation on the surface of the earth in relation to a temporal development. In the same nineteenth century corpus there is only one instances of *became old* and three of *became older*, which may signal that the

became sense of *grew* is less prominent in this context (TEMPORAL DEVELOPMENT), or that *grew* is the automatic choice of item to express the meaning. As a result, *grew old/older* may be fixed collocations and thus not viewed as metaphoric.

In summary, it could be argued that these temporally related instances of *grew* are no more metaphoric than *growing bigger/taller*, because of the physical development that makes *old* a possible member of the first semantic set. One instance of *grew older* that was agreed upon as metaphoric with unanimity is the phrase *he suddenly grew older*. The lack of difficulty in identifying and labelling this instance is presumably due to the lack of gradual, steady growth associated with non-metaphoric *grew*. Such an instance again implies perception rather than physical change. It is also an example of an accepted expression being adapted. In doing so, it partly confirms the non-metaphoricity and/or fossilisation of the accepted expression.

6.1.6 Single concordances

The final subsection of the middle group discussion will briefly examine the last four single instances of *grew*:

ards these four-footed children ourselves. So we GREW and flourished together,--children, dogs, birds, flowers, should be delivered at once, "before our wounds GREW stiff," and also before the sight of Twala's overpowering neglected her, though with every passing year she GREW more and more like her dead mother, until at last, at now through forest of gracious trees. The grass GREW sweeter and its flowers more lovely and various as we

Concordance 6.1. 9. *Grew* as *become* in a selection of middle group data

In the first line, (*we grew and flourished together*) it is more difficult to distinguish between the senses. The use of *grew* cannot be interchanged with *became* here – it is used intransitively. The implied meaning is that the pair have become closer in their

relationship. Thus the sense is abstract rather than physical. Inevitably, the process will be occurring steadily and progressively alongside their natural growth/ageing. The collocation itself is idiomatic in modern English, and thus the metaphoricity is arguably not present for the reader. The third line is another instance replaceable with *became*. As in the Mrs Malaprop example earlier (*Later she grew into an excellent Mrs Malaprop*), the meaning of *grew* is 'to become more like', or to embody another person, either through physical or mental characteristics. If the characteristics are visible and therefore have the ability to 'grow', (i.e. *the colour of her hair grew more like her mother's*) the discussion returns to the problem of the same semantic group shared by *grew* and *become*. If instead the characteristics are mental (i.e. temperament), the sense of *grew* must be seen as more metaphoric (there is no overlap of the senses).

The final concordance line describes a non-visible, non-physical characteristic of grass (sweetness). Thus despite the agreement between the semantic category of grass (organic) and the non-metaphoric meaning of *grew*, the instance appears largely metaphoric. It is also possible to interchange *grew* for *became*, suggesting a metaphoric sense.

The second concordance line needs to be put in a fuller context to draw out the full meaning and has been saved for discussion until last:

(6.2) "Then I recommended that the attack should be delivered at once, "before our wounds *grew* stiff," and also before the sight of Twala's overpowering force caused the hearts of our soldiers "to wax small like fat before a fire." Otherwise, I pointed out, some of the captains might change their minds, and, making peace with Twala, desert to him, or even betray us into his hands".

The passage is referring to a second attack on Twala's soldiers. The idea that they carry it out before their *wounds grew stiff* implies that they should not waste time, and take the opportunity whilst they still have it. In such a sense, the phrase is clearly metaphoric, and the second more elaborate metaphor, *to wax small like fat before a fire* supports this sense: the soldiers are frightened and this is the reason they should move quickly, before they change their minds. Thus there is no physical sense of wounds growing which needs to be drawn on to interpret the meaning. Although the soldiers may already have wounds (physical or otherwise), the need to hurry with the attack is not dependent on the wounds healing.

Though the meaning is relatively clear despite the ambiguity (intended or otherwise), the last instance shows the extent to which more than one sense of a word may be called upon in a single context. As mentioned, this may be for a particular literary effect: the image will be more memorable if it does call upon two meanings at once. However, it may also be unintentional but still capable of creating the same effect upon the reader or hearer. The fact that semantic sets can cross over or interplay with each other, no doubt creates this effect. It also suggests why interplay occurs unintentionally.

6.1.7 Conclusion to middle group analysis

The quantitative discussion of middle group instances of *grew* has proved worthwhile, mainly because it has again highlighted the indistinctness that lies between instances of metonymy and metaphor. Moreover, some of the instances were problematic for readers to identify as metaphoric because of the nature of meanings (both metaphoric and non-metaphoric) extending into new territory, through semantic extension. The point at which *grew* becomes metaphoric when describing human characteristics or behaviours

(e.g. *grew tall, grew large, grew old, grew weak, grew sick*) is not easy to distinguish. Furthermore, the discussion has shown that there are sets of metaphoric uses, each with a different meaning or 'meaning potential' (Hanks, 2004). The instances straddling a metonymic label (*as the population of the colony grew*) are different in form than those straddling a *became* meaning (*the sky grew darker*), and both of these are different in form and meaning from *as the globe grew older*.

The discussion has also brought to light a problem in relation to *grew* being polysemous. Because the most common forms of *grew* found in this middle group are associated more with the *became* meaning (abstract development), rather than the physical and primary non-metaphoric meaning of organic growth, the consequence is that there is more divergence from the two clear uses (metaphor and non-metaphor). This creates a lack of uncertainty amongst the informants, as has shown to be the case. If we take *he grew sick* as an example of this, the *grew* can be replaced with *became* (i.e. he developed a sickness), but *sick* is also part of the semantic set of *weaker, smaller* and *frail*, which themselves are semantically related to what can be classed in most cases as non-metaphoric (*grew strong, grew tall, grew big*). In summary, the discussion here has illustrated the need to take into consideration the nature of grouped metaphoric instances, rather than viewing metaphoricity as associated with a single sense with unified behaviours and uses. This was also made apparent from the metaphoric findings of *cultivated* in the Chapter 4. Moreover it can be said that polysemy has the ability to influence a reader's decisions on metaphoricity.

6.2 Analysis and comparison of the metaphoric and non-metaphoric datasets for *grew* (v)

6.2.1 Introduction

In this section, the concordance data for each group of *grew* instances is compared and contrasted. The first group consists of the clear metaphors, which total 2863 instances and comprises over three quarters (75.10%) of the total data. This stands in contrast to the figures for *cultivated* (v) (37.16%), *cultivated* (adj.) (48.39%) and *flame* (n) (34.08%). The second group comprises the non-metaphors, which total 807 instances and make up 21.17% of the data. The findings from the middle group analysis suggest that the greater number of metaphors in this dataset may be due to polysemy, and more specifically, the interaction between metaphor and polysemy and readers' judgement of each. The chapter will follow the structure of the quantitative analysis used in both Chapter 4 and Chapter 5. First, there will be discussion of keywords within the datasets in order to determine any items of unusual frequency in either set compared to the other. The aim is to gain a brief overview of general differences, to determine which collocates are worthy of deeper analysis. The collocation analysis will include a comparison of lexical items and differences in word classes amongst collocates, as well as semantic associations. An analysis of the top ten most frequent collocates will then be presented, mainly with the aim of identifying potential colligates in grammatical items of high frequency. Thirdly, the cluster data from WordSmith will be analysed to substantiate any colligation findings.

6.2.2 Keywords

The first table shows the keywords found in the metaphoric dataset when compared to the non-metaphoric dataset:

METAPHOR						
R	Key word	Freq.	% of corpus	RC. Freq.	RC. %	Keyness
1	HER	826	0.77	87	0.40	40.91
2	MORE	630	0.58	62	0.28	36.43
3	PALE	112	0.10	2		28.45

Table 6.2. 1. List of metaphoric keywords (when compared to non-metaphoric corpus)

The three items *her*, *more* and *pale* are shown to be key because of their unusual frequency in the metaphoric corpus, when compared to the non-metaphoric corpus. While *her* and MORE occur also in the non-metaphoric corpus, *pale* is more specific to the metaphors, occurring only twice in the non-metaphoric corpus and making up just 0.10% of that corpus. The three items predict there will be some similarities with the analysis of *cultivated* in Chapter 4: namely that pronoun use may be more common in the metaphoric data, and also that comparatives may play a role in distinguishing between the metaphoric/non-metaphoric senses. More can be shown from the non-metaphoric keyword list:

NON-METAPHOR						
R	Key word	Freq.	% of corpus	RC. Freq.	RC. %	Keyness
1	THE	1546	7.05	4759	4.41	249.06
2	UP	208	0.95	201	0.19	248.28
3	TREE	78	0.36	6		236.60
4	TREES	84	0.38	12	0.01	231.08
5	WHERE	86	0.39	46	0.04	152.41
6	WHICH	212	0.97	340	0.32	145.27
7	IN	437	1.99	1071	0.99	136.83
8	A	514	2.35	1384	1.28	125.16
9	GRASS	40	0.18	4		116.98
10	OF	705	3.22	2183	2.03	107.66
11	FLOWERS	26	0.12	4		70.41
12	THEY	162	0.74	361	0.33	62.66
13	ON	184	0.84	457	0.42	55.27
14	BOY	28	0.13	12	0.01	55.17
15	LEAVES	20	0.09	3		54.44
16	FRUIT	15	0.07	0		53.35
17	SPOT	20	0.09	4		50.99
18	GREEN	24	0.11	9		50.03
19	WOOD	25	0.11	12	0.01	46.74

20	OAK	15	0.07	1		46.24
22	BANKS	16	0.07	3		41.44
23	THERE	82	0.37	170	0.16	36.66
24	TWO	41	0.19	54	0.05	35.91
25	BRANCHES	15	0.07	4		35.27
26	WERE	107	0.49	263	0.24	32.92
27	CORN	15	0.07	5		32.71
28	FOREST	11	0.05	1		32.61
29	SHRUBS	9	0.04	0		32.01
29	ROSES	9	0.04	0		32.01
30	FROM	111	0.51	280	0.26	31.96
31	SOME	59	0.27	111	0.10	31.45
32	WILD	25	0.11	23	0.02	30.98
33	THAT	252	1.15	824	0.76	30.10
34	LARGE	26	0.12	26	0.02	30.01
35	TALL	12	0.05	3		28.78
36	CHILD	23	0.10	21	0.02	28.67
37	IS	65	0.30	136	0.13	28.53
38	FORESTS	8	0.04	0		28.45
39	GROW	15	0.07	7		28.42
40	FLOWER	12	0.05	4		26.17
41	BUSHES	9	0.04	1		25.88
41	HEIGHT	9	0.04	1		25.88
42	PLANTS	9	0.04	1		25.88
43	BEAUTIFUL	15	0.07	9		24.93
44	YEW	7	0.03	0		24.90
44	FIR	7	0.03	0		24.90
44	MEADOW	7	0.03	0		24.90
44	PINES	7	0.03	0		24.90
44	PLANTED	7	0.03	0		24.90
45	WAS	268	1.22	926	0.86	24.48
46	HIGH	18	0.08	15	0.01	24.10
47	THOSE	29	0.13	40	0.04	24.06

Table 6.2. 2. List of non-metaphoric keywords (when compared to metaphoric corpus)

The list of keywords in the non-metaphoric corpus is over seventeen times larger, and shows a keyness value of between 24.06 and 249.06. This is intriguing, given the much higher frequency (over 75%) of metaphors compared with non-metaphors, and potentially signals that *grew* as a metaphor is more tightly restricted in its uses and lexical behaviour. The majority of lexical items are semantically associated with PLANT LIFE. This includes nouns such as *plants*, *meadows*, *pin**es*, *flower*, *forest*, *branches*, *corn*, *leaves*, *roses* and *shrub*. There are also the verbs *planted* and *grow*, and modifying nouns such as *fir*, *yew*, *oak*. There are references to HEIGHT (*high*, *weight*, *tall*, *large*), which describe characteristics associated with the non-metaphoric sense of *grew* as well as descriptive

adjectives such as *beautiful* and *wild*. In terms of other semantic groups, there are also *child* and *boy* referring to HUMAN GROWTH. Many of these lexical items are not present at all in the metaphoric dataset, and all have a low corpus percentage of less than 0.09% in that corpus.

There are also a number of functional keywords shown in the table above. The majority of these are found higher up the table, signifying higher levels of keyness. These are *the*, *up*, *where*, *which*, *in*, *a*, *of* and *on*. The prepositions suggest a greater use of prepositional phrases associated with the non-metaphoric uses of *grew*. This is another finding mirrored in both the *cultivated* and *flame* studies. *The* suggests a definite use of nouns (i.e. *the plants*, *the trees*). It also occurs nearly twice as frequently as in the metaphoric dataset. As a highly frequent item, this stark difference in frequency suggests major differences between both datasets. This will be explored in more depth in the top ten most frequent collocate analysis (6.2.4). Furthermore, the presence of both *a* and *the* as keywords suggests a greater presence of countable nouns, as opposed to more abstract nouns, which may be characteristic of the metaphoric uses. A full collocation analysis will look at these items and their associations with *grew* in more detail.

6.2.3 Lexical Collocates

The first collocates to discuss are the lexical words, as these provide an indication of semantic associations of each sense of *cultivated*. These are divided into nouns, adverbs and personal pronouns and should give an indication of the types of things being *cultivated*, the ways in which they are *cultivated* and the degree of animacy or animacy associated with the action of cultivating. This final point refers to previous findings (Patterson, 2014) from a study of 'to kindle', which found that personal pronouns most

often indicated a metaphoric use of the verb. Finally, the top ten most frequent collocates will be discussed at the end of the section. The reason for leaving this discussion until last is that the majority of items are grammatical rather than lexical and will inevitably lead on to discussions of nesting and colligation. This will then be developed further in the cluster analysis, where longer collocational chunks and colligational structures will be explored.

6.2.3.1 Noun collocates

This following section will focus on the noun collocates for each dataset. For each of the subsequent sections it is important to note that only those collocates frequent enough to make up 0.5% or more of each corpus are considered relevant to discuss and compare. This is a frequency of 17 or higher for the metaphors and 9 for the non-metaphors. Thus the aim of this section is to explore possible semantic groups found in each dataset.

Firstly, it can be seen that there are clear semantic differences in the types of nouns found in each list, as show below:

METAPHOR			
R	Collocate	Freq.	Freq. ptw.
1	FACE	101	3.44
2	EYES	72	2.45
3	DAY	68	2.31
4	HEART	53	1.80
5	VOICE	45	1.53
6	TIME	38	1.29
7	THOUGHT	32	1.09
8	LIGHT	30	1.02
9	HEART	53	1.80
10	MIND	27	0.92
10	LIFE	27	0.92
11	NIGHT	26	0.88
12	MAN	25	0.85
13	WIND	21	0.71
14	YEARS	20	0.68
15	CHEEK	19	0.65
15	DEGREES	19	0.65
16	LADY	18	0.61
17	SEA	17	0.57
17	HANDS	17	0.57
17	LOVE	17	0.57

Table 6.2. 3. Noun collocates for metaphoric dataset (minimum freq. 0.5‰)

NON-METAPHOR			
R	Collocate	Freq.	Freq. ptw.
1	TREES	63	3.99
2	TREE	56	3.55
3	GRASS	31	1.97
4	FLOWERS	22	1.40
5	WOOD	16	1.01
6	BOY	13	0.82
7	CHILDREN	12	0.76
7	CHILD	12	0.76
8	MAN	11	0.70
8	HAIR	11	0.70
9	BUSHES	9	0.57
9	BANKS	9	0.57
9	CORN	9	0.57

Table 6.2. 4. Noun collocates for non-metaphoric dataset (minimum freq. 0.5‰)

Interestingly, there is no overlap between nouns in either dataset: each collocate is unique to either the metaphoric or the non-metaphoric use of *grew*. It becomes clear immediately that the list for the metaphoric noun collocates is larger than that for the non-metaphoric nouns. This may or may not show a smaller degree of fixedness. Totalling the token frequencies of all collocates with *grew* within each group (with a minimum frequency of 0.5 ‰) reveals the percentage made up of noun collocates in comparison to other collocate types. In the metaphoric data nouns make up 3.08% of all collocates and in the non-metaphoric data, they make up double this figure (6.35%). Alternatively, the type frequency for individual nouns in the metaphoric data is 12.35% of all collocates and in the non-metaphoric data is 12.04% of all collocates. This shows that despite the higher frequency of noun tokens in the metaphoric data, the nouns make up a similar percentage of each corpus compared to other word classes. This also means that there is more variety amongst the nouns in the metaphoric dataset, suggesting a level of fixedness amongst the nouns in the non-metaphoric set.

With regards to the metaphors, there are three principal semantic fields: those relating to BODY PARTS (*face, eyes, heart, mind, voice, hands, cheek*, PEOPLE (*man and lady*), those relating to abstract concepts of TIME or MEASUREMENT (*day, time, moment, years*), and those associated with NATURAL PHENOMENA (*light, day, night, wind and sea*) There are also the more general abstract concepts *life, love, degrees and thought*.

Face and *eyes* appear to be more fixed in their use than the others, appearing sixth and eighth in rank of total collocate frequency in L1 position (82.60% of all *face* as collocate and 83.05% of all *eyes* as collocate). Examples are shown below:

ld, almost numb with knocks. His *face GREW* pale with anger. He frowned and set his breath came short and thick, his *face GREW* pale, and his glance, after resting for fresh particulars of disaster. Jos's *face GREW* paler and paler. Alarm began to take child's manner entirely changed; her *face GREW* purple--she sobbed with as much anger throat firmly with both hands. His *face GREW* purple; his eyes were starting from his zarene,' replied the priest, and his *face GREW* paler; 'what wouldst thou?' 'Nay,' returned Rawdon himself trembled, and his *face GREW* purple behind his dyed mustachios. Could understood it, for his handsome *face GREW* of a bluish white, like snow in the moss-like attention in Dr. Mosgrave's *face GREW* into a look of interest as he listened to t Henry Dunbar." Joseph Wilmot's *face GREW* livid with rage. The change that came repressed took hold upon her; her *face GREW* hot, her hands trembled, she would have eared to penetrate to her, and her *face GREW* hot with a glowing, scarlet flush. She ner since the day of his death; her *face GREW* livid under an awful expression of rage spite of his happiness, his honest *face GREW* more melancholy: his loose clothes hacherous bishops. Catherine's fine *face GREW* more and more set, nay disdainful. M she never turned a page, and her *face GREW* momentarily darker, more dissatisfied, a ut, it is true!" said a woman. Sue's *face GREW* more emotional; but though she stood t his breath came quicker and his *face GREW* very pale. "Ay," said James Wentwor your feeling towards him?" Lilian's *face GREW* visibly paler, even in that dim light. "I that painful story." _ Arthur Lovell's *face GREW* terribly grave as he read these lines.

Concordance 6.2. 1. Selection of *face grew* occurrences in metaphoric dataset

The rescued maiden lay; Her *eyes GREW* bright with blissful light, Confusion passed passage, and as soon as my *eyes GREW* accustomed to the gloom I perceived the e, and in another moment my *eyes GREW* accustomed to the light, and I saw wher night nor day?' But as their *eyes GREW* accustomed to the light, they perceived ill his mouth watered, and his *eyes GREW* as round as an owl's. For he hoped the e room was empty, but as his *eyes GREW* accustomed to the dusk, he discerned orps et transiret et br'v'bler;_ My *eyes GREW* dim--my tongue refused its office; I buried id and terrible to see, and her *eyes GREW* fixed and dull. I shrank in horror behind the Gospels, of St. Paul. His *eyes GREW* filmy but he seemed every now and the uite still for a moment, but her *eyes GREW* full of tears. At last she said, very softly reon, and his small, dove-like *eyes GREW* intense, hungry, and rat-like. Oh! Lawy intoxication of a narcotic. His *eyes GREW* heavy; indistinct mists, through which axed, the glare of his wrathful *eyes GREW* dull and rayless; his limbs lay prostrate e came upon my soul,-_ _My *eyes GREW* dim--my tongue refused its office,-_ _I hand he pressed his side; his *eyes GREW* dim, and he sank into the arms of his t er face. Gazing at her, Casti's *eyes GREW* dim. He forced himself not to look at h , and guns all in a line, till our *eyes GREW* dizzy. Then the cavalry came up, to th

Concordance 6.2. 2. Selection of *eyes grew* occurrences in metaphoric dataset

Interestingly, in all cases but two in Concordance 6.2.1 (Lines 8 and 9) and in all cases in Concordance 6.2.2, there is a colligation with *face/eyes + grew + complement*. Although they (and the majority of the collocates) relate to humans or physical features of humans, the reference to growing is not a non-metaphoric one. Each of these nouns when used in

association with *grew* suggest a notion of the gradual transformation of a particular characteristic. Often this is in relation to colour, sound or light. They are also very often preceded by a possessive personal pronoun. It should be noted here that there are also instances of eyes growing bigger (not shown in the screenshot). With relation to body parts, particularly eyes, there appears to be a distinct usage of *grew* as a metaphor. *Eyes grew* occurs repeatedly amongst the data, mostly in relation to an increase in emotion or a change in temper. To an onlooker, eyes may appear to grow in such a sense, physically enlarging simultaneous to a change in emotion. In this sense, (eyes widening or brightening), the use of *grew* is reflective of a physical growth (an enlarging sense). Similarly to instances discussed in the middle group analysis, this use of *grew* is related to one of perception: in particular, whether a person perceives a change in character or emotion, through physical characteristics. The answer may not be definitive, and may rely on individual perception, or even conceptual world-view. Suffice to say, there is an uncertainty in the degree to which such a use of *grew* (to describe a widening of eyes) is non-metaphoric or metaphoric.

The noun collocates *voice*, *heart* and *day* are also fairly fixed in position: they are ranked 12th, 13th and 15th out of all collocates again in L1 position⁴⁰, with the large majority of all instances conveying the same colligation of noun + *grew* + complement.

⁴⁰ According to WordSmith's Collocate ranking

His habit of talking to himself in a low *voice GREW* steadily upon him, but though Mrs. ... guidance of the dying woman, whose *voice GREW* more feeble each instant, he mount ... protruded from their sockets, and her *voice GREW* more and more harsh and discordant ... e. Colour came back to his cheek, his *voice GREW* perceptibly stronger. And as I lighte ... anted and her bosom swelled, and her *voice GREW* more than human. In this condition : ... ning!" Marian's eyes softened, and her *voice GREW* vague as the visions returned. "I'll w ... ds the end of Jane's second song, her *voice GREW* thick. "That will do," said he, when i ... pression had come over him, while his *voice GREW* weaker with every word. "I shall not ... n pain and sorrow. Dear Alan!" and her *voice GREW* very low. She was talking half to her ... to the bridge over the Serpentine. The *voice GREW* stronger and stronger, though I coul ... t again. It did not come. But the whole *voice GREW* strangely upon her. It rose and fell a ... and then perceiving Arabella's garb her *voice GREW* sympathetic in spite of herself. "Wh ... n, before he could continue. "It--it"--her *voice GREW* suddenly timid--"is nothing bad abou ... ange." I turned my face away, and her *voice GREW* firmer as, after a brief pause, she re ... hich halted not a little. By degrees his *voice GREW* firmer. Words came from him with g ... nses I cannot stand. Sibylla"--and his *voice GREW* hoarse--"do you know that I am bec ... She seemed more confident, and her *voice GREW* gentler. "Monsieur, it is because Ma ... hy? It\92s no secret at all,\94 and his *voice GREW* angry, \93that that hoary-headed At ... nents of Marvel, he smoked faster, his *voice GREW* angry. Kemp tried to gather what he ... es she bewailed his hard destiny. Her *voice GREW* feebler, her speech interrupted; a fe

Concordance 6.2. 3. Selection of *voice grew* occurrences in metaphoric dataset

out in frozen tranquillity beneath me?" His *heart GREW* sick and his brain dizzy with conj ... coming of her father. She waited until her *heart GREW* sick, but still she did not despair o ... therefore, in his absence; and if the girl's *heart GREW* sick, it was not with the fear that h ... any rate she could listen to her when her *heart GREW* overburdened; so she gave up her ... he sunlight brightening over the earth, my *heart GREW* sad, and I wept as I thought on my ... he had guessed aright. But, although her *heart GREW* sick, and her limbs waxed weak, s ... f yesterday. As his purse GREW thin his *heart GREW* stout, as his hunger GREW great ... o him, yet as the spirit poured in, and his *heart GREW* warm, he thought he would not se ... f yesterday. As his purse GREW thin his *heart GREW* stout, as his hunger GREW great ... f yesterday. As his purse GREW thin his *heart GREW* stout, as his hunger GREW great ... acker till his arm ached, and at length his *heart GREW* sympathetic with the birds' thwart ... nd held it up. I gazed long, earnestly; my *heart GREW* to the image. My mother, I perceiv ... ept silently and continually. Mr Benson's *heart GREW* very full. His voice trembled as he ... as complete; but as the pulsations of his *heart GREW* less wild, his purpose became ste ... arly, and the moonlight still held. My own *heart GREW* cold as ice, and I could hear the g ... e from that climax of feeling. Not that his *heart GREW* colder or his sentiments changed; ... he very person of the Lady of Sorrow! My *heart GREW* faint at the thought, then beat as i ... , and Mr. Lorry's hope darkened, and his *heart GREW* heavier again, and GREW yet hea ... ry new year: the tones that stirred Silas's *heart GREW* articulate, and called for more dist ... wish me to stay so long?" I asked, for my *heart GREW* cold at the thought. "I desire it mu

Concordance 6.2. 4. Selection of *heart grew* occurrences in metaphoric dataset

d passed Westminster Bridge, the **day GREW** rather pleasant. At Westminster
 Foxes peeped from out their dens, **Day GREW** pale and olden; Blackbirds, will
 er hair, like seed pearls. When the **day GREW** quite strong and commonplace
 ming. But it was not so; the light of **day GREW** stronger and brighter, and even
 at the things floating at sea. As the **day GREW** the men left the fire at the back
 s imparted from my breakfast. The **day GREW** soft, and bright, and exhilarating
 own quantities by other means! The **day GREW** strong, and showed itself outside
 est following in line abreast. As the **day GREW** on, the wind, from being shifty a
 ended in a narrow difficult cleft. The **day GREW** excessively hot, not a breath of
 ork with in the cause which day by **day GREW** greater and more sacred in the
 ket might be examined, before the **day GREW** dark. My darling came in, with a
 ce beneath, as duly as the light Of **day GREW** dim the housewife hung a lamp;
 sand things in delay, yet she each **day GREW** more impatient, and at last I saw
 eside the silent old man, who every **day GREW** more and more silent still. She
 n rapture of their own fireside Each **day GREW** holier, dearer; and esteem Blen
 ness to the anticipated solace. The **day GREW** hotter and hotter, the people mo

Concordance 6.2. 5. Selection of *day grew* occurrences in metaphoric dataset

The colligational structure of noun collocates will be discussed in more detail in Section 6.2.4. The remaining noun collocates are more scattered in their positions in relation to *grew* (within the 5-item window on either side).

Within the non-metaphoric list of noun collocates, there are two clearly defined semantic groups: one refers to VEGETABLE ENTITIES, which contains the majority of items (*tree, trees, grass, flowers, wood, banks and corn*), and one refers to HUMAN ENTITIES (*boy, children, child, man*). In total, all nouns can be said to refer to (part or whole) organic beings.

In terms of positioning, the first group of collocates are much freer in their position in relation to *grew* and fall fairly evenly on the left or right of *grew*, showing no colligational preference. The only exception here is *bushes*, which always occurs on the left (either in L1 or L2 position). Similarly, the human noun collocates are all more frequent on the left of *grew*. The only exception here is *man*. In total, over 80% of all instances of *boy, children* and *child* occur before *grew* in the concordance line. Interestingly, *man* is marginally more common on the right of *grew* (54.55%). This is often in reference to a child or boy described as growing into a man.

In summary then, noun collocate data shows key differences between metaphoric and non-metaphoric uses of *grew* in respect of their semantic associations. In keeping with the other study findings in Chapter 4 and Chapter 5, the metaphoric noun collocates are often more abstract and relate to human thought or feeling. Despite the level of tangibility in the concrete body parts, these are distinct from the tangible collocates, semantically, in the non-metaphoric set which more often relate to plant life or people. Furthermore, the analysis has shown evidence of colligational differences which will need to be explored further through more detailed corpus analysis.

6.2.3.2 Adjectival collocates

Adjectival collocates are the most common type of collocate in each dataset. These items most often modify the thing doing the growing. They also function as complements at times, particularly in relation to the *became* sense of *grew* (*it grew dark; the noise grew fainter*). The items also convey the manner in which the thing may be growing (*worse, weary, strong* etc.). This group has the potential to show the most differences between each dataset, because of both its variety and size:

METAPHOR			
R	Collocate	Freq.	Freq. ptw.
1	PALE	100	3.4
2	DARK	83	2.82
3	WORSE	57	1.94
3	TIRED	57	1.94
4	WEARY	46	1.56
5	LITTLE	44	1.5
6	RED	36	1.22
7	ANGRY	35	1.19
8	HOT	34	1.16
8	COLD	34	1.16

9	OLD	33	1.12
10	LIGHT	30	1.02
11	WHITE	29	0.99
12	BLACK	28	0.95
12	IMPATIENT	28	0.95
12	DIM	28	0.95
12	SICK	28	0.95
13	FAINT	26	0.88
14	WARM	24	0.82
15	LONG	23	0.78
16	GREAT	21	0.71
17	RESTLESS	20	0.68
17	SILENT	20	0.68
17	CALM	20	0.68
17	BRIGHT	20	0.68
18	STRONG	19	0.65
19	RICH	18	0.61
19	SAD	18	0.61
20	DISTINCT	17	0.57

Table 6.2. 5. Adjectival collocates in metaphoric dataset (minimum freq. 0.5%)

NON-METAPHOR			
R	Collocate	Freq.	Freq. ptw.
1	OLD	18	1.14
2	WILD	17	1.08
3	GREAT	15	0.95
4	LITTLE	13	0.82
4	LONG	13	0.82
5	LARGE	12	0.76
6	YOUNG	11	0.70
6	GREEN	11	0.70
6	OAK	11	0.70
7	HIGH	10	0.63
7	TALL	10	0.63
8	WHITE	9	0.57

Table 6.2. 6. Adjectival collocates in non-metaphoric dataset (minimum freq. 0.5%)

The first comparison between the tables is the difference in frequency between the adjectives higher up the table. *Pale* and *dark* in the metaphoric dataset occur twice as often as does the most frequent adjective in the non-metaphoric data *old*. The total token frequency for adjective collocates (minus the comparatives discussed earlier) make

up 5.75% of the token frequency of all collocates in the metaphoric dataset (with a minimum frequency of 0.5‰) and the type frequency is 16.48%. In contrast, in the non-metaphoric data the token frequency for adjectives is 3.48% of the total token frequency of collocates and the type frequency is 11.11%. This means that the metaphoric dataset has a higher number of adjectives collocating with *grew*, both in terms of type and token.

Looking generally at the two tables (6.2.5 and 6.2.6), there is a difference in the level of physicality of the collocates. Within the metaphoric data, the majority of collocates are abstract and more specifically related to PERCEPTION, usually HEAT OR LIGHT (*bright, dim, pale, dark, hot, cold, light*). There are also references to COLOUR (*red, white, black*) EMOTION (*angry, restless, sad*) and physical state of DECAY (*tired, weary, old, sick*). These four semantic sets accommodate the vast majority of collocates, suggesting *grew* is used to describe a change in brightness, temperature, colour, emotion or decay. Moreover, all of the collocates relating to decay and emotion convey a sense of negative pragmatic association: the transitioned state described by the *grew* is a negative one. *Worse* also supports this.

In contrast, the collocates on the non-metaphoric list tend to refer to physical traits. Many of these refer to size (*great, little, large, tall, and high*). Similarly there are references to age (*old* and *young*) and there are colours (*green* and *white*). Concordance data support the assumption that *green* is semantically associated with organic growth (plants, trees etc.). *White* appears on both lists, but has distinct uses. In the non-metaphoric data, the things described as *white* are all concrete objects, semantically associated with non-metaphoric growth, with the exception of *dress*, which occurs in a separate clause. Other items are *white roses, flowers, beard, hair* and *thorn*. In contrast, *white* in the metaphoric data describes the outward expression or effect of an emotional state: *The poor dear grew white as death, and shook and shivered; Barbara's cheeks grew white and her heart sickened; and her blowing cheeks grew white and hollow*. The use of

black alongside *grew* in a metaphoric sense also creates an exaggeration of mood: *Hareton grew black as a thundercloud; his brow grew black as midnight; and Frank's brow again grew black*. In each case, the mood is one of despair, worry or anger. There are also instances of the light growing black.

The collocate *red* in the metaphoric set also deserves discussion. A selection of concordance lines with the collocate *red* are shown below:

e so suddenly, that I GREW hot and red in the face, and trembled in every limb with ex
ould not burn, and the letters GREW red-hot. Then came the image of Philip; and that
nt ashamed of himself. Nettie bit her red lip till it GREW white and bloodless as she tu
as a Lancers----! But he GREW very red and almost stammered as he said with humil
ned to ladies' society: but he GREW red in the face, twiddled his hat, and then cast a
ive it. The heat was intense, and the red glare GREW every instant more fierce; the po
ice of the glance; he GREW slightly red in his serious middle-aged face, and cleared l
e of folly," cried Sir Tom. He GREW red at the very thought with irritation and oppositi
dn't bear that; she GREW white and red in rapid succession, and, while tears beaded
oon the theft of a cat; she GREW so red while she was saying all this that I was not s
out GREW louder and angrier. Their red jaws, with champing teeth, and their blu'cell
azure, the third a silvery spark. The red light, which GREW paler and paler as I look
a hot and feverish flush. She GREW red to her hair, agitation and shame took posses
ed and sick, and their noses GREW red, and their hands and feet swelled; and then s

Concordance 6.2. 6. Selection of *red* collocating with *grew* in metaphoric dataset (within 5-item span)

The colour red is shown to depict a range of emotions such as passion, anger, embarrassment, laughter, irritation and excitement. In each case above the adjective is describing a human emotion, mostly belonging to a male, and mostly described within the physical context of a face. 47.22% of all instances occur in R1 and 19.44% in R2. The above examples show *slightly*, *very* and *hot and* to fill the cluster when *red* is in R2 or R3. As with *black* and *white*, the colour *red* is thus associated in the majority of cases with emotion, manifest in a physical change of appearance within the face (often the cheeks, or brow). This stands in contrast to the physical and non-metaphoric uses of *green* and

white in the metaphoric data, which do not appear to reflect or emphasise an abstract state of mind or emotion in any way.

Also of note amongst the adjectival collocates are those which are largely fixed to the left or right of *grew*, specifically those fixed to a single position. The majority of the collocates with a high degree of fixedness (90% falling on one side of *grew*) are in the metaphoric data. All instances in both datasets are shown in the tables below:

METAPHOR						
Collocate	Left Freq.	Left %	Right Freq.	Right %	Most freq. position	% of instances in R1
PALE	6	6.00	94	94.00	R1	56.00
WORSE	3	5.26	54	94.74	R1	63.16
TIRED	2	3.51	55	96.49	R1	89.47
WEARY	4	8.70	42	91.30	R1	80.43
HOT	1	2.94	33	97.06	R1	41.18

Table 6.2. 7. Adjectival collocates in metaphoric dataset with a fixedness over 90% or higher

NON-METAPHOR						
Collocate	Left Freq.	Left %	Right Freq.	Right %	Most freq. position	% of instances in L2
YOUNG	10	90.91	1	9.09	L2	90.91

Table 6.2. 8. Adjectival collocates in non-metaphoric dataset with a fixedness of 90% or higher

Whilst the majority of the complement collocates in the metaphoric table (6.2.7) above occur on the right of *grew*, *young* is the only collocate in the non-metaphoric table and in contrast it occurs on the left of *grew*. Eight of these are in L2 position, such as *Young Wilkes grew up a man of pleasure*; and *The young Albert grew up a handsome, intellectual lad*. The majority of each of the metaphoric collocates fall in position R1, meaning that they are complements of *grew*. Instances include *she faltered and again grew pale*; *she moaned, and pined, and wept, as the man's breath grew fainter and*

fainter; though the pains in her chest grew worse; and my mother's cry grew louder and wilder. This shows that there are different structures being used in metaphoric/non-metaphoric contexts, in relation to complement collocates. There is a similar degree of negativity attached to the complements (*pale, worse, tired, weary*). With the exception of two neutral instances, *grew hot* is also always negative, as shown in the lines below:

ep you back, I knew what it was." Lionel GREW hot and cold with a sudden fear. "Did I say any
 ight flashed upon me so suddenly, that I GREW hot and red in the face, and trembled in every
 her world. My heart beat thick, my head GREW hot; a sound filled my ears, which I deemed th
 drunk either. On singing nights the room GREW hot, and the steam stood so thick on the glass
 enthusiasm "first GREW warm and then GREW hot;" and when a presentation of a silver cigar-
 ier part of the day; but, when the streets GREW hot, the corner was in shadow, though not in s
 cambric pocket-handkerchiefs, her spirit GREW hot within her to remember Miss Hilary's count
 rtable, she says: but when the Dialogue GREW hot, then she could not help trying to get her h
 t I shriek'd; My eyeballs burnt, my brain GREW hot as fire, And all the hanging drops of the we
 nan of Bathsheba's taste. But Boldwood GREW hot down to his hands with an incipient jealous
 e repressed took hold upon her; her face GREW hot, her hands trembled, she would have follow
 enthusiasm "first GREW warm and then GREW hot;" and when a presentation of a silver cigar-
 k upon my tracks, and then, as my feet GREW hot and dry, the damp impressions began to fa
 appeared to penetrate to her, and her face GREW hot with a glowing, scarlet flush. She said not

Concordance 6.2. 7. All instances of *grew hot* in metaphoric dataset

An important consideration for focusing on adjectival collocates (aside from their high frequency in both datasets compared to any other word class), is that they are much more prevalent than adverbs, despite the keyword of this investigation being *grew* as a verb. It would be expected that adverbs would frequently modify *grew* directly in R1 position but this is not the case. A reason for this may be due to the fact that in many cases *grew* can be replaced with *became*. A structure like *grew* + adverb would not be able to be replaced with *became*. When *grew* is substituted for *became*, (e.g. *poor Charley sickened and grew/became worse; and I presume you grew/became weary of the amusement and dropped it, didn't you?*) an adjective functioning as a complement always follows the use of *grew*. Exceptions to the *became* meaning include those where *grew* is part of a lexical item with a distinct meaning e.g. *grew from, grew to or grew up* (e.g. *the*

*only solution of it, Tynn grew to/*became think...).* In such cases, although grammatically *grew* cannot be replaced with *became*, the full lexical item acquires a *became* meaning, and can be replaced: *a few of its tenants, seated generation after generation on its manors, grew into/became knightly and noble families; and in her eyes, as they met his, trouble grew to/became a calm joy.*

It is also the case in many of the non-metaphoric instances, that *grew* can be replaced with *became* (e.g. *It amused them through all the winter and spring, til Cairnforth woods grew/became green again; and we came to scattered bushes which grew/became more and more frequent*). It should be noted that these instances could be argued to be metaphoric but informants agreed on their identity as clear non-metaphors. This is only the case where there is double meaning in evidence in the senses of *grew*. Growing frequent, or growing green, have non-metaphoric senses, because the objects themselves (woods and bushes) are organic and have the ability to grow, but the *became* sense more aptly describes a transformation in their colour, or thickness (often collectively, as with woods or bushes).

The majority of instances of non-metaphoric *grew* are less easily exchanged with *became*, most often those without any kind of metaphoric extension, and interestingly, most often relating to plants rather than people (e.g. *Then we cut two large clubs off a species of very hard tree which grew/*became near at hand*).

The above discussion has added support to the noun collocate analysis and found further distinctions, semantically, between the two datasets. These include the prominence of colour imagery relating to emotion, found more frequently in the metaphoric set. Adjectives in general are much more prevalent in the metaphoric dataset (both type and token). As a consequence, more colligations have also been highlighted, again amongst the metaphoric instances. A discussion of personal pronouns may highlight

further differences based on human subject collocates and body part imagery, both more prominent amongst the metaphors, and therefore we turn to these next.

6.2.3.3 Personal pronoun collocates

The final set of collocates to be discussed are personal pronouns. The *cultivated* and *flame* studies showed significant differences in the use of personal pronouns between the metaphors and non-metaphors. Most notably, there were significantly more personal and possessive pronouns used overall in the metaphors. These emphasised the idea that metaphoric instances of both items were often chosen to describe emotion, feelings, or relationships, which are all associated with human subjects. It is therefore worthwhile to explore the extent to which these same collocates reflect pronounced differences in the senses of *grew* also. Below are all the pronoun collocates found in each dataset:

METAPHOR			
R	Collocate	Freq.	Freq. ptw.
1	HIS	412	14.01
2	HE	405	13.78
3	HER	308	10.48
4	SHE	243	8.27
5	I	242	8.23
6	THEY	168	5.71
7	MY	130	4.42
8	THEIR	96	3.27
9	HIM	86	2.93
10	ME	62	2.11
11	THEM	56	1.91
12	WE	55	1.87
13	OUR	30	1.02

Table 6.2. 9. Personal pronoun collocates in metaphoric dataset

NON-MET			
R	Collocate	Freq.	Freq. ptw.
1	HE	113	7.16
2	THEY	92	5.83
3	I	52	3.30
4	HIS	41	2.60
4	SHE	41	2.60
5	THEIR	27	1.71
6	HER	19	1.20
7	THEM	18	1.14
8	MY	12	0.76

Table 6.2. 10. Personal pronoun collocates in non-metaphoric dataset

The tables show that there is generally a higher frequency of personal pronouns within the metaphoric dataset. *His* and *her* in particular, show the greatest difference in use: *his* occurs 5.39 times more frequently in the metaphoric dataset and *her* occurs 8.73 times more frequently. *I*, *she* and *my* also occur twice as often or more in the metaphoric set. The tables also show that there is more variety within the metaphoric dataset. Unique to this set are *me*, *we*, *who* and *our*. There is also a range of subject, object and possessive pronouns found in the metaphoric dataset. Whilst there are examples of each three types in the non-metaphoric set, the most frequent are all subjective (*he*, *they*, *I*). This possibly reflects the specific use of *grew* non-metaphorically in relation to humans (i.e. physical growth, such as *he grew*, *I grew*, *they grew*). In contrast, there are more possessive pronouns with high frequency in the metaphoric data. This is supported by the highly frequent body part nouns (*his eyes grew*; *her heart grew*). There are also more objective pronouns (*grew fond of him*; *grew jealous of her*). These are supported by the association of metaphoric growth with abstract emotions, which are described as occurring physically *within* the body (*Heaven's rich instincts in him grew as effortless as woodland*; *The resolve grew stronger in him every day*).

In terms of positioning of the pronoun collocates, the majority of metaphoric pronouns all fall on the left of *grew*, in either L1 or L2 position. 52.35% of all cases of *he*

occur in L1, making it the most fixed pronoun collocate, followed closely by *she* in L1 (51.02%). *HIS* and *her* occur in L2 position 41.51% and 36.36% of the time respectively. In contrast, there is a lower degree of fixedness in the non-metaphoric data. *They* occurs in L1 position in 68.48% of all instances and *I* in L1 51.92% of the time, but the items with a lower frequency (2% of the total corpus) occur on the right and left with no preference for position.

A contrast can also be drawn within this section of the analysis, between the use of nominal and pronominal subjects in the datasets. The table below stands to highlight the starker difference between the use of pronominal subjects in each dataset, in comparison to nominal subjects (when the structure is within a 5 word window of *grew*):

	METAPHOR		NON-METAPHOR	
	Freq.	Freq. ptw.	Freq.	Freq. ptw.
Nominal + noun				
A	354	12.04	170	10.78
THE	1718	58.43	572	36.26
Total nominal	2072	70.47	742	47.03
Pronominal + noun				
HER	272	9.25	12	0.76
HIS	432	14.69	31	1.97
MY	137	4.66	13	0.82
YOUR	6	0.2	1	0.06
THEIR	99	3.37	23	1.46
OUR	34	1.16	2	0.13
ITS	44	1.5	9	0.57
Total pronominal	1024	34.83	91	5.77

Table 6.2. 11. List of nominal/pronominal subjects in each dataset (within 5 word window of *grew*)

Whilst there is a 23.44% difference in the use of nominal subjects, with the greater use being in the metaphoric dataset, there is a 29.06% difference in the use of pronominal subjects, again in the metaphoric dataset. Based on the frequencies of pronouns discussed above, a greater use of pronominal subjects in the metaphoric data is to be

expected. There is also a per thousand words difference of 41.26‰ between the use of nominal and pronominal subjects in the non-metaphoric dataset, compared to only 35.64‰ in the metaphoric dataset. Put simply, for every instance of a pronominal subject occurring per thousand words in the non-metaphoric data, there are 8.15 instances of *a* or *the* + subject. In comparison, for every pronominal subject occurring per thousand words in the metaphoric data, there are only 2.02 instances of a nominal subject. Thus *plants, tree, grass, flower, wood* (etc.) colligate with *a* or *the* more fixedly than with *face, eyes, day* or *thought*. This in turn means that *face, eyes, day, thought* and the other frequent nouns in the metaphoric dataset, are all associated with human ownership (or belonging generally, in the case of *its*) more often than are *plants, tree, grass, flower, wood* and the other frequent nouns in the non-metaphoric dataset.

To conclude, the previous four subsections have demonstrated differences amongst the semantic associations attached to lexical collocates within both datasets. The reoccurrence of body part imagery within the metaphoric set emphasizes the notion of growing in an abstract sense – the concrete body part is most often part of a physical reflection of a perceived change in temper or mood. The prominence of possessive pronouns amongst the metaphors also supported this finding (e.g. *his eyes; her cheeks*). A full colligation analysis (below) may support this finding, particularly in reference to prepositional phrases, as these were found to be prominent in metaphoric uses of *cultivated* and *flame*.

6.2.4 Top ten collocates and their clusters

The top 10 collocates of *grew* for both datasets are given below:

METAPHOR					NON-METAPHOR				
R	Collocate	Freq. ptw.	L Freq.	R Freq.	R	Collocate	Freq. ptw.	L Freq.	R Freq.
1	AND	69.08	795	1236	1	THE	37.34	297	292
2	THE	58.67	1072	653	2	AND	23.26	154	213
3	OF	21.84	328	314	3	OF	12.55	99	99
4	AS	16.36	224	257	4	UP	10.97	5	168
5	MORE	15.00	45	396	5	A	10.90	61	111
6	HIS	14.01	260	152	6	IN	10.02	37	121
7	HE	13.77	279	126	7	AS	8.81	115	24
8	IT	12.86	273	105	8	WHICH	8.75	127	11
9	TO	12.82	93	284	9	THAT	8.62	113	23
10	A	11.70	118	226	10	TO	7.86	36	88

Table 6.2. 12. Top ten collocates in metaphoric and non-metaphoric datasets

In terms of the top three collocates (*and*, *the* and *of*), the point most worthy of note is the frequency difference of *and*. There is a 45.82‰ difference between the metaphoric dataset (69.08‰) and the non-metaphoric set (23.26‰) frequencies. The distribution before and after the headword *grew* is roughly similar in both datasets: it appears slightly more frequently after *grew* than before it in both groups. There appears to be no major differences between the positioning of *the* or *of* in each dataset either: *the* appears slightly more often before *grew* in the metaphoric data (62.14%) than the non-metaphoric data (50.42%), and *of* is distributed almost equally before and after *grew* in both sets (51.09% and 48.91% in the metaphoric data and 50% on either side in the non-metaphoric set).

The fourth most frequent collocate of metaphoric *grew* is *as* (occurring 16.36 times per thousand words). As a single item, *as* has a variety of functions. Each instance has been identified as having one of two roles: prepositional or subordinating (based on Carter and McCarthy's terminology, 2006). The large majority of uses of *as* are subordinating in the metaphoric corpus and these are fairly evenly distributed between *grew* being a part of the subordinating clause (e.g. *he became more and more angry, as he grew in years*) and the *grew* preceding the subordinating clause (e.g. *Ships and guns,*

masts and sails, grew better, as did the administrative process). In the non-metaphoric corpus, the majority of instances of *as* are also subordinating, but most often *grew* is a part of the subordinating clause, and usually positioned on the right of *as* (e.g. *I meant to explain this some time as you grew older*). Below is a comparison of the most frequent *as/grew* clusters in each corpus:

METAPHOR				NON-METAPHOR			
R	Cluster	Freq.	Freq. (ptw)	R	Cluster	Freq.	Freq. (ptw)
1	AS IT GREW	44	2.79	1	AS THEY GREW	20	0.68
2	SOON AS IT GREW	21	1.33	1	AS HE GREW	20	0.68
3	AS SOON AS IT GREW	20	1.27	2	AS SHE GREW	16	0.54
4	AS IT GREW DARK	19	1.2	3	AS SHE GREW UP	13	0.44
5	AS HE GREW	15	0.95	4	AS HE GREW UP	11	0.37
6	AS THEY GREW	11	0.37	5	AS I GREW	10	0.34
7	AS SHE GREW	10	0.34	6	AS I GREW UP	9	0.31
8	GREW BETTER AS	5	0.17	7	AS THEY GREW UP	6	0.2

Table 6.2. 13. Most frequent *as/grew* clusters in both datasets (with a minimum frequency of 5)

The table shows that *as* appears in a wider variety of clusters in both datasets. The token frequency however is greater in the metaphoric data, supporting the higher frequency of *as* as a collocate over all. Whilst both cluster lists show *grew* as a part of a subordinating clause, *grew* precedes a subordinating clause, only in the metaphoric dataset (*grew better as*). Interestingly, it is the non-metaphoric cluster list that shows a higher frequency of personal pronouns (*they, he, she* and *I* are found in all clusters). There are four cluster types with the lexical item *grew up*, which may account for the high frequency of pronouns. *Grew up* as a lexical item has a specific and separate meaning to *grew*, being restricted to human life only. The use of *grew up* within a subordinating *as* clause suggests the item provides additional information rather than being the focus of the statement.

The first four clusters in the metaphoric dataset in contrast, refer to *it* as subject pronoun. Only 24.83% of all the clusters make reference to a personal pronoun (*he, she* of *they*). *Grew better as* signals an improvement in condition, and is thus loosely associated with a non-metaphoric sense of *grew*. Also of interest are the two clusters containing *soon*, which refer to *time*. There is one cluster containing *grew dark*, which is also related to time, particularly in the context of the nineteenth century. Finally, calculating all *as* clusters (also those without *grew* present), there is also a higher type frequency amongst the metaphoric dataset. Other instances include *as soon as, as well as, and as it*. Although these cannot be analysed in relation to the behaviour of *grew* directly, the first four of these clusters convey a sense of comparison. This is a finding which mirrors the *cultivated (v)* study, where *cultivated as X as* accounted for half of all instances of the collocate AS in a metaphoric context. Whilst it might have been expected that some of these instances would be similes, this turns out not to be the case, and the metaphoricity usually lies elsewhere (i.e. outside of the *as* structure), most often referring to the light. The majority of instances of the cluster form the larger phrase *as soon as it grew dark/dusk/light*:

obbery," or great dancing-party. *As soon as* it GREW dark, *small* fires were lit
 To this the King assented, and *as soon as* it GREW dark, *the* party secretly
 it out till nightfall, but proceed, *as soon as* it GREW dark, to Lambeth, where
 cing and shutting up the close *as soon as* it GREW dusk. *Arthur* promised to
 Como, and thither we removed *as soon as* spring GREW to *her* maturity, and
 fearful shock that awaited him. *As soon as* it GREW light *enough* to distingui
 ring her to action. Each night, *as soon as* it GREW dusk, *the* "Sylph" made
 they immediately GREW calm *as soon as* they heard Terpander sing: Yet I d
 narrow and dark passage, and *as soon as* my eyes GREW accustomed to t
 t engendered GREW stronger. *As soon as* he was dressed he narrowly scan
 obbery," or great dancing-party. *As soon as* it GREW dark, *small* fires were lit
 evening, Mary added, to begin *as soon as* it GREW dark, *and* on till-nobody
 /iviana hurried to her chamber. *As soon as* it GREW dark, *the* remaining barr
 Mrs Grey's lantern was ordered *as soon as* it GREW dark, *and* that she arrive

Concordance 6.2. 8. *As soon as* clusters in metaphoric dataset

The fourth most frequent collocate of *grew* in the non-metaphoric data is *up* (occurring 10.96 times per thousand words). Almost all of these instances (97.11%) occur to the right of *grew*. This shows a prevalence of the specific lexical item *grew up*, and a closer analysis of the collocate data shows that 165 out of a total of 173 (95.38%) instances follow *grew* directly in R1 position. *Grew up* occurs in over a fifth (21.44%) of all non-metaphoric instances of *grew* concordance lines, showing it to be a key lexical phrase associated with growing in a non-metaphoric sense. The phrase implies a growing up of people in age, stature, and also maturity:

them an undying celebrity. The young *Albert GREW up* a handsome, intellectual lad, and his tastes were
 nment of bridewell-keeper. As young *Allen GREW up*, he evinced a remarkable aptitude for the
 s son was placed in the Excise Office, and *GREW up* a place-hunter. He wrote a bad tragedy called
 suffered many hardships in his youth, and *GREW up* a quiet, industrious, family man. He left a very lar
 uired no mean tact at his employment, and *GREW up* a good workman, though somewhat too free a sp
 aps if he worked hard, was industrious, and *GREW up* to be a good man, he might some day come to li
 ch, in the little principality of Waldeck, and *GREW up* under the severe and simple training of a frugal
 , chiefly in the way of herding cattle. *Annie GREW up* to be employed like the rest; and when a little
 how the tree which bore the Golden Apples *GREW up* in the Garden of the Hesperides in honour of the
 e as soon as possible. As the young *birkie GREW up*, he soon gave evidence of being a sad scapegrac
 . And when by heaven's good grace the *boy GREW up* A healthy lad, and carried in his cheek Two stea
 it. But year after year went by, and the *boy GREW up* and became a great hunter, and the lord of the la
 orn again. Thus in his father's sight the *boy GREW up*: And now when he had reached his eighteenth ye
 rge's early youth was passed, and the *boy GREW up* delicate, sensitive, imperious, woman-

Concordance 6.2. 9. Selection of *grew up* occurrences in non-metaphoric dataset

Many of the lexical items on the left of *grew up* are related to children (*boy, young Allen, young Albert, youth, children*), whilst many on the right describe desirable characteristics (*handsome, intellectual, industrious, healthy, strong, hearty*). There are also references to *man* and *lad*. In the majority of instances *grew up* is used non-metaphorically to mean a physical growth or development from a *young boy/girl/child*, into a *man/lad* etc., alongside an implied growth in maturity and the positive acquisition of desirable attributes, physical and otherwise. *Grew UP* appears to be used equally as a phrasal verb

+ complement, (e.g. *the children grew up strong and hearty*), or without a complement (e.g. *in his father's sight the boy grew up*). As mentioned, as a lexical item the phrase has a separate and specific meaning, thus is always used in relation to humans and found in close proximity to personal pronouns, proper nouns or person-related lexis (*boy, child* etc.).

The fifth most frequent collocate in the metaphoric data is *more* and in the non-metaphoric data it is *a*. The non-metaphoric collocate *a* shows no fixed usage in its distribution of position on either side of *grew*. The use of *more* in the metaphoric data, however, shows a high level of fixedness. 89.8% of all instances occur on the right of *grew*. The majority of these occur in positions R1 and R3: 198 (44.91%) and 116 (26.30%) instances respectively. Concordance examples of *grew more* are shown below:

work bell tinkled as gaily as ever. But matters GREW more seedy; the place seemed literally worn out; speech; but had to sit down again till matters GREW more quiet, and then I got up, and proceeded to d considered the hardships of her life, her manner GREW more abandoned. 'If you'll let me have the skirt, m proceedings. As evening drew on the meeting GREW more hilarious, but there was not the slightest imp music increased, so her manner towards me GREW more inexplicably indifferent. At length, weary of t speech; but had to sit down again till matters GREW more quiet, and then I got up, and proceeded to d banted and her bosom swelled, and her voice GREW more than human. In this condition she uttered a e guidance of the dying woman, whose voice GREW more feeble each instant, he mounted it, and from s protruded from their sockets, and her voice GREW more and more harsh and discordant. But, althou icating. To diversify the routine of days which GREW more and more tedious to Lady Juliana, the weath ing away. His daily work was a burden which GREW more and more oppressive. He always seemed w sh of their fore-legs. Every moment the water GREW more polluted; and yet every moment fresh myriaw awn. The flying people on foot and in vehicles GREW more numerous every moment. "Black Smoke!" h gs of his mind shaped into articulate air; they GREW more definite and distinct as he uttered them; the d in speculations and conjectures. But these GREW more vague with every glass, and at length becam Sidney's voice wail and moan. But that voice GREW more languid and faint--it ceased--Sidney's weight ow spoken of less every day, while his visits GREW more frequent, longer, and, Margaret could not bu all and inquire, and from henceforth his visits GREW more and more frequent, and by a strange coincid y, too, in unconscious imitation of his father, GREW more and more distant; and poor Harcourt saw hi

Concordance 6.2. 10. Selection of *grew more* occurrences in metaphoric dataset

The majority of adjectives following the collocation are related to emotion or abstract characteristics, showing that most uses of *grew more* are used in relation to a change in temperament, state, or emotion rather than physical growth. A large majority of the

imagery associated with the adjectives on the right of the collocation are negative. These include *languid and faint, vague, feeble, tedious, harsh, abandoned, discordant, oppressive* and *seedy*. Even seemingly neutral adjectives are associated with negativity when more context is provided. This includes the increase in the number of people flying and on foot being associated with congestion in the 13th line above, and the increase in the frequency of visits by the character in the 17th line is undesired by Margaret. When *more* is in R3 position, items in R1 and R2 are mainly quantifiers such as in the example *Mr Audley grew a little more agreeable*.

71 of the instances of *grew more* form part of the larger colligation *grew more and more* (+adj.) where *grew* fills both R1 and R3 positions simultaneously. In total 35.86% of R1 *more* collocates and 61.21% of R3 *more* collocates form part of the larger cluster *grew more and more*, which in turn colligates with an adjective. Examples of these are shown below:

ided from their sockets, and her voice GREW more and more harsh and discordant. But, although the
y. His daily work was a burden which GREW more and more oppressive. He always seemed weary, al
on each side of her hawk nose, which GREW more and more hooked as she glared, while her neck we
in unconscious imitation of his father, GREW more and more distant; and poor Harcourt saw himself in
crowd of canoes \b0 round the ship \b GREW more and more numerous \b0 , and in the same proportio
r life was useless. Mr. Heathcliff, who GREW more and more disinclined to society, had almost banish
eaths of mist. As we went the country GREW more and more lovely. The vegetation was luxuriant, with
her temper altered for the worse: she GREW more and more fretful, more and more subject to morbid
hrink from speaking of the future. She GREW more and more uncertain as to her real thoughts and des
doubt as to her interest for Jem. She GREW more and more bewildered, and her dizzy head refused to
not constitutionally sanguine, and she GREW more and more nervous and dispirited as the fruitless effo
eak of her trials and temptations, she GREW more and more excited and hysterical, until the doctor,
plied: and the whole of their theology GREW more and more corrupted; so that very few traces of the
inquire, and from henceforth his visits GREW more and more frequent, and by a strange coincidence, h
with Ragged School work. But society GREW more and more distasteful to Miss Nightingale. She
ould not catch the words. At last Tess GREW more and more anxious to know what they were saying,
an power to gulp it down. The draught GREW more and more abhorrent. To proclaim one's iniquity, to
iness which detained him in Edinburg GREW more and more tedious; he found difficulties arise on eve
ide the silent old man, who every day GREW more and more silent still. She turned her head as
Carew. Her taste for disrespectability GREW more and more remarkable. She became a perfect Bohem
e prospects of a general emancipation GREW more and more dim . . . he did all that he could by
cherous bishops. Catherine's fine face GREW more and more set, nay disdainful. Mr. Newcome was qu

Concordance 6.2. 11. Selection of *grew more and more* + adj. in metaphoric dataset

The adjectives are varied in their references; however there seems to be a similar element of negative pragmatic association. On the left side of the cluster, there is a variety of subjects; the majority are human (*Mrs Hadwin, Freddy, Mr Heathcliff, Tess, Jem, he x4*), there are also abstract subjects (*attention, atmosphere, burden, vigilance, the whole of their theology, and her taste for disrespectability*) which are not always in the same clause, and a small number of concrete subjects (*country, face and voice*). Looking to the right of the cluster, the large majority of the adjectives are clearly negative. This is reflected in the screenshot above (e.g. *abhorrent, violent, silent and morose, afraid, drowsy, yellow and woebegone, anxious, oppressive, tedious, disinclined, disdainful, enamoured*). In total 37 out of 98 (37.76%) of the adjectives following the colligation *grew more and more* are negative in their pragmatic association.

More specifically, the sample above suggests that the colligation *grew more and more* (+ adj.) is used in relation to a negative change in a character's temperament or a situation. The repetition *more and more* also suggests a slow development rather than a sudden one. This can also be said to be in keeping with the non-metaphoric meaning of gradual, organic development associated with growth and will be discussed in more detail later.

As the above discussion also demonstrated key differences semantically and pragmatically between the two datasets, the role of intensifiers used alongside the adjectives needs now to be explored. The following table summarises the data:

METAPHOR				NON-METAPHOR			
R	Collocate	Freq.	Freq. ptw	R	Collocate	Freq.	Freq. ptw
1	MORE	481	16.36	1	MORE	29	3.84
2	VERY	103	3.50	2	VERY	17	1.08
3	LESS	57	1.94				

Table 6.2. 14. Intensifier collocates in both datasets

The first point to note is the difference in frequency per thousand for the top collocate *more* between the metaphoric and the non-metaphoric datasets (16.36% and 3.84% respectively). The second most frequent collocate in the metaphoric set is *very*, occurring 3.5 times per thousand. This makes *more* unusually frequent in its comparison to any other intensifier within this dataset. *Less* is only on the collocate list of the metaphoric dataset, presumably because to grow in a non-metaphoric sense, means an increase rather than a decrease. It is possible to grow less fast i.e. at a slower rate, but most often *grew less* (X) refers to the *became* sense. *Less* occurs 57 times. It is ranked 50th (according to WordSmith's collocate list) and occurs 1.94 times per thousand words. 50 out of 57 instances (87.71%) occur on the right of *grew*: 21 of these (42.00%) occur in R1 position whilst 11 (22.00%) occur in R3. It is unsurprising that *less* behaves similarly to *more* in relation to *grew*. Also comparable to *more*, many of the instances of *grew less* are followed by an adjective:

t the difference between town and country GREW less and less; and it was indeed this w
 urned with consuming fire. As her strength GREW less, I lifted her from the ground; her e
 wever, the ceaseless crying of the women GREW less frequent, till at length the silence y
 eal answer at all? Gradually, as his throat GREW less dry, his head less hot, and his bra
 tingly, and in greater quantities. The trade GREW less speculative and uncertain. French
 ghts flowed more freely, and his utterance GREW less embarrassed; until at length, in ta
 violence of the storm abated. The lightning GREW less frequent, the thunder distant and r
 id not know that I moved, but the distance GREW less between us. She took one step ba
 om him, the restraint upon those faculties GREW less, and he less suffered by it, and af
 solemnly uttered these words, his features GREW less and less distinct, and his figure m
 sit to three nieces. Sommerset Cloudesly GREW less fidgety long ago, and some people
 y as things settled, her influence on affairs GREW less. At least one hopes so; and, in th
 had gone, and the voices of the blackbirds GREW less clamorous, and the trees began to
 on the hills and trees when he started, but GREW less and less the farther he went south
 stablished between her mother and herself GREW less and less fruitful of real intimacy, ti
 d body-jacket. And there by dint of wear it GREW less black, and showed a little of the n

Concordance 6.2. 12. All instances of *grew less* in metaphoric dataset

Often the items are related to abstract traits in reference to a character, their utterance or action (*constrained, embarrassed, speculative, displeasing*). Many of the adjectives

describe a concrete thing (*dry* in relation to a *throat*, *shaky* in relation to a *hand*). Despite this, *grew* is still not used in a physical sense, but rather as a form of development or transformation. All instances of *grew less* can be replaced with *became*.

There are 8 instances of the cluster *grew less and less*, making up 14.04% of all instances of *grew* in this corpus. This can be compared to the 71 instances of *grew more and more* in the same corpus, making up 16.09% of all instances of *more*. Thus whilst *less* is less frequent than *more*, it is almost as likely to be found in the cluster *less and less* as *more* is likely to be found in the cluster *more and more*. This makes it more fixed in structure. Instances are shown below:

lties were then over. The rocks GREW less and less difficult as we ascended, and after
s, and by degrees our remarks GREW less and less frequent, till we were found standing
nce between town and country GREW less and less; and it was indeed this world of the
eyes, he began to dwindle, and GREW less and less. All at once my vision seemed to c
tered these words, his features GREW less and less distinct, and his figure more shadow
and trees when he started, but GREW less and less the farther he went south, till it disa
nt, began now to relax; the rain GREW less and less fierce; and at last, as the clouds pa
between her mother and herself GREW less and less fruitful of real intimacy, till at length

Concordance 6.2. 13. All instances of *grew less and less* in metaphoric dataset

Again, there appears to be no generalisation that can be made about what *less and less* is referring to in these examples. *Grew less and less* is used here both in reference to people (abstract and physical characteristics) and external concrete/abstract entities. There is also less preference for the colligation *grew less and less* (+adj.). Furthermore, unlike *grew more and more*, there appears to be no strong pragmatic associations attached to the cluster. This may be due to the small amount of data. Some instances refer to improvement, whilst other refer to a deterioration in condition or circumstance.

Delving further into the data, analysis of *grew* when used alongside a comparative adjective or adverb (e.g. *darker*, *smaller* etc.), should also provide a similar indication of

whether *grew* as is being used as a metaphor in a transformative sense. Comparatives with a frequency higher than ten are shown below. Columns 4 and 5 show their ranking in R1 and R3 position (taking into consideration clusters such as *grew brighter and brighter*):

METAPHOR					
Comparative	Freq.	Freq. ptw	R1 freq.	R3 freq.	R1 & R3 (X and X)
FAINTER	53	1.80	31	22	22
LOUDER	43	1.46	32	10	9
STRONGER	40	1.36	25	8	6
DARKER	37	1.26	28	8	8
HEAVIER	26	0.88	15	2	3
BRIGHTER	23	0.78	13	8	5
PALER	22	0.75	13	8	5
CALMER	17	0.58	16	1	-
LARGER	17	0.58	13	2	3
THICKER	16	0.54	9	5	5
CLEARER	15	0.51	8	5	2
WEAKER	15	0.51	12	3	4
DEEPER	12	0.41	8	2	5
WIDER	11	0.37	8	1	2
WHITER	10	0.63	9	1	-

Table 6.2. 15. Collocates acting as comparatives in metaphoric dataset

The table shows a different set of adjectives to those used in Tables 6.2.7 and 6.2.8. Interestingly there appears to be no pragmatic association attached to the adjectives in comparison to the structure *more* + adjective. This is further supported by consulting full concordance lines. Instead of referring to mood and temperament, the adjectives refer more neutrally to external, environmental changes such as those relating to sound or light (e.g. *grew fainter*; *grew louder*):

METAPHOR			
R	Cluster	Freq.	Freq. ptw
1	GREW LOUDER AND	21	0.71
2	FAINTER AND FAINTER	20	0.68
2	GREW FAINTER AND	20	0.68
3	GREW DARKER AND	16	0.54
4	GREW STRONGER AND	15	0.51
5	GREW BRIGHTER AND	8	0.27
5	LOUDER AND LOUDER	8	0.27
6	DARKER AND DARKER	7	0.24
7	STRONGER AND STRONGER	6	0.20
7	GREW WHITER AND	6	0.20
7	HEART GREW HEAVIER	6	0.20
7	HE GREW CALMER	6	0.20
7	GREW PALER AND	6	0.20
7	AND THICKER AND	6	0.20
8	IT GREW DARKER	5	0.17
8	THICKER AND THICKER	5	0.17
8	BRIGHTER AND BRIGHTER	5	0.17
8	GREW WEAKER AND	5	0.17
8	GREW THICKER AND	5	0.17
8	DARKER AND THE	5	0.17
8	GREW HEAVIER AND	5	0.17

Table 6.2. 16. Frequent clusters involving comparatives in metaphoric dataset

Of particular interest is the colligation *adj.(er) and adj.(er)*. The most prevalent of these are *louder and louder*, *fainter and fainter*, *darker and darker*, *stronger and stronger*, *thicker and thicker*, and *brighter and brighter*. *Grew fainter and fainter* is the most frequent, making up the majority of all occurrences of *fainter*. With the exception of *faint* and *dark*, the comparatives depict an increase in intensity, which is similar to the physical, non-metaphoric sense of growing outward or upward. Other, less frequent comparatives found in the colligation *grew + adj.(er) and adj.(er)* include *angrier and angrier*, *bleaker and wilder*, *closer and heavier*, *feeble and fainter*, *colder and colder*, *denser and denser* and *stupider and clumsier* and *wider and wider*. As with the colligation *grew more and more (+ adj.)*, the colligation *grew + adj.(er) and adj.(er)*, depict a preference for comparatives to be used emphatically, signalling a slow or gradual growth or development, rather than an immediate change. There is a difference, however, between

the use of *grew more and more* (+ adj.) and *grew + adj.(er) and adj.(er)*, not simply in the structure but also in the semantic nature of the adjective being used in each structure. The majority of *grew + adj.(er) and adj.(er)* similarly depict something negative, often creating a sense of something impending or threatening, but the pragmatic association is much more prominent than for the structure *grew more and more* (+ adj.). In total there is negativity associated with 137 out of 171 (80.12%) instances of *grew + adj.(er) + adj.(er)*, compared to only 37.76% of instances in the structure *grew more and more* (+ adj.) as was shown earlier in the section.

This finding can be compared with uses of both colligations (*more and more* + adj. and adj.(er) + adj.(er)) more generally, without *grew*, to determine if this is a more general finding of the language, rather than specific to the datasets. A small search of roughly 4 million tokens (taken from 3 random texts from the main nineteenth century corpus) yielded 21 instances of *more and more* + adjective and 100+ instances of verb + adjective (er) + adjective (er). With regard to the first structure, 13/20 are clearly negative in their pragmatic association (adjectives include *incensed, astonished, silent, fretful* and *anxious*). Another two instances reveal a degree of negativity when more context is provided. In summary, within the small sample (21 instances), three quarters of these display negative pragmatic association, which as a consequence, appears to be a salient feature of the structure *more and more* in general. In comparison, the adjectives in the second structure show no sign of characterised pragmatic association (some instances are negative, some are positive, and some are neutral). Similarly, they refer more often to external observations often related to speed (*faster and faster*), spatial description (*nearer and nearer; lower and lower; hither and thither*), or light (*darker and slighter; blacker and thicker*). There is also repetition of *over and over* and other degrees of intensity (*harder and better; graver and steadier*). With the exception of three instances, all show an increase in intensity, again similar to the non-metaphoric meaning of growth.

Within the sample there is a mixture of metaphoric and non-metaphoric language. Thus, to conclude, interestingly, the colligation *adj.(er) + adj.(er)* is specifically negative in its pragmatic association when used alongside *grew* in a metaphoric sense. This finding alone confirms that metaphoric instances of the item *grew* differ in their lexical characteristics to both non-metaphoric uses of the same item, and other more general uses of the same colligation – in this case *adj.(er) + adj.(er)*.

Turning now to the non-metaphoric dataset for *grew*, *more* collocates with *grew* only 29 times in all of the data, making up only 1.84‰ of the data. Whilst 72.41% of these instances occur on the right of *grew*, only 31.03% occur in R1 position, suggesting that there is much less fixedness as well as frequency in its association with *grew* non-metaphorically. Similarly, there are fewer comparatives following *grew* (41 tokens in total). The lexical fields, not surprisingly, relate to age and stature, in keeping with two salient non-metaphoric uses (*older* x8, *bigger* x5, *thinner* x4, *larger* x3 and *thicker* x2). Thus it can be concluded that both *grew more and more* and *grew + comparative (+ comparative)* are structures more characteristic of the metaphors. Moreover, *more and more* retains its negative pragmatic association when used in conjunction with *grew* metaphors, and more specifically, relates to negative emotions or changes in a character's temperament. In contrast, the comparatives used alongside non-metaphoric *grew* are characteristic of more physical yet external aspects of change (i.e. less animate). They usually refer to intensity in light, colour or sound. Other comparatives (including *less*) will be discussed in more detail in the individual collocate analysis.

The final items of interest left in the non-metaphoric data are the eighth and ninth most frequent collocates *which* (8.75‰) and *that* (8.62 ‰). The presence of *which* and *that* suggest *grew* is often used in sentences that contain subordinate or relative clauses. This is not always the case with *which* or *that* but it is one characteristic use. A large majority of both items (92.03% and 83.09% respectively) precede *grew* in the

concordance line. A closer look at the data shows that 60.87% of *which* and 52.21% of *that* do appear in L1 position and 87.50% and 68.62% of these figures respectively, do signal a relative clause. This depicts the action of the subject (the growing) as a secondary event. Examples are shown below:

r we got from the leaves of certain lilies *which GREW* on the bark of trees, which I found that we came into a great wood of ferns (*which GREW* not on the ground like ours, but on at Woodford, and the large blue plums *which GREW* on the wall beyond the sweet-herb ul thing about it was, that the branches, *which GREW* out from the stem horizontally, ser up with earth to make the floor. A tree, *which GREW* out from the hillside, was the living urs is believed to have slain a pear-tree *which GREW* opposite his house by directing to by its current, but that, grasping a tree *which GREW* on the bank, he got safely across. apples--not indeed all apples, but those *which GREW* on a particular tree, called 'Froll's t t one with a jointed stem like a bamboo *which GREW* not far from the bronze door. This e with. First we came to scattered bushes *which GREW* more and more frequent, till at last roduced many buds and shoots, one of *which GREW* more upright and vigorous with larg lava formation with precipitous sides, in *which GREW* many beautiful trees and flowering shaded by one or two cocoa-nut trees, *which GREW*, literally, in the sand, and were d between beautiful flower-beds, among *which GREW* magnificent aloes, twenty feet in h upt turn in the wall and some olive trees *which GREW* near it, shut out all view of objects rge clubs off a species of very hard tree *which GREW* near at hand. One of these was giv re we knew of a tree that would suit us, *which GREW* near the water's edge. As soon as onian bay near Corinth, and of the oaks *which GREW* near it. [284]Portus C\9critis, Sim a bed of seedlings from *_C. elongatus_*, *which GREW* near to *_C. purpureus_*, and was and endeavoured to cling to the bushes *which GREW* upon them; but some, losing their s 'the pretty arbour in Boscobel Garden, *which GREW* upon a mount, where his Majesty

Concordance 6.2. 14. Selection of *which grew* occurrences in non-metaphoric dataset

y found some oysters sticking to the trees *that GREW* round a pond, and opening them with their cla ot a breath of air was stirring, but the trees *that GREW* round the burying-ground waved and soughe n low piles under a few precious fruit trees *that GREW* on the banks of a clear brook, which, bubbling re--was his plunging into a thick plantation *that GREW* on the face of a steep and rocky hill, where it r eyes between us and the Pit. The apples *that GREW* on the fruit-tree of knowledge By Woman were ired upon them from among the pine trees *that GREW* on the hills around the town. Fortunately at th y and hunger that they gathered the plants *that GREW* on the river's bank for food. In a fortnight their s, he is buried in a coffin made from wood *that GREW* on a foreign soil, and his monument will be stream. Amongst the trees and underwood *that GREW* on this island, and on both banks of the river i , when eggs were scarce--a few ripe pears *that GREW* on the sunniest side of the humblest cottage, bade him take leave of sun, and of the leaf *that GREW* on tree, he felt himself under the necessity of t defence, by cutting down the large trees *that GREW* round the walls. In spite of all the threats and ed of the oak, and above all, the mistletoe *that GREW* upon the oak; and they offered in sacrifice to t s probably at first a huge misshapen rock *that GREW* upon the top of the hill, which the natives of th e burnt-up appearance of the scanty grass *that GREW* upon them. On either side of this great ed his ships under the boughs of the trees *that GREW* upon the banks; then putting eighty men in hi

Concordance 6.2. 15. Selection of *that grew* occurrences in non-metaphoric dataset

Both screenshots show a strong colligation associated with *grew* when used non-metaphorically: it is often used in a subordinate or dependent clause as predicted, particularly in the case of *which*. Moreover, the item in R1 position of *grew*, directly following the cluster *that grew/which grew*, is most often a preposition with a locative function: describing extra information related to the place or the manner of the growing (e.g. *at, in, on, round, upon*). In this structure, the growing is not the most important element of the sentence, but the object itself (i.e. *the large trees; a few ripe pears; a little red flower* etc.). This is a colligation specific to the non-metaphoric set. In contrast the metaphoric instances of *grew* would be presumed to be a more important part of the sentence in which they appear, for the specific reason that they are metaphors and thus (often) used for a particular effect by the author (of course, this is not the case with all metaphors, as the research has often discussed). An author may use a metaphor to describe, elaborate on, or emphasise a particular characteristic or action; in such a case it would be expected that the metaphor would have priority in the sentence, so as to carry out its intended effect upon the reader. A closer look at the metaphoric data shows that *which* also occurs on the collocate list generated by WordSmith but is a much weaker collocate than its non-metaphoric counterpart. It is ranked 30th out of all collocates (again, based on WordSmith's Collocate function) and occurs 140 times, making up 4.89% of the data (in comparison to 17.10% of the non-metaphoric data). It is also less fixed; the most frequent position (also L1) only makes up 34.29% of all instances of *which*. Some of these examples are shown below:

d then an evil odour began to assail them, **which GREW** and GREW, until at length they were s
hed. They laboured on into the moonlight, **which GREW** brighter every night as the moon increa
beset at once with many heavy obstacles, **which GREW** as I went onward, until I knew not where
d then an evil odour began to assail them, **which GREW** and GREW, until at length they were s
ed the young man and maiden with a face **which GREW** more and more radiant. The conversatio
radicating. To diversify the routine of days **which GREW** more and more tedious to Lady Juliana
dying away. His daily work was a burden **which GREW** more and more oppressive. He always
had been selected by an adept. The glen, **which GREW** narrow as I advanced, suddenly disclos
h blood. From the freshness of the stains, **which GREW** more frequent as they approached the
rn glowed on each side of her hawk nose, **which GREW** more and more hooked as she glared, v
nmediately followed a slight grating noise, **which GREW** loud, and before one could say her spe
immediate brothers or cousins. The party **which GREW** into Hindoos or Teutons may not have b
does not follow that the various branches **which GREW** into separate races and nations, speak
There was no reply except the knocking, **which GREW** louder and more hurried. If there can be
s in reality a blending of many voices; and **which GREW** louder and louder, until it swelled into th

Concordance 6.2. 16. Selection of *which grew* occurrences in metaphoric dataset

Although prepositions are found in R1 position of the collocation, similar to the metaphoric instances these are less frequent. They also often form part of phrasal verbs, which will be discussed shortly. More prevalent are complements where *grew* is used intransitively: *bright, broad, paler, plainly, rapidly*. There are also repeated trigrams such as *more and more, louder and louder, and quieter and quieter*. A survey of all 48 *which grew* collocations in the metaphoric dataset reveals that 25 instances (52.08%) are followed by a complement, 11 instances (22.92%) are followed by an object and 11 (22.92%) are followed by a prepositional phrase. Moreover, the instances followed by an object or a prepositional phrase most often are lexical items (*grew up, grew out of, grew into, grew upon, grew from*). Each of these instances within their context displays a different meaning from *grew* + preposition. The most common meaning is to evolve or develop. Removing the lexical items then, and returning to *grew* and its meaning in isolation, there are only six instances that do not have a complement.

Without a complement, we would be left with a meaning closer to the non-metaphoric sense of *grew* e.g. *his daily work was a burden which grew*; rather than *his daily work was a burden which grew more and more oppressive*. The first example

suggests the burden to be growing in the physical sense of upward or outward (albeit metaphorical), but the second example portrays the burden as becoming *more oppressive*. *Oppressive* here is the signal of a more abstract sense of development. Used alongside *more and more*, which was discussed earlier, the effect is one of gradual development towards a negative state. To summarise the collocation *which grew* then: whilst its behaviour in the non-metaphoric examples often demonstrates a sense of extra meaning (often locative) used alongside a prepositional phrase to display the place or manner of the object growing (*it grew around the tree*), in a metaphoric context, the collocation has a non-locative characteristic and is much less prevalent. The collocation is most frequently followed by a complement (*more and more, louder and louder, paler and paler*), and more often than not signifies a development from one state to another. This is either in relation to a character's temperament (*Meanwhile, Arthur Beaufort's own complaints, which grew serious...*), or a change in an external state (*...the glen, which grew narrow as I advanced*). In this sense however, it is of importance to note that the use of *grew* mostly stands for a change in a character's perception of the external world, rather than a physical/concrete transformation. Perception such as this has been discussed in relation to *grew* in the middle group analysis. Also of note is that most of the above instances suggest *grew* being used to describe a noise or a light. Again, the contexts depict a slow or gradual development in either sound or light/darkness.

Finally, returning to *that*, it does not occur within the metaphoric collocate list at all, which signifies that it appears less than five times in the total data. Indeed, if *grew* is being described metaphorically, it could be suggested again here, that it would more likely be the focus of the sentence, rather than an addition, placed within a dependent clause. This may be the reason for the lower use of *that* and *which*, which are used alongside a preposition much less in the metaphoric data.

To conclude this section, the top ten collocates show differences in the most frequent items collocating with *grew*. Although the majority of items are grammatical rather than lexical, differences have also been found in relation to semantic associations and, more notably, pragmatic associations. The high frequency of the fixed phrase *more and more* alongside *grew* in a metaphoric context showed strong negative pragmatic association as well as revealing a stark difference. Another finding of interest is the use of *which* and *that* amongst non-metaphoric instances. In total, 33.95% of all *grew* instances in the non-metaphoric dataset collocate with either *which* or *that*. This pointed to heavy use of subordinate or relative clauses and a high degree of fixedness more generally. Subsequently, the frequent use of preposition or particle in R1 position to *grew* substantiated this claim. The final section will explore further clusters identified in the WordSmith cluster list which have so far not been discussed. These will give a more comprehensive picture of colligation and nesting, which have shown to be more prominent in this analysis than in the other two studies (Chapter 4 and Chapter 5).

6.2.5 Cluster analysis

Remaining clusters not yet discussed will be commented upon here. The metaphoric clusters making up 1% or more of the metaphoric data are presented and discussed first:

METAPHOR			
R	Cluster	Freq.	Freq. ptw
1	GREW AND GREW	84	2.93
2	GREW MORE AND	72	2.52
3	AND GREW TIL	36	1.26
3	AS IT GREW	36	1.26
3	GREW TIRED OF	36	1.26
4	IT GREW DARK	30	1.05
4	GREW OUT OF	30	1.05

Table 6.2. 17. Frequent clusters in metaphoric dataset (with minimum freq. of one per thousand words).

The first and second most frequent clusters (*grew and grew*; *grew more and*) both portray an association with an increase in intensity and size, as discussed earlier in the analysis. Instances of *grew and grew* within their context are shown below:

n evil odour began to assail them, which GREW and GREW, until at length they were satisfie
ns portend? At every second the thought GREW and GREW, till my brain seemed like a vapo
ding out into a line. That line GREW and GREW and GREW till it was three-quarters of a mile
were spreading out into a line. That line GREW and GREW and GREW till it was three-quart
were spreading out into a line. That line GREW and GREW and GREW till it was three-quart
ay, came the first murmur of sound, that GREW and GREW till it began to crash and bellow i
ness first stirred by her aunt's questions GREW and GREW till at the end of ten days that sh
ns portend? At every second the thought GREW and GREW, till my brain seemed like a vapo
ess something like a star appeared, that GREW and GREW till they saw it was the Virgin se
ve been a clog.... The _Ancient Mariner_ GREW and GREW till it became too important for o
ame more and more distinct; the picture GREW and GREW into more speaking definiteness
hundred humorous points of view. For it GREW and GREW in monstrousness and outrageou
e of things had long been smouldering. It GREW and GREW, threatening to break out into op
small hoard to meet the future; and, as it GREW and GREW, they felt a pleasure the miser h
rushing noise, mingled with faint cries. It GREW and GREW until a tumult as of gathering mu
small hoard to meet the future; and, as it GREW and GREW, they felt a pleasure the miser h
patience for the structure, none the less, GREW and GREW with the interruptions. He had, o
e of things had long been smouldering. It GREW and GREW, threatening to break out into op

Concordance 6.2. 17. All instances of *grew and grew* in metaphoric dataset

Here, the most common item to directly follow the cluster is *till* or *until*. In these occurrences, *grew* is being used to describe a transformative process. The majority of the instances above also portray a negative form of pragmatic association. In particular,

things are depicted as growing in size or sound, until they become undesirable or even a threat. Items following *till* or *until* such as *crash*, *roar*, *bellow*, *tumult*, *monstrousness*, *outrageous* and *threatening to break out*, all support this sense of pragmatic association. Thus the level of growth is seen as undesirable.

The third and fourth clusters (*and grew till*; *as it grew*) portray a sense of time, or change in circumstance occurring during the growth. Clusters 5 and 6 (*grew tired of*; *it grew dark*) refer to emotion and light, both of which cannot organically or physically grow. In each of the above-mentioned clusters, *grew* can be replaced with *became*. Finally, cluster 7 (*grew out of*) is interesting for its difference in meaning. *Grew out of* suggests a causative, transformative process. A selection of concordance lines with this cluster are shown below:

any single respect, to Rome. Everything GREW out of the Anglo-Saxon laws and customs.
 rance. Besides that, his loss of himself GREW out of it. Not knowing how he lost himself, or
 wever; then a mood of vexed impatience GREW out of the anguish and despair, and Lotty pu
 y, that Donne's intolerable defect of ear GREW out of his own baptismal name, when harnes
 y were in harmony with each other, and GREW out of a strong moral feeling, which is the on
 pupils, and forms of supernatural beauty GREW out of Parian marble in a quarter of an hour; :
 oung woman, indeed. All this, no doubt, GREW out of the diamonds, and chiefly arose from t
 here lies our conception of the matter. It GREW out of the very excess of the evil. When busi
 son; on the contrary, these propensities GREW out of his ardent temperament and his
 njecture that the reason why the spring GREW out of fame was because S*. Winifred GREW
 V out of fame was because S*. Winifred GREW out of favour. _____ \cell \row
 that to attain it was in their own power, GREW out of these disorders. Had it been possible
 er of fact authorizes the inference that it GREW out of authentic testimony.\94 And Mr. Grote
 e was nothing irrelevant in it; it naturally GREW out of the course adopted by the chair, and i
 but that form of government necessarily GREW out of their hallucinations. Without pausing t

Concordance 6.2. 18. Selection of *grew out of* occurrences in metaphoric dataset

Here, the majority of both subjects and objects are abstract events. These include *vexed impatience*, *supernatural beauty*, *propensities*, and *inference* all on the left of the cluster and *Anglo-Saxon laws and customs*, *strong moral feeling*, *anguish and despair*, *excess of evil*, *hallucinations*, *disorders*, and *ardent temperament* on the right of the cluster. The

majority of items, particularly on the right of the cluster, portray a negative pragmatic association. The cluster in most cases portrays a sense of undesirable causal development or consequence, often going from bad to worse, such as *a mood of vexed impatience grew out of the anguish and despair*; and *disturbances that grew out of the trouble*.

Clusters occurring with the same frequency in the non-metaphoric corpus can be compared below:

NON-METAPHOR			
R	Cluster	Freq.	Freq. ptw
1	HE GREW UP	33	4.09
2	GREW ON THE	24	2.97
3	GREW IN THE	23	2.85
3	GREW UP TO	23	2.85
4	AS HE GREW	22	2.73
5	AS THEY GREW	20	2.48
6	I GREW UP	19	2.35
7	SHE GREW UP	17	2.11
8	GREW UP HE	16	1.98
8	AS SHE GREW	16	1.98
9	GREW UP AND	15	1.86
10	THEY GREW UP	14	1.74
11	GREW UP IN	13	1.61
11	AS SHE GREW UP	13	1.61
12	WHEN HE GREW	12	1.49
12	THAT GREW ON	12	1.49
12	TREES THAT GREW	12	1.49
12	GREW UP TO BE	12	1.49
12	GREW UP A	12	1.49
12	GREW AND GREW	12	1.49
13	GREW TO BE	11	1.36
13	AS HE GREW UP	11	1.36
14	TREE WHICH GREW	10	1.24
14	AS I GREW	10	1.24
14	THAT GREW IN	10	1.24
15	WHICH GREW IN	9	1.16
15	WHEN HE GREW UP	9	1.16
15	HE GREW UP HE	9	1.16
15	AS I GREW UP	9	1.16

Table 6.2. 18. Frequent clusters in non-metaphoric dataset (with minimum freq. of one per thousand words)

The immediate difference with the non-metaphoric set is that there are over four times as many clusters making up 1‰ or more of the data. This echoes the keyword list findings and may signal that there are more fixed structures, or colligations within the non-metaphoric data overall, an idea which is supported by the higher per thousand words frequency of the clusters generally. *He grew up* is the most frequent cluster, occurring 4.09 times per thousand words. Remarkably, the lexical item *grew up* occurs in over half of all the non-metaphoric frequent clusters (15 out of 29), which signifies a collocation that likes to nest. Instances include *he grew up*, *she grew up*, *I grew up* and *they grew up*, and also transitive phrases such as *grew up a* and *grew up to be*. As a lexical item, *grew up* has a specific and thus a restricted meaning. As a consequence, usually only people have the ability to *grow up*, as it implies a holistic growth: an abstract, mature growth as well as physical, bodily growth. Thus the item is often used in conjunction with subjective personal pronouns (*you*, *he*, *she*, *I*, *we*, *they*), creating a number of restricted, high frequency clusters. *Grew up a* and *grew up to be*, are also restricted in their meaning, referring only to people, or possibly human characteristics or temperaments:

e. This hot-blooded young gallant Herbert GREW up to be Earl of Pembroke and first plenipotentiary at estershire, and was a weaver, and at last GREW up to be a cloathier. This cloathier at Malmesbury, at pon Wallow Crag afoar." Charles however GREW up to be a boy, just as if this ominous stone had com am, Mrs. Edgeworth's youngest boy, who GREW up to be a fine young man, but who died young of the there was for dinner. And afterwards she GREW up to be a very comely maiden, tall, and with a well-b ty and yet innocent) and would strive as I GREW up to be industrious, contented, and kind-hearted and version; and their children, of whom eight GREW up to be men and women, were reared in decent frug chiefly in the way of herding cattle. Annie GREW up to be employed like the rest; and when a little her s if he worked hard, was industrious, and GREW up to be a good man, he might some day come to liv wanted them to take a turning. When he GREW up to be a big man he expressed his determination to n which he was bound to bear a part. He GREW up to be a man of adventurous and daring habits, bet to look at it, and used to say that if I ever GREW up to be a clever man perhaps I might own that hous

Concordance 6.2. 19. All instances of *grew up to be* in non-metaphoric dataset

There are also many more clusters referring directly to people growing: *as he grew* and *as they grew*. The second and third most frequent clusters (*grew on the*, *grew in the*)

support the high frequency of prepositional phrases attached to *grew*, discussed earlier in the chapter. *Grew* also forms part of a subordinate clause (*which grew in; that grew in; and as they grew*).

In summary, the cluster data shows two clusters of interest in the metaphoric data. These are *grew and grew (until/till)* and *grew out of*. Both of these show a level of negative pragmatic association and a high degree of fixedness. In contrast the non-metaphoric cluster list shows much more variety (four times as much), with stronger colligation, particularly in relation to the most frequent cluster *he grew up*. There is a large number of clusters with pronouns and prepositions or conjunctions, both on the left and right of *grew*, but there is a lack of other lexical items in the clusters in comparison to the metaphoric data. The large number of cluster types is surprising considering the dataset is more than three times smaller than the metaphoric dataset. The level of fixedness however is mostly attributed to the use of the lexical item *grew up*. As explained, the item has a restricted meaning, associated only with human life (as the subject of the verb), and thus is most often found in association with a subjective personal pronoun.

The cluster analysis has added support to our analysis to the top ten collocate findings. Metaphoric and non-metaphoric uses of *grew* are signalled differently in the structures and groups of items in which they form a part of. Despite the fact that the full analysis has shown more types of uses of *grew* metaphorically (i.e. specific meanings pragmatically or semantically, such as *grew into*, *grew* signalling an abstract change, *grew* signalling a change in perception, *grew more and more* etc.), there are more varied structures (and thus more high frequency clusters) in the non-metaphoric data. Findings from the analysis show this to mean that *grew* as a non-metaphor is more flexible and less fixed semantically, pragmatically and grammatically.

6.2.6 Conclusion to main analysis

The data analysis has shown a number of differences in the behaviour of *grew* when used in a metaphoric or non-metaphoric context. In general, there is a wider variety of collocates, both token and type, associated with the metaphoric instances. Despite this, there are a lower number of frequent clusters in the metaphoric data suggesting that there is a larger range of fixed structures being used overall in the metaphoric data. Moreover the metaphoric clusters and colligations often convey an element of negative pragmatic association (particularly *grew and grew till/until* and *grew out of* and *grew adj.(er) + adj.(er)*).

The noun collocates are unique to each dataset: generally they are abstract in form in the metaphoric set (*time, day, moment, thought*), but there is also reference to body parts, which highlight the use of *grew* in reference to human emotion (*cheeks, eyes, etc.*). Interestingly the use of colour in the adjectival analysis (namely, *black, white* and *red*) also reflect or emphasise a human emotion or temperament. Artistic licence in phrases such as *black as a thunder cloud* and *white as death* occur frequently within the data. In contrast, whilst colours are also frequent in the non-metaphoric data, there is no secondary meaning associated with their use. *White* and *green* both referred to things that grow non-metaphorically. Pragmatic association featured prominently in the above analysis. Instances are found most apparent in connection with metaphoric structures of *grew*. This includes the phrase *grew more and more*, which often conveys a sense of despair, anger, or weakness in a character's temperament. Interestingly this is not the case with *grew less and less*, another frequent metaphoric cluster. Of more interest is the colligation *adj.(er) + adj.(er)*, which had a much stronger negative pragmatic association that *grew more and more + adj.* Moreover, the structure was shown to be specific to the verb *grew* – there was no pragmatic association found associated with the more general

colligation adj.(er) + adj.(er) in the BNC. The adjectives displaying the highest degree of fixedness in R1 position also display a negative pragmatic association (*grew pale, worse, tired, weary, hot*). There is no such association shown in the non-metaphoric adjectives, or indeed in any collocate analysis with the non-metaphoric dataset. Interestingly Louw (1993) claims that metaphor is often enlisted “both to prepare us for the advent of a semantic prosody and to maintain its intensity once it has appeared” (Louw, 1993: 172). The findings here do indeed show a prevalence for pragmatic association amongst metaphoric instances of items in comparison to the non-metaphoric uses. Thus it could be suggested that pragmatic association and metaphor form a creative relationship.

More generally, the metaphoric instances of *grew* most often convey a natural, inevitable, or gradual transformation, reflective of the natural process of growth. This is largely found in relation to sound, light or emotion. Whilst the analysis has shown that many metaphoric instances can be replaced with *became*, there is often still a semantic link to non-metaphoric growth in the nature of the movement or transformation. This supports the idea that the *became* sense of *grew* is not simply a case of polysemy, as the two uses are often called upon simultaneously.

6.3 Chapter summary and initial conclusions of the three studies

The chapter has provided a full analysis of *grew* in all 3812 instances of the item within the nineteenth century corpus. The analysis has shown a more complex picture than that painted by the *cultivated* and *flame* investigations. The main reason for this is an overlap between the different senses of *grew*. As with *cultivated*, metonymy was shown to play a key role in the problematic middle group instances, highlighting a general inability to label it easily as metaphoric or non-metaphoric. Similarly to *flame*, semantic extension

played a role in identifying potential metaphoricity. *Grew sick*, and similarly the sun described as *going down in a blaze of flame*, depend on an extension of an otherwise semantically congruent and conventional association (one can grow strong; similarly the sun is technically in a permanent state of combustion and composed of flames). Animacy was also discussed in relation to both *flame* and *grew*: often the degree of metaphoricity is determined by the use of a modifier, such as an adjective, which is more congruently associated with humans (e.g. *feeding a flame*). It was acknowledged that whilst there are degrees of metaphoricity and of conventionality of metaphoricity, there are also degrees of animacy, which can be more or less specifically associated with living beings. Items such as *tongue (tongues of flame)* can be described as having undergone a form of extension. Other items such as *heart (the heart of the flame)* are more fossilised and may even be viewed as instances of polysemy rather than extension. This distinction between polysemy and metaphor is shown to be greatly problematic in this final study. *Grew* can be replaced by *became* in the majority of metaphoric instances, but also in some non-metaphoric uses, and in some unclassified uses.

As has been shown in all three studies, metaphoricity has the ability to come into and out of view, depending on the semantic categories or associations activated by the reader. The discussion of *grew sick* showed how one might create metaphoricity by extending and merging two semantic categories. In this sense, metaphoricity has the ability to manipulate or make use of multiple senses or uses simultaneously. It could be argued then that metaphoricity is inherent in the language user rather than the language itself, merging the relationships between word meanings which are in no way definite or precise. The quantitative analysis has brought to light the complexity that exists amongst what are labelled separate phenomenon (metaphor, polysemy, metonymy).

In light of such complexity however, the results from the *grew* analysis have shown a stronger set of patterns of use, particularly amongst the metaphoric instances. The

reason for this may be due to the degree of fossilisation or conventionality of *grew* in a *became* sense. The fact that this use is not always seen as metaphoric (as the results of the participant experiment shows) shows its conventionality and consequent expectedness amongst language users. If a use becomes the expected use of that item, the metaphoricity is reduced for, or even unidentifiable to, the language user. In such cases, the *became* meaning of *grew* is the only one people think of in certain instances of the word. If we view the sense as polysemous then, or polysemous in some of the cases, Tsiamita's (2009) study would predict that the sense would remain distinct from the non-metaphoric sense through the patterns and behaviours we are primed to associated with it. Indeed, the patterns and behaviours of *grew* have shown a higher degree of fixedness than in the *cultivated* study and even the *flame* study, in a range of behaviours. At the same time, the results support the idea that *grew*, like *cultivated* and *flame*, has a range of uses or sets of uses, both in a metaphoric sense and a non-metaphoric sense, which each display their own lexical tendencies. As a consequence of this, the non-metaphoric uses are less fixed and show more variation (because they have the freedom to do so, not being the marked use of the item).

Chapter 7 – Conclusion

This final chapter will present the concluding findings of the three investigations and relate them to the three main premises of the research. The first question that will be addressed is that of ‘belonging’: whether metaphoricity is inherent in the particular word/phrase in which it is expressed, or whether instead it belongs, at least in some degree, to the language user. It is concluded from the findings that metaphoricity being described as inherent in language does not provide a detailed enough explanation of the interacting and shifting behaviours of metaphor. The second and third research questions will then be addressed: the extent to which corpus linguistic methods and Hoey’s theory of Lexical Priming add to our current understanding of the behaviour of metaphoric language. The findings suggest that metaphoric behaviour can be accounted for by the Lexical Priming theory. In particular, the Drinking Problem Hypothesis (Hoey, 2005) is shown to extend to metaphoric language, and the theory offers an explanation for creativity more generally. Finally, the further potential research will be introduced, within the direction of corpus linguistics and metaphor.

7.1 Conclusion to the investigations

The investigations have revealed differences in the lexical behaviour of metaphoric and non-metaphoric instances of a single item, when looking at a large set of collocations, colligations, and semantic, pragmatic and textual associations. These differences, in turn, suggest that we as language users are primed to recognise a metaphoric use of a word or phrase based on our awareness of such behaviours. In the case of Hoey’s (2005) theory,

we are said to be *primed* by these recurring encounters. When used as metaphors, it can be argued that *cultivated*, *flame* and *grew* are qualitatively different lexical items compared to their non-metaphoric use(s). These findings suggest that lexical, grammatical, textual and pragmatic manifestations in language play an important role in distinguishing between subtleties in word senses and meanings. Moreover the findings suggest that these patterns or behaviours play a role in distinguishing between (and making sense of) metaphoric uses of the language.

Whilst more generally, the present research has demonstrated the concept 'metaphor' to be fluid and changeable in nature, depending on factors concerning the individual, the process of interaction and communication, and the relationship of language with itself in a text as a whole, these are factors present only to a degree. The discussion has more importantly found that there is order within the fuzziness of metaphor, and indeed lexical characteristics can distinguish between metaphoricity and non-metaphoricity. This in turn has consequences for teaching metaphor, particularly within an EFL/ESL setting. Whilst dictionaries cannot effectively define all aspects of metaphoricity (this is an impossible task because a dictionary cannot take note of the context), EFL teachers can approach metaphor from the perspective of lexical patternings and behaviours. Such patternings as collocation, colligation, and semantic association have been shown to illustrate differences in how a word or phrase may be used metaphorically, in comparison to a non-metaphoric usage. The focus of this approach pedagogically, is on frequency of usage in naturally-occurring data.

In addition to these findings, it was shown that aspects of secondary meaning can account for metaphoricity, as much as grammatical structures or collocations. This was shown in relation to *feeding the flame* and *solitary flame*, in which the process of interpretation is dependent upon pragmatic factors (for example, whether we accommodate for the metaphor by transferring animate characteristics to *flame* so that it

can be fed, or whether we semantically extend the meaning of *feed* to incorporate inanimate things and thereby do not see it as metaphoric). Other extra-linguistic factors have the ability to affect metaphoricity, such as changes in meaning across time, audience, and genre. The notion of how well-known a particular metaphor is to both the producer and the receiver will also determine one's relationship with it (i.e. the way it is treated within the text as a whole, the way we are primed to understand it with a certain meaning in a particular context, and the ability to transfer the meaning to a new situation). These factors echo Hoey's (2005: 13) claims for Lexical Priming.

Of equal importance to the three investigations is the discussion born out of the smaller 'middle-groups'; the problematic instances of each item, which cannot easily be classified as either non-metaphoric or metaphoric. The fact that these groups were considerably smaller than the clearly identified metaphors and non-metaphors already suggests that identification of metaphor is not as problematic as some theorists suggest. Additionally, the instances in these smaller groups were shown to behave in similar ways to both the metaphors and non-metaphors in each of the three item studies here, in that they show specific and unique lexical characteristics amongst groups of uses. Thus, rather than existing on the perimeters of an analysis, the middle groups of uses are crucial in showing that metaphoricity occurs at different levels, within the lexis and semantics. The discussion of *grew sick* showed how one could create metaphoricity by extending and merging two semantic categories. In this sense, it is possible for a language user to manipulate metaphoricity or make use of multiple senses or uses simultaneously. Often the metaphoricity was found to be embedded within phenomenon such as metonymy, personification, or semantic extension. Whether a phrase is fossilised or conventional also impacts on the language user's awareness of metaphoricity.

7.2 The question of metaphoricity as an inherent characteristic

In reference to our research questions, the first point to consider is whether our findings support the view that metaphoricity is an inherent characteristic within language itself. This idea would imply that not only is the metaphoricity bound to the confines of the text, but also that it is a permanent, intrinsic feature. This reduces the importance of both the producer and the receiver of the metaphor to one of a secondary nature: their role is to choose and understand the language based upon that characteristic inbuilt in the chosen language. This has been shown not to be the case: metaphoricity is neither definitive, nor is it static. We have demonstrated that it is not a permanent feature, and exists rather indefinitely, along a cline of semantic extension, as well as polysemy and metonymy.

Furthermore, the notion of metaphoricity being inherent in the language itself assumes that once the producer has chosen to use a particular word or phrase (based on its metaphoric quality), there is a right and a wrong way to interpret it. Consequently, it fails to take into account the significance of the interaction between the language users (producer and receiver) and the text. If metaphoricity were inherently present (or not present), the role of the producer would be to intentionally choose it and the role of the receiver would be to effectively detect it, otherwise they would fail to perceive it and potentially misinterpret the overall meaning. In sum, by not taking into account the interaction of language users, such a theory overlooks entirely the dynamic processes involved in language exchange. Instead, the findings presented here have shown that metaphoricity belongs, in some part at least, to the individual language users and their interactions both with each other (i.e. a producer's intentions and a receiver's interpretation) and with the text itself (including the wider, extra-linguistic context of the text). In this sense, metaphoricity is seen as a much more fluid concept, possessing the ability to change and shift through time and context and from person to person. Hoey

(2005: 181) argues the importance of an individual's "unique set of data" in relation to the Lexical Priming theory. The theory also goes some way in discounting the inherence idea by suggesting that metaphoricity is a result of a crack in our primings, as will be discussed in the following section.

7.3 Metaphoricity and Lexical Priming

7.3.1 The Drinking Problem Hypothesis

The second and third research questions related to two aspects of the Lexical Priming theory: The Drinking Problem Hypothesis (2005: 8), and the applicability of lexical priming to creativity more generally. The Drinking Problem Hypothesis states that different word senses will avoid the patterns (and our primings) associated with the other sense(s) of that word of which we are primed for. These patterns take the form of collocations, colligations, and semantic, textual and pragmatic associations. Hoey's (2005) account of the hypothesis refers only to polysemous senses, which was illustrated with respect to *consequence* and *result* (Hoey, 2005) and later supported by a study of the polysemous senses of *drive* and *face* (Tsiamita, 2009). The findings of the present research support the hypothesis in relation to metaphoric senses also. The findings have shown that, for *cultivated*, *flame* and *grew*, the metaphoric and non-metaphoric uses remain distinct in relation to each of the lexical behaviours explored (as summarised above). As mentioned, these findings have implications for how we approach the teaching of metaphoric language.

However, the results presented a complexity in the usage patterns found for these three items, not revealed in either Hoey's (2005) or Tsiamita's (2009) studies. Whereas polysemy refers to another (single) sense of an item, metaphor refers haphazardly to any

use of an item or phrase, which is not congruent with the most common, basic, salient, or non-metaphoric use of that word or phrase. This leaves scope for a wide range of manifestations of metaphoricity, of differing degrees of strength and originality, as has been shown throughout the three investigations. What the investigations have provided is support for the idea that metaphoricity cannot successfully be seen in dichotomy to non-metaphoric language, and, as has just been discussed in 7.2, cannot be seen as inherent in the language. This inevitably gives rise to the notion of varying degrees of strength of a metaphor, which can change depending on who is reading or listening to the metaphor, and in what context they find it.

The Drinking Problem Hypothesis suggests that we recognise a metaphor based on its lexico-grammatical features, which come to be seen as characteristic of that use (and opposed to the non-metaphoric behaviours). The research findings support the idea that metaphoricity is more complex than a single label can account for, and is evident in the language within sets of items, or sets of uses of the item in question. Thus *old flame* had a separate set of behaviours than from those of the colligation *flame of* + abstract noun. Thus, the theory that there are sets of primings to accommodate sets of metaphoric meanings provides an explanation as to why, on the whole, we are successful in identifying a metaphoric sense, whilst at the same time, allowing for the pervasiveness, ambiguity and at times, uncertainty we find in metaphoric language.

7.3.2 Lexical Priming and Creativity

Chapter 2 also detailed another way in which the Lexical Priming theory could explain the lexical behaviour of conventionalised metaphoric language. A lot of metaphor research discusses the dilemma between a language user's desire to produce something creative

and yet, at the same time, be conventional enough to be understood. This can be overcome by reusing, in a new form, an already conventionalised metaphor. In this way, the *particular* meaning(s) associated with that metaphor (built up through its repeated use) is still retained, but the phrase is still creative and original. Instances of variations of a single metaphoric use were found within the data. These included the colligation *flame* of + abstract noun, which was often used to provoke patriotism or passion (*passion, love* and *patriotism* collocating with significant frequency). The ability to replicate the metaphor with an original abstract noun (such as *insurrection; liberty*) allowed the writer to retain the same pragmatic association, whilst manipulating the context or situation. Furthermore, the findings have shown that we are far more primed to understand particular phrases as metaphors rather than single items. *Old flame* and *grew out of* are good examples of this. As producers, we use them as such, or we tweak them (creating a crack in our readers' priming) to be more creative, whilst importantly, still retaining the link to a kind of meaning commonly understood. Similarly, the extent of pragmatic association embedded in *grew more and more* allows it to still be retained in seemingly neutral phrases, to accommodate a stylistic level of subtlety in a narrator's literary voice.

Such findings suggest that metaphoric variations follow trends, and such trends fit into a recognised framework, thus conforming to our expectations. This does not reduce the creativity, but rather provides evidence for the open choice principle operating *within* the idiom principle (Sinclair, 1991). Whatever element is substituted, its meaning is always read in relation to the expected or conventional phrase. Philip calls this a "palimpsest effect" (2008: 104). Hoey (2008a), states that more work needs to be done in relation to creativity and lexical priming, and metaphor by its very nature is creative within the realms of language, literature and thought. Together with the findings presented here, the theory has been shown to account for the pervasiveness of such creativity, whilst at the same time finding patterns and expectations through corpus methods.

7.4 Future directions for corpus linguistics and metaphor

To date, corpus linguistics has pushed furthest the argument that the linguistic patterns found in metaphor more complex than other theories can account for and that the importance of social interaction needs to form part of an adequate explanation of the data. Together with corpus linguistics, the Lexical Priming theory permits a re-focusing of metaphor, taking into consideration society's role in the use of language, and language's relationship with both society and the individual. Rather than taking a compartmentalised approach to metaphor, corpus linguistics and lexical priming address both the cognitive and social aspects to metaphor, as integral parts of both the theory and analysis of data.

Amongst other linguists, Sampson goes further in support of corpus linguistics, claiming that "it could be argued that corpus methodology should be driving the theoretical notions of metaphor and lexicology more generally" (Sampson, 2001: 194). The creative link found between metaphor and pragmatic association is a finding worthy of further exploration, and only through corpus linguistics can it be explored in the first place. Louw's (1993: 172) claim that metaphor is often enlisted to help prepare a reader for semantic prosody (pragmatic association) may in fact turn out to be a more pervasive relationship, where semantic prosody helps provide an explanation for our ability to recognise metaphor.

Finally, the theory of Lexical Priming has been shown by Hoey (2005) and others to be genre dependent, as has metaphoric language. Further research with the current corpus could offer up a much-valued exploration into the types of metaphors found in each of the sub-corpora and further subsets of the non-fiction section. The present research would also benefit from a comparison with contemporary data to form a

diachronic analysis of the items *cultivated*, *flame* and *grew*. This would bring to light changes in metaphoricity over time, which in turn would add greatly to the literature on conventionalisation of metaphor. According to Hanks (2013), conventional use must be “stipulatively defined for each word, or use of a word, by explicit criteria derived from corpus analysis” (Hanks, 2013: 141). Moreover, diachronic findings might add further support to the idea that metaphoricity is not an inherent characteristic but transfers and extends over time as much as genre and community. An important finding of this research is that like other aspects of lexicography, metaphor as a linguistic phenomenon suffers from the dilemma that a dynamic phenomenon must necessarily be represented as static. A diachronic corpus analysis of metaphor would thus allow for the changeable nature of meaning to enter the forefront of a theory of metaphor.

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Appendix

Appendices are found on the CD attached and labelled accordingly:

Primary Data

- I. Full 19th Century corpus .txt file
- II. Study 1: *Cultivated* concordances (metaphors)
- III. Study 1: *Cultivated* concordances (non-metaphors)
- IV. Study 1: *Cultivated* concordances (middle group)
- V. Study 2: *Flame* concordances (metaphors)
- VI. Study 2: *Flame* concordances (non-metaphors)
- VII. Study 2: *Flame* concordances (middle group)
- VIII. Study 3: *Grew* concordances (metaphors)
- IX. Study 3: *Grew* concordances (non-metaphors)
- X. Study 3: *Grew* concordances (middle group)

Comparative data

- XI. Concordance lines for *literally* in the BNC-Written-Fiction
- XII. Concordance lines for *fire* and *ocean* (BNC-Written-Fiction)
- XIII. Concordance lines for *solitary* (BNC-Written-Fiction)
- XIV. Concordance lines for *jets* as a collocate of *flame* (BNC-Written-Fiction)
- XV. Concordance lines for adj.(er) + adj.(er) (19th Century)
- XVI. Concordance lines for *more + and + more + adj.* (19th Century)
- XVII. Concordance lines for *highly cultivated* (BNC-Written-Fiction)
- XVIII. Concordance lines for *tongue* as a collocate of *flame/fire* (BNC-Written-Fiction)

