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Interpretive Functions of Adjectives in English : A Cognitive Approach

Frännhag, Helena

2013

Link to publication

Citation for published version (APA):
Frännhag, H. (2013). *Interpretive Functions of Adjectives in English : A Cognitive Approach*. (Lund Studies in English; Vol. 116). [Publisher information missing].

Total number of authors:
1

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LUND UNIVERSITY

PO Box 117
221 00 Lund
+46 46-222 00 00

Interpretive Functions of Adjectives in English

A Cognitive Approach

Interpretive Functions of Adjectives in English

A COGNITIVE APPROACH

Helena Frännhag

LUND UNIVERSITY

English Studies,
Centre for Languages and Literature
LUND STUDIES IN ENGLISH
116

LUND STUDIES IN ENGLISH 116

Editors: Carita Paradis and Marianne Thormählen

LUND STUDIES IN ENGLISH was founded by Eilert Ekwall in 1933. Published by the Centre for Languages and Literature at Lund University, the series consists of books on the English language and on literature in English.

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Book design: Johan Laserna

Printed by Media-Tryck, Lund 2013

ISBN 978-91-976935-4-7

ISSN 0076-1451

To the men in my life

Lars, Hilding, Julius, Valdemar, and Teodor

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Acknowledgements

In the spring of 2010 I finalized my doctoral thesis on interpretive functions of adjectives in English. A year later, it won me a prize for academic achievement from the Royal Swedish Academy of Letters, History and Antiquities. Now, in the autumn of 2012, it has reached its final goal: getting published.

For the very existence of this book, I am infinitely indebted to so many people. I would like to thank Beatrice Warren and Carita Paradis for being the best supervisors anyone could ever wish for – your knowledge and your wisdom (life-wise as well as academically) have been a constant source of inspiration.

I would also like to thank all my friends and colleagues at Lund University for all your input and support; many thanks to Hannele Diehl, Nina Rosang, Maria Wiktorsson and Anna Wärnsby (mentioned in alphabetical order) – our various discussions (and non-discussions) have been invaluable.

Special thanks to my two best friends Elin 'Lika' Eriksson and Tom Sköld for sharing my soul.

For the publication of the book, I owe many thanks to Katarina Bernhardsson at Lund University, for including it in her project geared to increasing the visibility of Lund monographs in the humanities and theology – your vision and ability to think outside the box have turned unfeasibility into possibility. I am furthermore deeply grateful to Carita Paradis and Marianne Thormählen (also at Lund University) – without your relentless efforts at getting my thesis into the Lund Studies in English series, it would never have been published.

Last, but certainly not least, I want to thank my wonderful family for having put up with me (and my book) during all these years. I thank you all from the bottom of my heart. Your support, your love, and your never-failing belief in me have meant – and always will mean – more than I can ever say.

Lund, February 2013
Helena Frännhag

0 Introduction

0.1 Preliminaries

This is a work on functions of adjectives in English, as approached from a cognitive/conceptual point of view. More precisely, it deals with the conceptual effects that adjectives seem to have in creation of meaning in a communicative event.[1] Such effects are referred to in the present work as **interpretive functions**.[2]

Since adjectives (just like any other linguistic item) have two 'sides' to them (the formal and the semantic side), I suggest that they also have two main interpretive functions in the creation of overall communicated meaning – one for each 'side'.

The adjective *form*, first – that is the written or spoken adjective input – affects the creation of meaning of the adjective itself, in that it is conventionally associated with certain meaning potential; upon taking in a certain adjective form, the interpreter makes an assessment, based on convention, of what it may and may not mean. A form such as *tall*, for instance, may take on meanings to do with some kind of extension in space, but hardly meanings to do with, say, human emotion; *tall* in an utterance such as *a tall man entered the room* cannot be understood to mean 'sad' or 'happy'. This restriction in meaning is entirely due to the adjective form itself – there is nothing else in the relevant utterance that disallows a human emotion interpretation. In short: the interpretive function of the formal side – henceforth referred to as the adjective's **formal interpretive function** (or **FIF** for short) – is to trigger, delimit and shape the meaning of the adjective as a whole.[3]

---

1. The discussion rests on a dynamic view of language meaning, according to which all meaning, including lexical ditto, is created 'on-line', in the actual interpretive event (see, especially, Section 2.3).

2. Bold face is used to mark important technical terms.

3. This is, in fact, the interpretive function of the formal side of any linguistic item, that

The interpretive function of the semantic side, on the other hand, – henceforth referred to as the adjective's **semantic interpretive function** (or **SIF**) – is to affect the meaning of *other* items, which may be found at any level of conceptual organisation. For instance, I suggest that the meaning 'not short', determined for the form *tall* in the above example, primarily affects the interpreter's conception of a certain something that entered a specific room, specifying it as being TALL (='not short'). Whereas the interpretive function of the *formal* side of a particular item – that is the FIF – is on all occasions the same as for any other item (namely to trigger, delimit and shape meaning for the particular item as a whole, cf. Footnote 3), that of the *semantic* side – that is the SIF – may, I suggest, vary, both between items, and for one and the same item on different occasions.

0.2 Aim and Scope

To date, the functions of adjectives in interpretation of communicative input have received comparatively little attention in the literature, at least as far as the cognitive approach is concerned.[4] Not only are empirical studies in this area few, but the very foundation for any such study – namely a comprehensive theoretical framework on the basis of which concrete analytical tools can be devised – is yet to be fully laid out.

The aim of the present work is two-fold, namely (i) to provide the germ of a theoretical framework of the kind just mentioned (Chapter 2), and (ii) to offer a discussion of adjectives' interpretive functions – from the specific point of view afforded by the suggested framework – from which more precise models for empirical research can be obtained (Chapters 3 and 4). Although original ideas and observations will be presented throughout the thesis, the work is intended as a means to identify important issues requiring further research, rather than as a fully-fledged theory of adjective function (and meaning creation) *per se*. It is my hope that the discussion that I present

is, the formal side of all linguistic elements have the same interpretive function – to trigger, delimit and transform underlying meaning potential. I will come back to this matter in Sections 2.4 and 3.1.

4. I will consider previous work in some more detail in Chapters 3 and 4 respectively.

– both as regards a general theory of meaning creation, and as regards the more specific issue of interpretive functions of adjectives as such – may serve as a stepping-stone and an inspiration for more in-depth study of the various questions that it raises. Ultimately, it is my hope that the thesis will serve as a useful tool in the quest for a better understanding of the conceptual nature of meaning creation as a whole.

As should be clear from the above, the present work is purely theoretical in nature. It is concerned with the development of theory and how theoretical queries can be modelled, rather than with actual empirical findings. From this follows that the discussion is realized on a hypothetical plane throughout the dissertation, and that any examples are constructed rather than actual. However, although the discussion does not itself *report* on empirical research, this does not mean that it is completely cut off from the reality of actual language use. On the contrary, a major source of information in its development have been results obtained from a systematic investigation of the use of adjectives in context, carried out in preparation of the present work (Kullenberg 2002).

The overall scope of the book is inclusive: although specific observations often apply only to certain subsets within the adjective class (as will be made clear in each individual case), the discussion pertains loosely to adjectives of all kinds – so called peripheral adjectives as well as central ones.[5] Similarly, it applies to adjectives in prenominal as well as predicative position. As regards FIFs, the position of the relevant adjective within larger discourse is of no relevance; the effect of the formal side – to trigger and delimit a specific meaning potential – is the same regardless of position, and the kinds of meaning that may conventionally be called up by a particular form are, furthermore, also unaffected by position.[6] SIFs, on the other hand, depend

5. Very briefly, central adjectives are adjectives such as *cute* and *soft*, which exhibit all the typical features of adjectives, such as gradability, comparability and ability to appear in prenominal as well as predicative position. Conversely, peripheral adjectives are adjectives such as *solar*, *certain* and *afraid*, which lack one or several of these features. For detailed discussion of the central/peripheral distinction, see e.g. Quirk *et al.* (1985).

6. This is not to say that the final, contextualised meaning settled for on any particular occasion of interpretation is not affected by position; on the contrary, position – just as any other linguistic and extra-linguistic factor – has great impact on ultimate meaning, so that in practice, conventional effects triggered by the form of a certain item cannot be sepa-

to a large extent on position; whereas adjectives in prenominal position exhibit a range of SIFs, those in predicative position have only one. For this reason, although the discussion as a whole applies to adjectives in any position, it will inevitably centre on adjectives appearing prenominally.

Finally, it should be pointed out that although the main topic of the book is adjectives and their roles in creation of meaning, much of the discussion will also concern itself with the nature and functions of nouns, which, to a very large extent, could be said to be the conceptual and functional 'anchor' of adjectives.

0.3 Outline

The following is divided into five main chapters. Chapter 1 deals with the theoretical approach taken, namely the cognitive approach. This chapter is intended as a general introduction to cognitive linguistics as such, and is aimed mainly at readers who are not already well acquainted with this specific view of language and language study. As a consequence, it takes a relatively wide scope; to some extent it covers issues beyond those of immediate relevance to the main topic of the study, for the simple purpose of giving a reasonably solid understanding of the cognitive approach as a whole. On the same note, focus lies (with the possible exception of the presentation of qualia structure in Section 1.3.3.1) on assumptions that have come to be generally accepted in the cognitive literature, rather than on 'new' and/or controversial issues.

In Chapter 2, I turn to the first aspect of my main aim – to develop and elaborate on a general theoretical framework for the more specific modelling of interpretive functions as such. This chapter – and particularly Section 2.3 – can be read in two different ways, depending on one's current interests: either in its own right, as a provisional outline of a theory of meaning creation as a whole, or as a background to the particular topic of subsequent

rated from contextual constraints (cf. Section 2.3). The point I am making here is that whereas position – along with a range of other factors – plays a part in the building up of final, contextualised meaning on any particular occasion, it does not affect the range of possible effects that can be posited for a particular adjective form.

chapters, that is interpretive functions of adjectives. Being intended as a theoretical contribution in its own right, the discussion keeps a rather high level of theoretical and terminological detail, the specifics of which may be paid less attention to from the mere point of view of background reading. In short, anyone who is interested only (or mainly) in interpretive functions of adjectives, should read through chapter 2 so as to 'get the general idea', without paying too much attention to (above all) terminological detail.

In Chapters 3 and 4, I move on to the second aspect of my aim, which is to offer a discussion of adjectives' interpretive functions, from which a testable model can be obtained. Chapter 3 deals with formal functions, whereas Chapter 4 concerns itself with semantic functions.

In Chapter 5, finally, I summarise the main points of my discussion and comment briefly on its potential value as a platform for further research into the various questions that it raises.

1 Theoretical Framework: The Cognitive Approach

1.1 Introduction

In this chapter, I give a presentation of the theoretical framework within which the present work is set, namely cognitive linguistics. For the sake of coherence and intelligibility I present the theory as if it constituted one single, unified school of thought – something that is, of course, a simplification. Obviously, there are differences of opinion even among those that consider themselves part of 'the cognitive camp', differences that may be quite pronounced indeed. In particular, this is the case with so called construction grammar (e.g. Fillmore, Kay and O'Connor 1988, Goldberg 1995, 2009[7], Lambrecht 1996 and Croft 2001, 2005), which – although it certainly belongs within the cognitive framework – differs to such an extent from mainstream cognitive linguistics, that it could be seen as a separate (and in itself very heterogeneous) theory.[8] Apart from generally ignoring differences of opinion, I will furthermore concentrate only on a few specific issues of relevance to the present work, leaving aside many other matters that are of equally great importance in cognitive linguistics.[9]

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7. Goldberg's 2009 article is a target article, which is followed by a number of peer commentaries along with author's response. Together they give an overview of current approaches within Construction Grammar.

8. For an overview of the main differences between different construction grammars, see Croft and Cruse (2004:265ff).

9. For general, more comprehensive introductions to the theory, see, for instance, Dirven and Verspoor (1998), Croft and Cruse (2004), Evans and Green (2006), Geeraerts and Cuyckens (2007), Radden and Dirven (2007), and Langacker (2008, 2009). For good coverage of many of the different aspects involved in cognitive linguistics see e.g. Casad (1996) which deals with general issues such as what is cognitive about cognitive linguistics (Gibbs 1996) and how cognitive linguistics relates to disciplines other than linguistics (e.g.

Cognitive linguistics makes three general claims that together set it apart from other major theories of language. The first is that language can only be studied and understood in terms of the human mind, since this is what makes linguistic items meaningful; there is no objective reality or 'God's eye view' (cf. Johnson 1987). In this, Cognitive Linguistics differs from truth-conditional theories, which assume that language meaning is to be found in the link between linguistic signs and what such signs can be said to be true of in an objective reality, independent of human interpretation (e.g. Montague 1974, Davidson 1976, Evans and McDowell 1988, Taylor 1998 and Kolbel 2001).

The second important claim that cognitive linguistics makes is that language is 'non-modular', so that

i. there is no clear-cut mental division between different areas of language (such as lexicon and syntax); rather, all linguistic structures are meaningful conceptual entities, forming a continuum with no clear break-off points, ranging from very specific and detailed items to highly abstract structures of a 'rule-like' kind (e.g. Langacker 1998, Croft and Cruse 2004 (especially p. 255), and Croft 2005);

ii. there is no division between language and cognition in general; rather, language is an integrated part of general cognition, utilising the same kinds of cognitive principles and conceptual entities as we use for non-verbal cognitive activity (e.g. Langacker 1987:2.2.1). A more specific formulation of this assumption is the claim that meaning is encyclopaedic, so that there is no sharp line between the representation of linguistic meaning on the one hand, and that of general knowledge on the other.[10]

Deane 1996 and Malt 1996), as well as with more specific matters of language. Janssen and Redeker (1999) is another collection of papers discussing foundations, scope and methodology of the theory (see especially Fauconnier (1999) and Langacker (1999b)). For convenient lists of the tenets of cognitive linguistics see e.g. Goldberg (1995:3f), Gärdenfors (2000:160–167) and Paradis (2003).

10. One of the first scholars to argue against a strict division between lexicon and general knowledge was Haiman (1980). Today most cognitive linguists have an encyclopaedic view of meaning (although cf. Wierzbicka (1995), who argues *for* a distinction between

The 'non-modularity claim' sets cognitive linguistics apart from generative theories (e.g. Fodor 1983 and Chomsky 1986, 1988, 2000a, 2000b), according to which language exists in our minds as an autonomous module, which in turn is organized into sub-modules operating with specific symbols internal to the respective system.[11]

The third main tenet of cognitive linguistics is that linguistic knowledge is usage-based, so that although it seems reasonable to assume that we are born with the *capacity* for language (in the same way as we are presumably born with the capacity for cognition in general), linguistic knowledge as such is formed from our processing and use of actual language, as perceived of in actual usage events. Language acquisition is thus believed to be an inductive process, which goes from the specific conceptualisations of actual linguistic input on specific occasions of use to the general abstraction of schematic representations that generalise over our various experiences of language use (e.g. Tomasello 2003). From a more general perspective, this also means that our 'mental grammars' are what we make them – a product of the ways in which we communicate by means of language.[12] Again, this functional approach to language sets cognitive linguistics apart from, for instance, generative theories, which propose a more or less 'ready-made', innate mental grammar of rules and categories that is triggered (as opposed to formed) by exposure to language, and that determines language use rather than the other way around.

In summary, cognitive linguistics sees language as a mental, albeit usage-

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lexicon and encyclopaedic knowledge). For an overview of the lexicon-encyclopaedia debate, see Peeters (2000). I will return to the matter of meaning in Section 1.3.2 below.

11. In the last decade or so, the strictly modular approach of original generative theory has taken 'a softer turn'; although modularity is still maintained, there is now more focus on interaction via interfaces between language internal modules (see, for instance, Gronemeyer 2001), as well as between language and general cognition (see, for instance, Sperber and Wilson 1998 and Chomsky 2000a, b). It should also be noted that not all generativists draw a strict line between language and general conceptualisation. Jackendoff (1983, 2002), for instance, claims that "[t]he terms *semantic structure* and *conceptual structure* denote the same level of representation" (1983:95). See also Pustejovsky (1995).

12. Of course, cognitive linguistics is not the only linguistic theory that takes this kind of functional approach to language. On the contrary, the functional view is even more pronounced in the linguistic school actually known as *Functional Linguistics* (e.g. Searle 1969, 1976, 1979, Austin 1975, Dik 1978, 1983 and Halliday 1994).

based, system, which furthermore consists of the same kind of representations (namely conceptual structures), formed by means of the same cognitive processes, as any other kind of knowledge that we acquire during our lives. With this view, the prerequisite framework for any specifically linguistic query is, of course, an overarching theory of cognition in general. In the following, therefore, I first outline some of the main assumptions made concerning this phenomenon (Section 1.2), before I turn to how these assumptions are integrated with the cognitive linguistic approach to language as such (Section 1.3).

1.2 Mind: Representations and Operations

The human mind is thought of as comprising two main aspects of interest to cognitive linguists (e.g. Fortescue 2001 and Harder 2007. On the one hand there is the aspect of knowledge representation: what kinds of conceptual material do we form on the basis of our experiences, and how could this material be assumed to be represented and organized in our minds? On the other hand, there is the aspect of what mental operations we subject our conceptual material to: How do we activate, manipulate and transform it on any particular occasion of mental activity? In the following I will discuss each of these two main aspects in turn.

1.2.1 Knowledge Representation and Conceptual Space

Whenever we are confronted with some kind of input, we presumably interpret it by translating it into mental representations of various kinds, thus creating conceptual material. The mental realm within which such structures are created and stored is generally referred to as **conceptual space**.[13]

Although we are necessarily born with the *capacity* to form conceptualisations, conceptual structures as such – including our most fundamental con-

13. Other terms used for this phenomenon include *semantic space, mental map* and *cognitive map* (see Croft 2000b:95). It should also be noted that *conceptual space* is sometimes used as a rough synonym of *concept* (e.g. Gärdenfors 2000).

ceptions – are presumably developed only after we are born (e.g. Mandler 2004). The very first conceptual constructs to arise are all **embodied**, that is, they are representations of experiences that we gain directly through our bodies. Such structures fall into two main kinds: On the one hand, we have representations of introspective, body-internal experiences, including, for instance, representations such as TIME, which is formed from our introspective awareness of the passage of time, and EMOTION, which is formed from our various experiences of body-internal emotional states.[14] On the other hand, we have structures that are created in response to our 'external', sensory-perceptual experiences of being and acting in the world – of moving and experiencing our physical bodies, of seeing and hearing, of applying and being subjected to force, of touching and tasting, and so on. Examples of representations formed in this way include SPACE, CONTAINMENT, PITCH, FORCE, TEMPERATURE, and TASTE.

The embodied structures that are abstracted from pre-conceptual experiences in turn serve as the pre-requisite for any subsequent kind of conceptual structure. That is, once they have themselves received conceptual status, they function as tools in the conceptualisation and organisation of experiences of increasing complexity and abstractness, so that all knowledge structures, no matter how abstract they are, all ultimately fall back on fundamental, directly embodied structures. The intricate build-up of increasingly complex and/or abstract concepts on the ultimate basis of embodied structures can be illustrated by Croft's example of the letter T (Croft and Cruse 2004:26), for which he suggests the following underlying knowledge structure (embodied structures are given in capitals):[15]

Apart from falling into two different kinds on the basis of whether they are introspective or sensory-perceptual, embodied structures are also distinguished in terms of how they function in the build-up of abstract knowledge: as **domains** of knowledge against the background of which more specific concepts can be *understood*, or as **schemas**, according to which

14. Following a common trend in the cognitive literature, I use small capitals to mark conceptual status.

15. I will return to a discussion of the interconnected nature of conceptual structure in Section 1.2.1.1 below. The figure given here is meant only as an illustration of the assumption that all knowledge ultimately falls back on embodied structures.

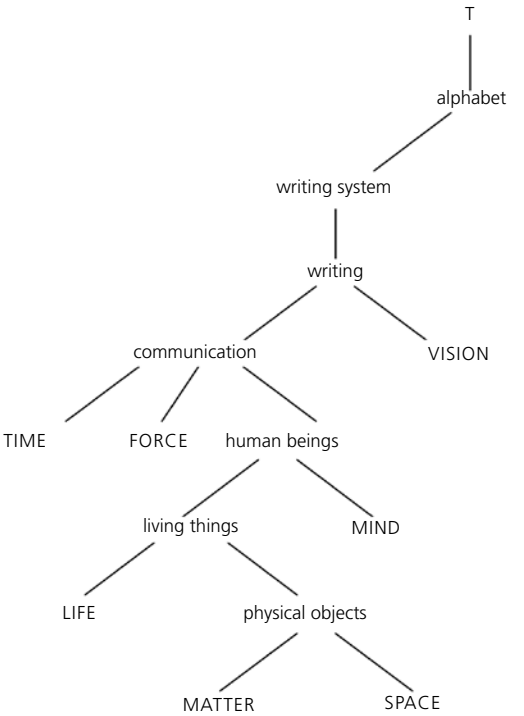

Figure 1: The Concept T and its Underlying Knowledge Structure (adapted from Croft and Cruse 2004:26)

any specific concept is *viewed*. Embodied domains are generally referred to as **basic domains** (e.g. Langacker 1987), and embodied schemas are often termed **image schemas** (e.g. Lakoff 1987, Johnson 1987, Lakoff and Turner 1989, Clausner and Croft 1999; see also e.g. Croft and Cruse 2004:45 and Evans and Green 2006:190 for inventories of image schemas).[16] Basic

16. There are other differences between basic domains and image schemas, apart from the important difference in terms of role played in the build-up of conceptual space. One such difference is that whereas basic domains are fully irreducible, so that they cannot be broken down into separable component parts, image schemas may consist of conglomerations of more primitive notions (cf. e.g. Clausner and Croft 1999). Another difference is

domains, first, could be said to serve as the ultimate background knowledge, into which any particular conceptual structure is ultimately fitted. That is, they provide the elementary tool for *understanding* concepts (and, by extension, any experience categorized according to such concepts). I will return to this matter in Section 1.2.1.1 below; cf. also Figure 1). As regards image schemas, on the other hand, these could be said to function as instructions as to *how to look upon* a particular conceptual structure.[17] That is, they provide the requisite tool for *viewing* or *construing* concepts (and, by extension, any experience categorized according to such concepts). As conceptual space develops, this functional difference continues to manifest itself throughout the conceptual system as a whole (that is, not only with directly embodied structures, but also with higher-order abstract conceptualisations); whereas many (if not most) of the structures that we form during our lives come to serve as domains for the understanding of other, more specific phenomena, others are schematic, serving mainly as templates for how to construe the material with which they map. In the remainder of the present section I focus on the former of these aspects, considering in some more detail the build-up of conceptual space in terms of domains.[18]

1.2.1.1 DOMAINS AND THE NETWORK NATURE OF CONCEPTUAL SPACE

Domains could be described as coherent areas of human experience that provide the necessary contextual and background knowledge for the understanding of other, more specific concepts. A classic example of this, originally given by Langacker (1987:185), is that of the notion of CIRCLE, which functions as the domain for concepts such as ARC, DIAMETER, CIRCUMFERENCE and RADIUS. If we do not have the concept CIRCLE, we will not form – nor be able to form – these more specific concepts, since it is only in their capacity of being parts of a circle that they are what they are.

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that whereas basic domains are derived from introspective as well as sensory-perceptual experiences, all image schemas are (as the term would suggest) imagistic in nature – that is, they are derived from sensory-perceptual experiences only.

17. Cf. Harder (1996, 2007) for the idea of language as instruction.

18. I will return briefly to the matter of schemas in Section 1.2.2.5 below, as well as in Section 1.3, in the latter of which I consider some of the schemas of particular interest to language.

Whereas the example of CIRCLE is convenient as a reasonably straightforward illustration of the role of domains, it may, at the same time, be overly simplistic. Firstly, whereas CIRCLE is a rather simplex construct, with few component parts and a relatively straightforward meronymic internal structure, this is not necessarily (or even usually) so with domains in general. On the contrary, structures functioning as domains may exhibit any degree of complexity, both in terms of number of salient component parts (i.e. concepts that it supports) and in terms of internal structure (including relations holding between the domain as a whole and any concept that it supports, as well as relations between component concepts). The only defining features of domains are that they form coherent areas of knowledge, and that they serve as some kind of reference frame for certain other structures. As an example of a rather more complex domain we could think of our conception of COMPETITION. This structure supports an array of different concepts – WINNER, LOSER, FIRST/SECOND RUNNER-UP, COMPETE, PRIZE, MEDAL, JUDGES and so on and so forth – and it furthermore exhibits an internal structure that is not easily captured by any straightforward structural arrangement; although the relation holding between the domain as a whole and any concept that it supports could in some sense be thought of in terms of whole/part, this does not seem to be the only relation of relevance. Nor do the various component concepts seem to be related to each other only (or even primarily) in terms of being parts of the same overarching whole.

Secondly, another way in which the CIRCLE example is somewhat simplistic is that it fails to account for the fact that a certain domain is often not relevant in its entirety to the particular concepts that it supports. Consider, for instance, our conception of family relations: whereas this construct would serve as a domain for concepts such as GRANDMOTHER, COUSIN, BROTHER, NEPHEW, and so on, its full extent is not equally essential for the understanding of any one of these concepts. Rather, each concept depends only on those 'nodes' and relations of ancestry and descendance that are directly relevant to it. For instance, in order to understand a concept such as MATERNAL GRANDMOTHER, we rely heavily upon knowledge of the relations holding between the individual serving as a reference point (EGO), the female parent of EGO and the female parent of the first parent. We do not, however, need to bring in our knowledge of the relations and inter-

mediate nodes found between EGO and, for instance, the concept of NEPHEW (cf. Langacker 1987:119).

Finally, the example of CIRCLE is simplistic in that it presents matters as though concepts are always understood only in terms of one single domain. In many (if not most) cases, however, any particular concept figures in some way in a whole range of different domains, reflecting all its various experiential aspects. Consider, for instance, a concept such as BANANA. Our various experiences (physical as well as ideational) with this kind of thing have taught us that bananas exist in three-dimensional space, that they are generally yellow in colour, that they tend to have an elongated, slightly curved shape, that the ways in which we interact with them typically include peeling them and eating them (something which is, furthermore, done by means of our hands rather than by means of some instrument), that they grow in clusters on banana 'trees', that they are a kind of fruit, and so on and so forth. Since all this knowledge (along with any other knowledge that we may have drawn and continue to draw from our experiences with bananas) is represented in our conceptual system, it follows that BANANA connects with a wide range of domains, including THREE-DIMENSIONAL SPACE, COLOUR, SHAPE, EATING, EATING CONVENTIONS, PLANT LIFE AND REPRODUCTION, FRUIT and so on. The various domains that are directly associated with a concept in this way are generally referred to as the concept's **domain matrix** (e.g. Clausner and Croft 1999) or **base** (e.g. Langacker 1987).

The fact that many concepts are understood relative to a matrix of domains (as opposed to one single domain) raises certain theoretically important issues. Firstly, there is the question of what domains are included in the matrix of a particular concept (that is, what domains a certain concept is directly associated with and understood in terms of). Secondly, there is the matter of how central the various domains are to the relevant concept. Thirdly, there is the question of domain salience on particular occasions of concept activation. As regards the first of these issues – that is what domains are associated with a particular concept – this varies from one person to another, depending on personal experiences. Whereas certain domains are probably included in the domain matrix of most people's BANANA concept (notably domains such as the ones mentioned above), there may be others that are included by only a few people. For instance, whereas most of us

probably do not normally include a domain such as CASUALTY/EMERGENCY TREATMENT in the domain matrix of BANANA, someone who happens to be fatally allergic to bananas probably does.[19] One domain that stands out as omnipresent is the so-called **domain of instantiation** (e.g. Langacker 1987). The domain of instantiation is the domain in which a particular entity is felt to exist, or manifest itself. For instance, concepts of concrete physical objects (such as BANANA) has THREE-DIMENSIONAL SPACE as their domain of instantiation, temporal concepts (such as HOUR and YEAR) has TIME as their domain of instantiation and so on.

As for the second matter of interest mentioned above – namely the relative centrality of the domains in a domain matrix – this is to do with the degree of entrenchment of the link between a certain concept and the relevant domain. Put briefly, the more entrenched the link is, the more central the domain is to the concept. Centrality depends on a number of different factors, such as the degree to which the relevant domain is conventionally and generically associated with the concept in question, its degree of intrinsicness relative to the relevant concept, and the degree to which it relates to the concept in a distinctive way, pointing up some piece of information that is more or less uniquely characteristic (e.g. Langacker 1987:159ff, see also Section 4.2.1). It furthermore seems reasonable to assume that the 'power' of any associating experience affects centrality; for instance, the experience of being rushed to hospital after having had an anaphylactic shock is likely to strengthen the link to a domain such as CASUALTY/EMERGENCY TREATMENT quite radically, even though this domain is not central in any other way, whereas, for instance, the experience of finding a banana lying in the gutter will not effect more than a temporary, situational connection with the notion of GUTTER.

The third and final matter of interest in relation to domain matrices concerns the fact that although different domains are more or less central to a certain concept in that the association between concept and domain is

19. It should be pointed out in this context that not only do domain matrices vary between people, but also within the mind of one and the same person at different points in life. This is an obvious and natural effect of conceptual structure being a product of experience: with each experience of a certain kind, we amend and change the knowledge associated with this experience.

more or less well entrenched, this is not to say that the most *central* domain is always the most *salient* on a particular occasion of concept activation. This is instead ultimately determined by context (albeit in combination with centrality). For instance, in Sweden we have a particular kind of cake called *gräddtårta* (literally 'cream cake'), which consists of sponge cake layered with jam and covered in whipped cream. Being a kind of food, the concept of GRÄDDTÅRTA is closely associated with a domain such as EATING – that is, EATING is very central to this concept. Consequently, in any default context where, say, some children are approaching a cake of this kind with happy grins on their faces and plates in their hands, the domain of EATING will also be the most saliently activated, serving as a basis for understanding both the role of the cake itself and (in this case) the intentions and imminent actions on part of the children. However, in another context, such as a situation in which the cream cake is sat on a counter in front of a clown at a fun fair, I believe that the domain of EATING will not be very salient at all. In this case I think that we – at least if *we* refers to Swedes – are far more likely to activate most saliently a domain of HAVING THINGS THROWN IN ONE'S FACE, relative to which the role of the cake and the intentions and imminent actions on part of any approaching child are understood.[20]

From the preceding discussion it should be clear that the various conceptual structures that we form and store during our lives do not simply float around in our minds as separate, self-contained phenomena. On the contrary, they are all interconnected in one way or another, something that is a natural effect of the fact that whenever we process a particular experience, we do so precisely by comparing it to, and integrating it with, stored representations of previous experiences. So far I have only considered interconnectedness in terms of *direct* association – that is, the kind of association holding between any given concept and its base. However, any particular concept is also, to varying degrees, *in*directly associated with any other structure, in that the domains in its domain matrix are in turn connected to other domains, which in turn are connected to other domains, and so on and so forth (cf. Figure 1 above). Conceptual space could thus be seen as constituting a coherent and immensely complex network of knowledge –

20. This domain would, I believe, figure in the matrix of most Swedes' concept of GRÄDDTÅRTA, although with far less centrality (as opposed to salience) than EATING.

often referred to as **encyclopaedic knowledge** – within which any given concept forms a node, and where each such node gives access to our full amount of knowledge, albeit at different points of entry. With this analogy in mind, it is important to realise, however, that encyclopaedic knowledge is in no way constituted by a static set of ready-made, fully specified structures – quite the opposite. On the one hand, it is in constant flux, in that it is continuously changed and amended in response to new experiences. On the other hand, the extent to which conceptual material is actually stored – as opposed to created on any particular occasion of activation – is far from clear; it has even been suggested that we have no actual concepts stored at all (e.g. Smith and Samuelson 1997). I will return to a discussion of this matter from a specifically linguistic point of view in Sections 1.3.2 and 4.2 below. What is important to establish at this point is the fact that our conceptual material (or encyclopaedic knowledge) is suggestive rather than static and ready-made, so that whenever we access a particular part of conceptual space, we **construe** – or view – the material that we activate in a specific way. This is what I turn to now.

1.2.2 Cognitive Abilities and Construal Operations

As humans, we are born with certain cognitive abilities that allow us to select and transform (what we perceive of as) relevant parts of the flow of input that we are constantly exposed to, into mentally accessible representations. As conceptual space develops, and we start having conscious conceptual thought, these same abilities also allow us to perform similar operations on our conceptual material, that is, they allow us to construe conceptual information in various ways.

Cognitive abilities and construal processes have been discussed to quite some extent in the literature (e.g. Talmy 1977, 1978, 1988a,b, 2000, Langacker 1987, Croft and Wood 2000, Croft and Cruse 2004, and Paradis 2005). One of the more comprehensive surveys is the one proposed by Croft and Cruse (2004) (which, in turn, is largely based on Croft and Wood (2000)), suggesting a classification of construals in terms of four main cognitive abilities, namely our abilities for:

i. attention,
ii. comparison,
iii. perspective, and
iv. constitution

In the following, I will consider some of the most important construals found with each of these abilities.[21]

1.2.2.1 ATTENTION AND CONSTRUAL

Attention is a complex psychological phenomenon that comprises a number of different aspects, only three of which I will comment on here, namely

i. focus,
ii. granularity, and
iii. manner

Focus, first, pertains to the fact that attention involves the selection of a particular portion or part of a particular experience, which is focused on at the expense of other, less relevant parts. Focus of attention is, however, a matter of degree rather than a clear-cut issue of either-or; whereas there is one part that constitutes the focal point, other associated material will enter more or less saliently into our conscious awareness too. This is usually referred to as *scope of attention*. A particular kind of focusing construal is so called **profiling**, pertaining specifically to linguistic conceptualisation; a particular linguistic form is said to **profile** – select – a specific conceptual structure within a certain domain or domain matrix, with experientially related areas in the domain constituting the scope of attention. I will return to the matter of profiling in Section 1.3.2 below.

Granularity, next, concerns the degree of detail with which the selected item is viewed. When we focus attention on a particular entity, we may do so to a greater or lesser extent, allowing for more or less detail. For instance, in a sentence such as *she ran across the field*, the preposition *across* construes

21. For more detailed discussions of cognitive abilities and construal operations see, e.g., Talmy (1977, 1978, 1988a, b, 2000), Langacker (1987), Clausner and Croft (1999) Croft and Cruse (2004).

the conception of the field in less detail than would the preposition *through*; in the former case the field is pictured as if it was seen from a distance, as a two-dimensional, flat surface, whereas in the latter case it is construed as if it was seen in close-up, as a three-dimensional volume (Croft and Cruse 2004:52).

What I refer to as manner, finally, is to do with *how* we focus attention on the selected item. Focusing of attention is often referred to as *scanning*, and manner of scanning falls into two main kinds: summary scanning and sequential scanning respectively (e.g. Langacker 1987:144f, 248f). Summary scanning is static in nature: the structure selected as focus of attention is taken in all at once, forming a holistic conception where all parts are available at the same time. Sequential scanning, on the other hand, is dynamic, in that it involves scanning the selected material in a step-by-step fashion, through conceived time. The difference between summary and sequential scanning is seen clearly if we compare deverbal nouns and their verbal roots. For instance, a noun such as *explosion* and a verb such as *explode* both profile the same underlying, ontological experience, but scanning is different in each case: in the former, the scene is viewed as a holistic, atemporal whole, whereas in the latter case, it is scanned through conceived time, prototypically starting with the conception of a whole, which suddenly goes into pieces flying around in the air, eventually landing on the ground. As should be clear from this example, the difference in manner of scanning is one of the factors underlying the distinction between word classes (e.g. Langacker 1987, see also Section 1.3.3).

1.2.2.2 COMPARISON AND CONSTRUAL

The fundamental ability of comparison – that is the ability to consider two or more entities (in the widest sense of the word) in relation to each other – enables construals such as categorisation, metaphor and figure-ground alignment.

Categorisation, first, is the operation of comparing a certain experience to previous experiences, making similarity judgements and grouping the relevant experience with others like it. This grouping may be more or less fully sanctioned – full sanction pertains when the new experience is completely subsumed by a previously established category, whereas partial sanction

holds when it deviates to a greater or lesser extent from previous experiences, although it is still deemed to belong to the category in question (e.g. Langacker 1987:66–71).

Metaphor, next, is the operation of understanding one thing in terms of something else, as in looking upon time as space (the baby slept *through the night*), emotion as a container (he's *in love*), or anger as the heat of a fluid (he *boiled over*) (e.g. Lakoff and Jonhson 1980).[22]

Figure-ground alignment, finally, is the operation by which entities that are compared are aligned in terms of prominence: within a certain scene, one item (referred to as *the figure*) is generally construed as being more prominent than the other(s) (*the ground*); the figure is what the conception in question is all about, whereas the ground serves as the relevant background or context, relative to which the figure is viewed (e.g. Talmy 1972, 1983, 2000; see also Gestalt theory, e.g. Koffka 1935). Examples are given in (1)–(2):

(1) Teodor [*figure*] is sleeping on the sofa [*ground*].
(2) Valdemar [*figure*] sat down between his two elder brothers [*ground*].

I will return briefly to the matter of figure-ground alignment in my discussion of adjectives (Section 1.3.3.2); according to cognitive linguistics, adjectives express relations, and consequently, figure-ground alignment tends to follow suit.

1.2.2.3 PERSPECTIVE AND CONSTRUAL

Whenever we perceive or conceive of something, we do so from a certain perspective; being fundamentally situated relative to our spatial, temporal and socio-cultural surroundings, we, as conceptualisers, necessarily relate any experience that we may have to our own concrete and/or abstract 'position'.

22. The phenomenon of metaphor has been extensively discussed in the cognitive literature. Among the most influential works are Lakoff and Johnson's *Metaphors we live by* (Lakoff and Johnson 1980), which revolutionised the entire view of metaphor. The ideas presented in this pioneering work have been discussed and elaborated on in, among many others, Lakoff (1987, 1993), Lakoff and Turner (1989), Gibbs (1994), Clausner and Croft (1997), Grady (1997, 1998), Glucksberg (2001) and Giora (e.g. 2003).

The most straightforward manifestation of this is probably three-dimensional spatial perspective; depending on the conceptualiser's position in space (also referred to as *viewpoint*, e.g. Langacker 1987:122–126), as well as that of other relevant entities, one and the same item, objectively situated in one and the same place, may be considered to be *behind*, *beside*, *in front of*, *above*, *below* and so on. The aspect of perspectival construal that has been most thoroughly discussed in the literature is probably so-called *deixis*, which takes the here and now of a speech event as its reference point. Deictic perspective is expressed by words such as *here*, *yesterday*, and *you*.

1.2.2.4 CONSTITUTION AND CONSTRUAL

The fourth and final fundamental cognitive ability, which supports a range of important construals, is our ability to impose structure on any experience that we have – to give it 'shape' and coherence, so that it forms a unified **Gestalt** (see, also, Section 1.3.3 below). This matter has been discussed to quite some extent in the literature, by Gestalt psychologists (e.g. Koffka 1935), by phenomenologists (e.g. Husserl 1948 [1973]), and by cognitive linguists (e.g. Talmy 1988a,b, 2000). Constitutive construal comprises three main aspects, namely:

i. structural schematisation,
ii. force dynamics, and
iii. relationality[23]

Structural schematisation, first, is to do with (literal or non-literal) 'physical' constitution of the relevant conception – its internal disposition in terms of boundedness, plexity and dividedness, its degree of extent, whether it exhibits scalarity and so on.

Force dynamics, next, involves the construal of transmission of energy (or force) between parts of the conception at hand (more precisely: in con-

23. Structural schematisation and force dynamics has been discussed at length by Talmy (e.g. 1977, 1988a, b, 2000). Relationality is probably most thoroughly dealt with by Langacker (e.g. 1987), who uses distinctions to this effect to explain categorisation of word classes. I will return to the matter of relationality below, as well as in Chapter 3 (Sections 3.2.1 and 3.3).

ceptualisation of events). Consider the following examples, each of which expresses a different force-dynamic structure:

(3) The dog was lying on the sofa.
(4) The boy pushed the dog off the sofa.
(5) Once on the floor, the dog refused to move.

In 3 the relevant situation is construed as being force-dynamically neutral; it is a static situation of one entity (the dog) resting on another (the sofa). In 4 and 5, on the other hand, there are dynamic chains of force, causation and resistance: in 4, there is movement of a still entity (the dog), caused by another entity (the boy) which exerts force, and in 5, there is resistance to (implicit) force exerted by some unspecified entity (presumably the boy), on part of a still entity (the dog). There is a wide range of more or less subtly different force-dynamic patterns like these, based on factors such as causation (external or self-contained), degree of affectedness/resistance, direction of force, and so on.

Relationality, finally, concerns whether or not the relevant conception involves some additional entity, apart from itself. For instance, conceptions of processes and events, such as CRY and JUMP, necessarily involve the additional conception of entities performing them; conceptions of properties, such as UGLY and BIG, necessarily involve the conception of entities manifesting them, and so on (cf. Section 3.2.1). Consequently, these structures are relational. Conversely, there are conceptions that are felt to be autonomous and self-contained; for instance, physical objects, such as TABLE, WATER and BABY, are self-contained entities that need nothing but themselves for their conception. Consequently, they are non-relational.

1.2.2.5 CONCLUDING REMARKS

In this section I have discussed the dynamic, operational phenomenon of construal, showing that whenever we engage in conceptual thought, we necessarily view, or construe, the object of conceptualisation in different ways: we focus on certain aspects at the expense of others, we view them in greater or lesser detail, we assess them relative to, or in terms of, other entities, we consider them from a particular perspective, and we determine their

static and dynamic constitution. These are operations that we presumably carry out on each and every occasion of conceptual thought. However, as I have already touched upon, it seems reasonable to assume that as a result of performing such operations over and over again we also abstract conceptual schemas *representing* the particular construals that they give rise to.[24] I will discuss some specific schemas below, suffice it at this point to establish, on a more general note, that the idea that we abstract schemas for use as structuring tools in any kind of conceptual thought seems psychologically plausible.

Before I leave the matter of construal operations and schemas, there are a few general points that have to be made. In Section 1.2.1 I contrasted schemas with domains, suggesting that the schema/domain distinction is functional in nature: whereas domains are conceptual representations that serve as knowledge structures in the context of which other, more specific concepts are understood, schemas are structures that serve as instructions as to how to view the material currently processed. It is important to realise, however, that the distinction between domains and schemas is not absolute; although their most common function is that of providing ways of viewing and structuring, many structures that are generally *referred* to as schemas may, in fact, also have a secondary domain-like function. For instance, we could be presumed to have some kind of ORDER schema that is used to structure an array of different concepts such as WEEK, QUEUE, and so on. With these concepts, ORDER serves a purely organising function; we do not *understand* the notions of WEEK and QUEUE *in terms of* ORDER – this function is instead left to other structures, such as, for instance, TIME and MEASURE, and SOCIAL CONVENTIONS – rather, we *look upon them as being ordered*, that is: we *structure* them by means of ORDER. However, under different circumstances, the ORDER schema may also function as a domain. This is seen clearly with, for instance, ordinal concepts (including notions such as THIRD, PREVIOUS and FOLLOWING); such concepts must necessarily evoke

24. In effect, then, it seems plausible that construal operations (at least to a large extent) come to consist in the mapping of, on the one hand, schemas and, on the other hand, underlying, unconstrued material. I will come back to the idea of unconstrued material (referred to as *purport*), as well as to construal as mapping of schemas with purport, in Chapter 2.

the order schema as a frame of reference – that is, as a domain – in that the various kinds of position that they designate can only be understood relative to order as such. Notions such as THIRD, PREVIOUS and FOLLOWING are not themselves *structured* by the ORDER schema – they form points *within* ORDER. An important reason that structures such as the ORDER schema are nevertheless generally referred to, and thought of, as schemas is that their structuring power is so pervasive; that is, although they *may* function as domains, they function *primarily* as schemas (cf. Croft and Cruse 2004:68).

Another reason that structures such as ORDER are generally referred to as *schemas* even when they function as domains is that the term itself – *schema* – may take on slightly different meanings. Apart from the functionally motivated use of *schema* in the sense 'representation that has a structuring function', there are also other applications of this term. For instance, it is often used in opposition with *content (structure)*, in which case it refers to a phenomenon based on the ontological nature of the information that it reflects, rather than on its function. In this sense, *schema* means 'structure that reflects information of a structuring kind', and contrasts with 'structure that reflects information of a contentful, descriptive kind' (that is *content structure*). Obviously, the difference between this sense and the sense based on function is extremely subtle in the case of the term *schema* itself; a representation that has a structuring function (sense 1) is necessarily also a structure that reflects structuring information (sense 2). Consequently, terms such as *schema* and *schematic* are often used indiscriminately in either of these senses. However, the distinction becomes important when we turn to the opposing terms – that is *domain* and *content (structure*) respectively. These terms do not refer to the same thing; on the contrary, as I have already suggested, a structure that functions as a domain does not have to reflect a content structure, but may well comprise purely structuring information (cf. the above example of ORDER). In most discussions of conceptual structure it is the distinction based on ontological nature, rather than the one based on function, that is intended (see e.g. Cruse and Togia 1996, Paradis 1997, 2001, 2003, 2004 [2010], 2005, Talmy 2000).[25] I will, myself, return

25. Talmy considers conceptual structure relative to two main systems referred to as the *conceptual content system* and the *conceptual structuring system* respectively (Talmy 2000),

to this kind of distinction in Chapter 3 below, where I suggest a classification of structures evoked by adjectives into, on the one hand, mainly contentful, and, on the other hand, mainly schematic structures.

Yet another, commonly intended, sense of *schema* is 'less specific structure that generalises over more specific structures'. This is probably also the most common sense of the corresponding adjective – *schematic* – which is thus synonymous with words such as *non-specific*, *generalising*, *skeletal*. For instance, a meaning such as ANIMAL is schematic relative to, say, POODLE; ANIMAL subsumes POODLE along with a vast number of other phenomena with which poodle has certain features in common, and it is thus also much less specific than POODLE. I will return briefly to this sense of schemas in Section 1.3.1 below.

1.2.3 Summary

In this section I have discussed some fundamental assumptions concerning the human mind, made within cognitive linguistics. According to this theory, conceptual structure is emergent rather than innate, and all structures are furthermore ultimately grounded in embodied experience – either directly (as in the case of basic domains and image schemas) or indirectly, as a consequence of their ultimate falling back on basic domains, and their being structured by image schemas respectively. I have also discussed what main kinds of representations are posited for conceptual space. I have shown that conceptual structures are roughly divided into domains and schemas on the basis of their main representational function; domains are representations of some kind of coherent, contentful area of human experience, serving as the prerequisite for the understanding of other more specific structures, whereas schemas are essentially representations of ways of viewing, or construing, any material with which they may map. In connection with my discussion of domains, I also considered the question of how con-

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and Cruse and Togia and Paradis propose a rough division of conceptual space into *the schematic domain* and *the content domain* respectively. Many of the scholars describing conceptual structure in terms of schemas vs. content structures furthermore use the term *domain* inclusively for what they refer to as schemas and content structures alike. This is, of course, completely adequate, since, in this sense, both kinds of structure may function as domains.

ceptual space is assumed to be organised; rather than being constituted by, for instance, a simple list or inventory of separate, self-contained entities, it is assumed to consist in an immensely complex network of conceptual material, where specific concepts could be seen as forming points of access in various areas within our bank of knowledge as a whole. For instance, a concept such as BANANA is stored relative to (and thus gives access to) a wide variety of domains, including domains such as COLOUR, SHAPE, EATING and EATING CONVENTIONS, PLANT LIFE AND REPRODUCTION, FRUIT, and so on. The fact that domains are interconnected in this way in turn means that whenever we activate a particular concept, we also activate to varying degrees the various domains with which it is somehow associated. Finally, I have considered the operational (as opposed to representational) aspect of the human mind, establishing the importance and pervasiveness of construal in any kind of conceptual activity.

Having accounted for the cognitive linguistics view on conceptual structure and construal in general, I will now turn to the matter of how general conceptual and cognitive issues impinge on the specific area of language.

1.3 Language

In Section 1.2, I showed that language, as conceived of within cognitive linguistics, consists of the same kind of representations, formed by means of the same cognitive processes, as any other kind of knowledge that we acquire during our lives. This in turn raises the question how language can be distinguished as a specific phenomenon within cognition and conceptualisation in general. For purposes of language study, it is convenient to distinguish three sub-kinds of mental representation, namely what is generally referred to as *phonological structures*, *semantic structures* and *symbolic structures* respectively (e.g. Langacker 1987). Phonological structures are conceptualisations of phonic information of any kind – segmental as well as supra-segmental information – including speech sounds as a special case. Semantic structures, on the other hand, could be somewhat sweepingly described as conceptualisations of any other kind of information, regardless of modal origin, and regardless of whether they are schematic or contentful. The disparity of this distinction – assigning individual status to structures

reflecting phonic information, but lumping structures reflecting any other kind of information together indiscriminately – is warranted by the fact that this is how structures are generally divided up by the third kind of mental representation, namely symbolic structures. Symbolic structures consist in symbolic pairings between phonological and semantic structures, where the phonological pole symbolises the semantic pole. It is our integrated sub-system of symbolic structures that constitutes language – hence, language is distinguished in terms of being symbolic in nature.

The idea of language being made up by bi-polar structures, where one pole symbolises the other, is not exclusive to cognitive linguistics. In modern times, it goes at least as far back as to the Structuralists (e.g. Saussure 1960), who suggested that the linguistic sign divides into two parts: the signifier, corresponding to the phonological pole, and the signified, corresponding to the semantic pole. However, although the Structuralists focused on these two in their capacity of forming parts of a symbolic whole, it is important to realise that phonological and semantic structures are each independent of symbolisation. Although they very well may be linked in symbolic pairings, they do not have to be. In order to understand the individual status of semantic and phonological structures, we could think of the area between the nose and the upper lip (Langacker 1987:60) and the phonological sequence /kwurt/ respectively. As for the former, which is a uni-polar semantic structure, we have no problem imagining the area in question – for most of us it probably even constitutes a fairly well entrenched concept. Nevertheless, we have no word for it – it has no corresponding phonological pole (in English).[26] Conversely, we have no difficulty conceptualising the string of sounds /kwurt/, which is a uni-polar phonological structure, but it does not 'mean' anything – it has no semantic pole associated with it (again, in English).

Recapitulating, language according to cognitive linguistics could be said to be our integrated mental sub-system of bi-polar, symbolic structures, in which phonological poles symbolise semantic ones. In the remainder of the present chapter, focus lies on the semantic pole of symbolic items. I start with a general discussion of language structure and language organisation (Section 1.3.1). I then turn to the notion of linguistic meaning, and how this

26. For further examples of uni-polar semantic structures see, e.g. Murphy (2002:389).

is dealt with in cognitive linguistics (Section 1.3.2). In Section 1.3.3, next, I consider the conceptual basis of the linguistic division into different word classes and phrase types (namely THING/RELATION construal), concentrating on nominal and adjectival structures in particular (Sections 1.3.3.1 and 1.3.3.2). In this presentation I also consider certain schemas of particular importance to language.

1.3.1 The Organisation of Language

In this section I describe briefly the organisation of language. I present the idea of a general conceptual grammar, and how this could be assumed to be organised in our minds. As I mentioned in Section 1.3.1, a basic claim made within cognitive linguistics is that we cannot clearly distinguish different parts of language organisation. That is, we do not have a separate 'grammar' of rules operating with some specific kind of entities internal to the system, nor do we have a separate 'lexicon' consisting of a set of 'lexical items' that are of a completely different kind compared to the entities of grammar. Rather, lexicon and grammar are assumed to comprise the exact same kind of entities – namely symbolic structures –, which differ only in terms of how specific, or schematic they are.[27] Consequently, language structure is believed to be best accounted for in terms of a continuum of symbolic structures ranging from very specific and detailed items to highly abstract (grammatical) schemas. This continuum will henceforth be referred to as *the grammar continuum*.[28] A specific item is simply any item that is specified at both poles, regardless of internal complexity. That is, [PUSH THE ENVELOPE / push the envelope][29] and [BOILER SUIT WASHING MACHINE / boiler suit washing machine], as well as [BOOK / book] and [MUSIC / music] are completely

27. Note that *schema* and *schematic* are used in the present section in the sense 'generalising, non-specific', cf. Section 1.2.2.5 above.

28. Although it is convenient to discuss the grammar continuum as a phenomenon in its own right, this does not mean that it constitutes a separate mental module. As I have already established, language is considered to be an integrated part of conceptual space, using the same kind of structures as those used for any cognitive activity.

29. In the representation of symbolic structures I follow Langacker in using small capitals for the semantic pole, lower case letters for the phonological pole, and a slash to mark bipolarity.

specific symbolic structures.[30] A grammatical schema, on the other hand, could be seen as a kind of template for a certain set of more specific structures, grouped together on the basis of some shared feature(s). What a schema does, then, is to represent linguistically relevant generalisations. Consequently, one could say that the notion of schema (in the sense used in the present section, cf. Footnote 27 and Section 1.2.2.5) is the cognitive linguistics equivalent of grammatical rule.

According to cognitive linguistics, we have taxonomic networks showing exactly how the various structures constituting the grammar continuum are related in terms of schematicity/specificity. In these networks each (more or less schematic) structure is linked by means of categorising relations to a higher-level schema and/or to a set of more specific structures over which it generalises. Figure 2 gives a very simplified picture of what part of the schematic network for the class of nouns might look like:

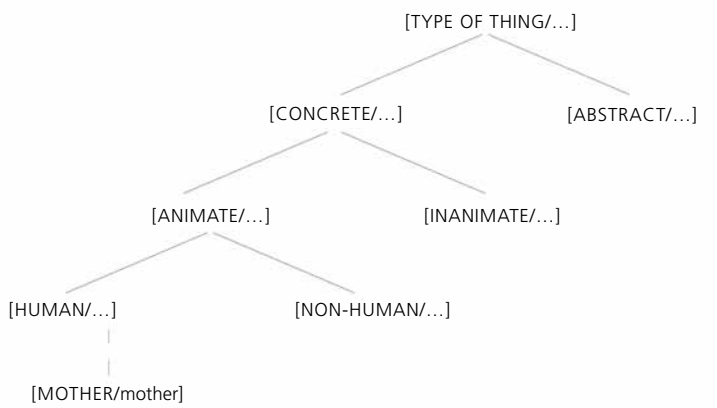

Figure 2: Schematic Network For the Class of Nouns

30. It should be pointed out in this context that whereas the present account represents the standard approach to the grammar continuum, modifications are made in many current descriptions. Specifically, as I shall come back to below (see, especially, Section 2.3), many works (including the present one) suggest that whereas the phonological pole of a specific item is presumably stored in all its specificity, its semantic counterpart is most likely *not* stored, but rather created on-line, in the moment of activation.

Obviously, the illustration in Figure 2 is extremely simplified. For one thing, it represents only a certain kind of sub-category, and even here, many possible subsets are left out (notably those subsumed by the schemas to the right at each level). Furthermore, the figure gives a highly abbreviated representation of the information included with each structure, which obscures the idea of a network of information; the notion of 'concrete' for example, gives access to all our knowledge of what it means to be concrete, and the same applies to all these structures (and to conceptual structures in general). Figure 2 also gives the dubious impression that all information is stored in a maximally economical way, in that it represents each distinctive feature only once.[31] For instance, THING construal is represented only at the top level, although this construal is by definition shared by all the structures found in Figure 2; essentially, THING construal is what makes a noun a noun (for further discussion of this, see Section 1.3.3.1 below). Having made these admissions, I believe that Figure 2 nevertheless illustrates in a clear way the idea of taxonomic networks.

The structuring factor in taxonomic networks such as the one given in Figure 2 is, of course, categorisation. Consequently, categorising relations constitute an important kind of relation in linguistic organisation. Another kind of relation that is of great significance is the valence relation, which involves the syntagmatic aspect of language, that is, the combination of smaller entities into larger structures. Valence relations could be seen as "instructions for fitting two structures together" (Langacker 1987:96). There are four main aspects to valence relations, namely correspondence, profile determinacy, autonomy/dependence and constituency.

The correspondence aspect, first, is to do with the fact that it must be possible to set up some kind of correspondence between structures in order for them to be able to combine. That is, there has to be some part of the one

31. There has been some discussion in the literature as to exactly how we store recurrent information in taxonomic networks. Scholars have suggested models ranging from complete inheritance models like the one used here (e.g. Kay and Fillmore 1999) via slightly more inclusive inheritance models (e.g. Goldberg 1995:73) to full-entry models where all information is re-represented at each consecutive level (e.g. Goldberg 1995:74). Psychological evidence seems to support models towards the full-entry end rather than those that suggest complete inheritance in all cases (Barsalou 1992a:180). That is, we seem to re-present information at each consecutive level.

structure that corresponds to, and elaborates, some more or less salient part of the other. For instance, in a combination such as *black dress*, the meaning of the adjective corresponds to, and elaborates, a substructure COLOUR, comprised by the meaning of the noun, and, conversely, the meaning of the noun corresponds to, and elaborates, the sense of something manifesting blackness, which is comprised by the adjective (for further discussion of internal conceptual make up of adjectives and nouns, see Section 1.3.3 below).

Profile determinacy, next, involves the question of what kind of **Gestalt** – i.e. what external conceptual 'shape' (see Section 1.3.3) – a composite structure takes on. The most common situation is that it simply adopts the Gestalt of one of its component parts.[32] Which of the component Gestalts is prototypically adopted by different kinds of combinations is presumably indicated by schemas, so that in English there is a general schema for, say, adjective–noun combinations, which tells us that any such combination will take on the Gestalt of the component noun – that is, the meaning of a noun on its own, for instance *dress*, as well as of an adjective–noun combination, for instance *black dress*, will be construed as THING (cf. Section 1.3.3). The component whose Gestalt is taken on by the complex structure as a whole (in this case DRESS) is referred to as the *profile determiner*.

The autonomy/dependence factor, in turn, is to do with the degree to which component parts are dependent on each other.[33] The more relevant the corresponding, elaborated part of a component is, the more dependent the component is, and vice versa. In adjective–noun combinations, for instance, the part that the noun elaborates in the adjective is part of the adjective profile (cf. Section 1.3.3.2), which is about as relevant as it gets.

32. Other situations are, however, also possible, such as merging of Gestalts, or creation of a new Gestalt from component substructures other than the original Gestalts. For further discussion and exemplification of less common cases like this, see Casad (1982), Casad and Langacker (1985), Langacker (1987:290f).

33. Note that *dependence* must not be confused with *dependency*, as used in the theories of, for example, dependency grammar (e.g. Robinson 1970, Anderson 1971, Hudson 1976, Matthews 1981). In such theories nominals, for example, are considered to be dependent on elements such as adjectives or verbs, in that the latter determine how many, and what kinds of, nominal arguments they take. As will become apparent, the notion of dependence (as opposed to dependency) runs completely counter to this analysis.

Consequently, the adjective is highly dependent in relation to the noun. The part that the adjective elaborates in the noun, on the other hand, is generally some less relevant substructure, such as SIZE or COLOUR (as in *black dress*). Hence, the noun is autonomous in relation to the adjective. The autonomy/dependence dichotomy can be used to account for various grammatical notions. For instance, it explains neatly the difference between the traditional grammatical terms *complement* and *modifier*. If the profile determiner of a phrase is a dependent structure, the structure elaborating it will be a complement, whereas if the profile determiner is autonomous, the structure elaborating it will be a modifier. For instance, in a prepositional phrase such as *on the table*, the noun phrase (*the table*) is a complement since the profile determiner (ON) is dependent: THE TABLE elaborates a crucial part of the preposition's profile – namely the central knowledge that ON involves some kind of THING relative to which something else is positioned – whereas ON, in turn, elaborates a less important substructure of THE TABLE. Conversely, in a combination such as *black dress*, *black* is a modifier since the profile determiner (DRESS) is autonomous – as I showed above, the structure that BLACK elaborates in DRESS is a less important structure, whereas the structure that DRESS elaborates in BLACK is extremely central.[34]

Constituency, finally, involves the *grouping* of component structures, that

34. It should be noted in this context that there are many cases of adjective-noun combination where the profile determiner (the noun) could arguably be said to be dependent, but where the adjective is nevertheless considered to be a modifier rather than a complement. Examples include *solar power*, *atomic bomb*, *circular saw* and *brown bread*. However, the kind of dependence exhibited by combinations like these – namely dependence in the sense that the adjective cannot be omitted without crucially affecting nominal meaning – is not the same as dependence in the sense discussed above – that is dependence in the sense of having a central aspect of the actual profile elaborated. In this latter sense, the profile determiners of combinations such as *solar power* and *brown bread* are clearly autonomous: in any standard analysis of these combinations, SOLAR and BROWN would be considered to apply to less important substructures of POWER and BREAD (namely to GENERATOR and COLOUR respectively) rather than to the profiled concepts as such. Having said this, I would like to suggest an entirely different approach to this kind of combination: as I shall come back to in Section 2.3.1 and 4.2, I argue that in this kind of case there is no relation of (mutual) elaboration between adjective and noun to begin with; instead, the adjective meaning and the noun meaning serve as independent (although clearly 'co-operating') indicators of a third, individual meaning.

is the order in which smaller structures are combined to form more complex structures. Consequently, the notion of constituency as conceived of in cognitive linguistics is basically the same as constituency as interpreted in, for example, generative theory – with one important exception: Whereas generative theory considers constituency as a purely syntactic phenomenon, separate from any semantic or phonological considerations, cognitive linguistics sees it as a feature of the valence relations holding between symbolic structures, which involve semantic and phonological poles and nothing else.

In this section I have focused on language organisation. I have shown that cognitive linguistics posits one single grammar continuum for all aspects of language structure and organisation, a continuum that is constituted by, on the one hand, symbolic structures (which differ in terms of specificity/schematicity, but not in terms of their basic nature – they are all conceptual structures of a bipolar, symbolic kind), and, on the other hand, different kinds of relation, such as categorising relations and valence relations, which give structure and cohesion to the language system.[35] In the next section I will turn to the notion of (linguistic) meaning, and how this is dealt with within cognitive linguistics.

1.3.2 Meaning

What exactly is meaning? How could – and should – it be dealt with? This issue has been approached in the literature in two main ways: the representational approach sees meaning as reflections of conceptual structure, whereas the referential approach looks at meaning in terms of what language refers to in the world (or any possible world). As should be clear from what has been said in previous sections, cognitive linguistics takes the former approach, looking upon components of language as pairings between phonological and semantic poles, so that the meaning of a certain linguistic element is the semantic (conceptual) structure constituting the semantic

35. There are many other kinds of relation, pertaining to different aspects of language. One crucial kind is of course the **symbolic** relation, found between the semantic and the phonological pole of any linguistic structure. What is traditionally called *sense relations* or *semantic relations* – i.e. synonymy, antonymy etc. – are other examples. For further discussion on various sorts of relations found between symbolic structures, see e.g. Lakoff (1987), Goldberg (1995) and Croft and Cruse (2004).

pole. The referential approach, on the other hand, is represented by truth-conditional theories such as those mentioned in Section 1.1 above.

The main issue of discussion among representational linguists has been – and still is – what the mental entities symbolised by words 'look like' – what information they comprise, and how this information is structured. The so-called classical view, which falls back on ancient philosophical tradition, is that meanings are mental definitions providing all the necessary and, at the same time, sufficient characteristics of the category that they represent (see, e.g. Katz and Fodor 1963, Collins and Quillian 1969). There are obvious problems with this view. For instance, how do we decide which components are necessary, and how do we draw the line when it comes to sufficiency? How do we explain that no matter what necessary features we decide on, we can always find a context where exceptions would be allowed? [36]

Various theories have been formulated to meet the problems with the classical view, two of the most important of which are prototype theory (e.g. Rosch 1973, 1975, Rosch and Mervis 1975, Rosch *et al.* 1976, Hampton 1979, Smith and Medin 1981, Barsalou 1992a) and frame semantics (e.g. Fillmore 1975, 1982, 1985).[37] Prototype theory focuses on the observation that there are degrees of prototypicality, so that necessary and sufficient features can in principle be set up for a prototypical member of a certain category, but not for the category as such. Category boundaries are instead considered to be fuzzy, so that one category shades off into another. Frame semantics focuses on the fact that there is so much more to our conceptual structures than simple components of meaning. According to this view, the meaning

36. There is a wealth of literature on the inadequacy of the classical view. Interesting philosophical discussions include Wittgenstein (1968), Putnam (1962 and 1975) and Kripke (1980, especially p 119–21).

37. Whereas frame semantics was developed as a specifically linguistic theory, prototype theory originated in more general cognitive psychology. Another important theory developed within cognitive psychology as a reaction against the classical view of conceptual representation is exemplar theory (e.g. Medin and Schaffer 1978, Nosofsky 1992, Nosofsky and Palmeri 1997), according to which our conceptions of any actual experience – exemplar – of a certain kind together serve to represent the kind as such (so that we have no abstract concepts that are generally representative of kind). However, unlike prototype theory, which has had a huge impact on linguistic views of meaning, exemplar theories has tended to be generally ignored in the linguistic literature.

of a linguistic item depends on elaborate theories about the world – so-called **frames** – formed from experience and the culture we live in. This view is, of course, fully in line with the more generally cognitive view that the conceptual structures that we have exist in a network of encyclopaedic knowledge, where one structure includes parts of other structures; the term *frame* refers to basically the same phenomenon as that referred to as *domain* above.[38]

Of course, the notion of meaning cannot be captured by referring to frames only. We also have a sense of the intended semantic structure as such, standing out against the background provided by the frame. As I mentioned in Section 1.2.2.1 above, this is referred to as the **profile**, and a certain linguistic item is said to profile a specific semantic structure – i.e. meaning – against a specific frame on a particular occasion of use. To better grasp the distinction between profile and frame, we may consider a word pair such as *caviar* and *roe*, originally discussed by Langacker (1987:164–165). These words profile the same underlying concept, but they do so against different frames: whereas *caviar* profiles the intended concept against a frame of food and food consumption, *roe* calls up a 'biological' frame of fish and fish reproduction. Frame semantics and prototype theory both constitute part of the basis for the general view of meaning adhered to in cognitive linguistics.

A radical development of the cognitive approach to meaning representation is that meaning is, in fact, not represented at all, other than in specific usage events. That is, the semantic structure symbolised by a phonological ditto is assumed to be created 'on-line', in actual usage events, rather than to be stored as a meaning in conceptual space, awaiting activation. This view, often referred to as the *Dynamic Construal Approach*, was first put forth by Moore and Carling (1982) and has later been developed by, among others, Lakoff and Sweetser (1994), Croft (2000c), Cruse (2000a, b, 2002), Croft and Cruse (2004), and Paradis (2005, 2008, forthcoming). I will return to a detailed discussion of this approach in Chapter 2.

In this section I have focused on the notion of meaning. I have shown

38. Ideas similar to the idea of domain/frame have been presented by several other researchers in psychology and artificial intelligence as well as in linguistics, all typically using their own terms (Fillmore 1985:223, n. 4). For an overview of some such proposals, see Stillings *et al.* (1995).

that in cognitive linguistics, this phenomenon is considered to be of a representational rather than a referential kind, so that the meaning of a particular item is constituted by a mental representation, rather than by its extension in the world (or any possible world). I have also shown that meaning is considered to be encyclopaedic in nature, so that the import of a specific linguistic item cannot be isolated from our general knowledge of the world. Finally I have introduced very briefly the idea of on-line creation of meaning, as opposed to ready-made, stored meaning. So far I have focused on the contentful aspect of meaning. Strictly speaking, however, meaning includes not only content, but also schematic structures of various kinds.[39] This is what I turn to now.

1.3.3 Word Classes and their Conceptual Basis

In the previous section I discussed in some general terms the notion of meaning, and how the contentful side of this phenomenon is tackled within cognitive linguistics. In the present section I take a closer look at the schematic side of meaning, focusing on the kinds of construal that underlie our classification of symbolic structures into word classes and phrase types. Particular attention is paid to the kinds of schematic information that constitute the basis of nominal and adjectival structures.

I have already touched upon the idea of schemas in Section 1.2.1 above. One kind of such structures, which is of particular importance to the classification of language, is that of Gestalt. I introduced in passing the idea of Gestalt in Section 1.2.2.4, where I discussed constitutional construal. The specific nature of the various operations involved here – structural schematisation, the construal of transmission of energy (or lack thereof), and the assessment of relationality – as well as of certain other operations (notably scanning (cf. Section 1.2.2.1) gives rise to specific Gestalt schemas, which, in turn, form the basis of our classification of symbolic structures into word classes and phrase types. According to cognitive linguistics (see, e.g., Lang-

39. Any specific, fully interpreted meaning necessarily comprises schematic information, telling us how to construe the content at hand. In short: according to cognitive linguistics, meaning comprises what is traditionally considered to be grammatical information as well as straightforwardly semantic ditto.

acker 1987:ch 5–7, 1991b:ch 3), the basis for nominal structures (nouns and noun phrases) is the **THING** schema (Section 1.3.3.1), the Gestalt found with adjectival, adverbal, and prepositional structures (single words as well as full phrases) is the **ATEMPORAL RELATION SCHEMA** (Section 1.3.3.2), and that which gives rise to verbal structures (verbs and verb phrases) is the **TEMPORAL RELATION** schema (which differs from ATEMPORAL RELATION in that it is scanned dynamically through conceived time, rather than summarily and statically (cf. Section 1.2.2.1)). In the cognitive framework the starting point for grammatical classification is thus not different formal and notional criteria, but rather construal – whether we think of some content as THING, ATEMPORAL RELATION or TEMPORAL RELATION – and only on the basis of this are symbolic structures categorised into word classes and phrase types.

In the following sections, I will go into some further detail about nouns and adjectives respectively, taking a closer look at the Gestalt schemas that form the conceptual basis of these structures – that is, the THING and the ATEMPORAL RELATION schema respectively – as well as at certain other aspects of construal relevant in this context.

1.3.3.1 THE CONCEPTUAL NATURE OF NOUNS

In this section I comment briefly on the cognitive approach to nouns, which are symbolic structures construed as THING. Although there is (obviously) a lot more to be said about this kind of structure, I restrict the presentation to two main aspects: on the one hand the aspect of nominal Gestalt (*viz.* THING), and, on the other hand, the aspect of internal nominal structure, focusing on the idea of **qualia structure**.

As I have already pointed out, the Gestalt schema that forms the conceptual basis of nominal structures is the THING schema. It is important to realise that the technical cognitive linguistics meaning of the term *thing* should not be confused with the sense 'physical object'. Langacker defines the THING schema as a "set of mutually interconnected entities" – a region – in some domain (1987:494; see also 1987:ch 5). An entity could be anything – a thing, relation, sensation, point on a scale, location, value etc. Interconnection is what we have when several entities are co-conceived as a higher-order structure. For instance, a concept such as MORNING is typically construed as a region in the TIME domain – hence, TIME constitutes

part of the frame of MORNING, more precisely its domain of instantiation – and the entities interconnected to form this region are conceptualisations of points in time. Another example is the concept FOREST, which is typically construed as a region found in the SPACE domain, arising through the interconnection of conceptualisations of trees.

Basically any set of entities could be construed as THING, but there are, of course, certain sets that are more naturally conceived of as forming a region than others. There are many factors determining the relative ease with which we conceive of a set of entities as forming a region, factors such as the density of the interconnections, the cognitive distance between the entities, the utility of the conception and so on. As Langacker points out, "we hardly expect to find in any language a noun that designates a fancied region consisting of the hump of a camel in the morning, the letter R in the afternoon, and a colour television set at night" (Langacker 1987:200).

Although the THING schema thus involves, on the one hand, different entities and, on the other hand, co-ordinating processes interconnecting these entities, it is the full final product that is profiled. That is, with the concept MORNING, for example, we do not focus on the individual points in time, nor on the processes interconnecting them, but rather on the resulting whole. This could be represented graphically as in Figure 3 where neither the component entities (shown as boxes) nor the interconnections between them (shown as lines) are individually profiled. Instead it is the full region – within which the entities and the interconnections nevertheless play crucial parts – that is profiled. In Figure 3 this is indicated by means of a heavy-line circle enclosing the region as a whole:[40]

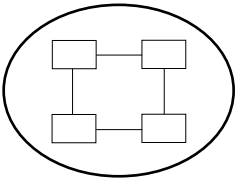

Figure 3: The Thing Schema

40. I follow Langacker in using boxes as an overarching notation for entities of any kind, regardless of their precise nature. Circles or ellipses are used for entities construed specifically as thing.

So far I have considered the nature of the THING schema, i.e. the conceptual basis for classification of symbolic structures as nominals. The THING schema could be said to take care of the external configuration of the content profiled by a noun.[41] As for content as such, on the other hand, there is, supposedly, another kind of structure, that could be said to function as a very general 'declaration of content', establishing that something that is construed as THING has the capacity for four main kinds of content, sorted into four main **qualia** – more precisely the formal, the constitutive, the agentive, and the telic quale.[42]

The **formal quale** is categorial, telling us that things typically exist in taxonomic networks, with super ordinate kinds as well as sub kinds. The **constitutive quale** is structural, suggesting that things have (or may be perceived of as having) some sort of structural make-up, including sensory attributes (shape, size, colour etc.), constituent matter, and part structure. The **agentive quale** is existential, informing us that things have a life cycle

41. This is, of course, not exclusive to the THING schema. All Gestalt schemas give external form to the structures they map with; this is the very point of Gestalt.

42. The notion of a qualia template was first introduced by Pustejovsky (1995), on the basis of ideas dating as far back as to Aristotle, and has since been used by scholars such as Cruse (2000a:117–119), Jackendoff (2002), Warren (2003) and Paradis (2003; 2004 [2010]). Descriptions differ, however, to some extent from one to another; particularly, there are differences in terms of, on the one hand, the conceptual nature, and, on the other hand, the exact organisation of the qualia template. As for conceptual nature, Pustejovsky and Jackendoff hold that qualia appear in the lexicon, as parts of lexical items, whereas Cruse and Paradis claim that they have a more general conceptual application (Warren takes no explicit stand in the matter). This is of course no surprise, seeing that these linguists have different views of how language is organised in general; Pustejovsky and Jackendoff believe in modular divisions into lexicon, syntax etc., and Cruse and Paradis believe in a general conceptual grammar with no strict divisions either between different levels, or between linguistic knowledge and world knowledge. My own view on this matter accords with that of Cruse and Paradis. As regards the exact organisation of the qualia template, descriptions differ both in terms of number of qualia suggested, and in terms of what kinds of information are considered to 'go with' which quale. Compared to the original model put forth by Pustejovsky, Paradis has fewer, more general qualia, whereas Jackendoff retains the number of qualia, but with a different distribution of information. Jackendoff claims that he redistributes properties "in the interest of coherence", and that the changes are of no great theoretical significance. I agree with him on both accounts, and the present description is consequently based mainly on Jackendoff.

with a start and an end, as well as possible intermediate stages. It also tells us that things come into being and come to an end in some particular way – naturally or artificially. The **telic quale**, finally, is functional, suggesting that things interact with other entities and/or can be interacted with, most importantly as part of some function or purpose.

As should be clear from what has just been said, the respective qualia – the formal, the constitutive, the agentive and the telic – could be seen as the most general content structures found with nominal concepts. Although they are schematic in the sense 'abstract'/'non-specific'/'general', they are not, I maintain, schematic in the sense of being conceptualisations of ways of looking upon things (that is, they are not conceptualisations of construals). Rather, they are clearly of a content kind, roughly summarized by content words such as *kind* (the formal), *constitution* (the constitutive), *existence* (the agentive), and *activity* (the telic) respectively.

Within each quale, nominal content clearly falls into further, often quite complex, patterns of increasing specificity. Consequently, it is reasonable to assume that there are further structural levels, where qualia are 'at the top' of a taxonomy of content structures with different degrees of specificity, ranging from the highly non-specific qualia, all the way down to idiosyncratic, highly specific information found only with individual – or at least only with very limited sets of – nominal concepts.[43]

Obviously, in practice, there is no hard and fast line between, on the one hand, general, and, on the other hand, specific content structures, but in theory, it should nevertheless be possible to discern a set of content structures regularly appearing with nominal concepts, that are general in that they apply to whole classes of nominal concepts, but that are nevertheless

43. Note that we are dealing with two kinds of degree of specificity here: on the one hand, we are dealing with specificity in the sense 'idiosyncraticity/application to a limited set of nominal concepts', and, on the other hand, we are dealing with specificity in the sense of actual meaning being more or less specific. In most cases the two co-occur, so that the more idiosyncratic a certain content structure is, the more specific it tends to be in terms of actual meaning. For instance, the qualia themselves apply to nominal concepts in general, and are, at the same time, also very general in terms of meaning as such. The structure SCREAMS WHEN HUNGRY, on the other hand, applies to a much more limited set of nominal concepts (notably concepts of the kind BABY), at the same time as it is much more specific in terms of meaning.

more specific than qualia in terms of actual meaning.[44] Some such subdivisions into more specific (although still general, in terms of the number of nominal concepts that they apply to) structures have already been made in the literature. For instance, the constitutive quale is said to comprise content structures such as SENSORY ATTRIBUTES, CONSTITUENT MATTER, and PART STRUCTURE, and SENSORY ATTRIBUTES are, in turn, described as comprising COLOUR, SHAPE, SIZE etc. (see, e.g., Jackendoff 2002). In general, however, structures at lower levels of specificity have not been mapped out in any great detail.

Apart from being presupposed by the qualia template and other more specific, though still general content structures, it also seems reasonable to assume that content of any degree of specificity is associated in certain ways to the concept as a *whole*. This assumption is in line with proposals made by, for instance, Collins and Loftus (1975) and Barsalou (1983), who suggest that attributes are tied to concepts by means of associations "such as "has" (e.g., a robin has wings) […] and "is an instance of" (e.g., "robin" is an instance of "bird")" (Barsalou 1983:212). Quite likely, then, conceptualisations of regularly recurring associations of this kind exist as integrated parts of structural templates such as qualia structure. For instance, the conceptualisation of the association 'is an instance of' (or, better: 'is a kind of') is, I believe, found as part of the formal quale, and that of the association 'is constituted by' is tied to the constitutive quale.

The idea of specific substructures mapping with more general substructures via associative links could be illustrated graphically as in Figures 4a and b.[45]

Figure 4a illustrates what the structure for a relatively schematic thing concept such as PHYSICAL OBJECT might look like in part, whereas Figure 4b shows how the more specific substructures comprised by a concept such as GRENADE maps with, and are organised according to, the more general struc-

44. Such structures are variously referred to as *zones* (e.g. Langacker 1987:271ff, Croft and Cruse 2004:138ff, Paradis 2004 [2010]), *dimensions* (e.g. Murphy 1988, 1990, 2002, Wisniewski 1997), *roles* (e.g. Warren 1984a, b), and *attributes* (e.g. Smith and Medin 1981, Smith and Osherson 1984, Smith *et al.* 1988). In the present work they are interchangeably referred to as *substructures* or *dimensions*.

45. The subscripts F, C, A and T stands for the formal, the constitutive, the agentive and the telic quale respectively.

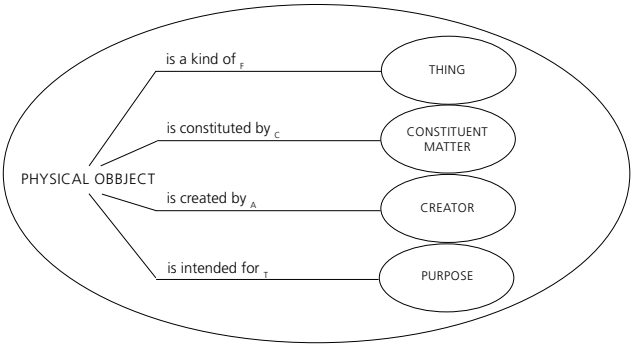

Figure 4a: Part of the Conceptual Structure of PHYSICAL OBJECT

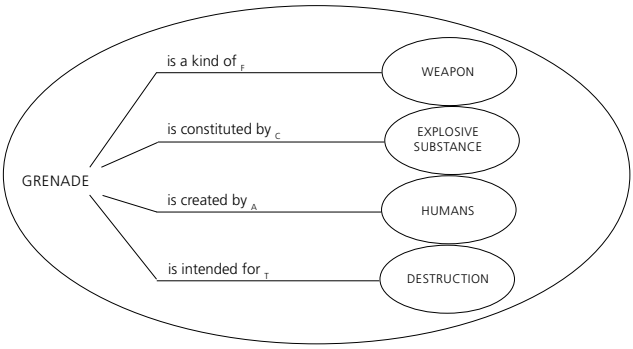

Figure 4b: Part of the Conceptual Structure of GRENADE

tures.[46] From a specifically linguistic point of view, qualia structure is generally thought of as the prerequisite factor enabling, for instance, adjectives to 'hook onto' nouns. That is, in much the same way as the argument structure of verbs allows for elaboration by means of structures acting as subjects, objects and complements, the qualia structure of nouns – along with further substructures within qualia – allows for elaboration by means of adjectives. For instance, the constitutive quale, with its various substructures of, for

46. These templates are obviously much more detailed than the relevant Figures indicate, with many more substructures, even at the general level of Figure a. Obviously it is practically impossible to show them all. I nevertheless believe that these figures serve their illustrative purpose.

instance, COLOUR, SHAPE and SIZE, enables elaboration by adjectives such as *black*, *round* and *huge*, and the telic quale, with its prime substructure of PURPOSE, allows for elaboration by adjectives such as *surgical* (as in *surgical instrument*) and *educational* (as in *educational programs*).

1.3.3.2 THE CONCEPTUAL NATURE OF ADJECTIVES

In this section I deal with adjectives, that is, symbolic structures construed as ATEMPORAL RELATION. The ATEMPORAL RELATION schema forms the conceptual basis not only of adjectives, but also of other similar symbols such as adverbs and prepositions. For obvious reasons I will concentrate on the specific version serving as the Gestalt for adjectival structures, although I will sometimes (at least initially) also use prepositional structures for purposes of illustration, simply because these are often more straightforward than adjectives.[47]

I showed in the previous section that a thing concept profiles entities and their interconnections collectively as an integrated whole. A concept construed as ATEMPORAL RELATION, on the other hand, profiles one individual interconnection, that is, the actual relating of one entity to another; ON, for example, typically relates two entities in space, whereas DURING typically relates two entities in time.[48] Because it is impossible to conceptualise an interconnecting process without also conceptualising entities that are interconnected, it is reasonable to assume that an atemporal relation profiles not only the interconnection as such, but also entities that are interconnected. The ATEMPORAL RELATION schema could thus be represented graphically as in Figure 5.

An atemporal relation is generally construed as being 'asymmetric', so that one of the interconnected entities is marked off as the 'stronger', more prominent component in the relation.[49] This prominent component is the

47. I would, however, not wish to give the impression that the kind of concept that forms the semantic pole of a preposition cannot be complex – quite the opposite. For a well-known and very exhaustive study illustrating the intricate semantic networks that the semantic pole of a preposition may exhibit, see Brugman and Lakoff (1988).

48. Remember that *entity* is used in a maximally broad sense, about objects, relations, points on a scale etc.

49. In other words, along with the assignment of the ATEMPORAL RELATION schema as

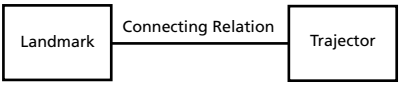

Figure 5: Atemporal Relation Schema

trajector. The trajector could be said to be the entity that is related, whereas the other component, the landmark, is the entity that the trajector is related *to*. Langacker illustrates this by means of the relations ABOVE and BELOW, which differ mainly in terms of trajector/landmark assignation: "The only substantial difference between the two [...] is that an expression of the form *X is above Y* takes *Y* as a point of reference (landmark) for locating *X*, while *Y is below X* takes *X* as a point of reference for locating *Y*" (Langacker 1987:219).[50]

Let me now turn more specifically to adjectives as such. From a Gestalt point of view, the interconnected entities found with such items are the same, in that they are both mapped with the THING schema.[51] This is, however, as far as the similarity goes. Apart from differing in terms of prominence, the two entity conceptions also typically differ in terms of how much further information they conventionally hold: whereas the entity construed as trajector is left essentially unspecified with the adjective itself, the entity construed as landmark typically maps with some further, more or less contentful structure. With an adjective such as *cute*, for instance, the trajector is left relatively schematic until it is elaborated by the meaning of a combining noun (as in *cute baby*). The entity construed as landmark, on the other hand, is further mapped with the notion of CUTENESS.[52]

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such, there is also figure-ground alignment, cf. Section 1.2.2.2.

50. As I will come back to in Section 3.3, the cognitive view of adjectives as atemporal relations that link two entities to one another is, in fact, very similar to that put forth by 'non-cognitive' linguists such as Aarts and Calbert (1979) and Warren (especially 1984a). The main difference between the cognitive view and that presented by Arts and Calbert and Warren, is that unlike cognitivists, Aarts and Calbert and Warren go into quite some detail about the actual connecting relation.

51. The fact that both entities involved in an adjective are construed as THING is, furthermore, one of the things that distinguishes adjectives from adverbs; with the latter kind of structure the entity construed as trajector is typically mapped with the TEMPORAL RELATION schema (as in *He walked slowly*) or the ATEMPORAL RELATION schema (as in *He is very sweet*).

52. This is, furthermore, something that distinguishes the majority of adjectives from

Of course, the observation that there is often further information mapping with the landmark of an adjective does not entail that this content is *fixed* with this adjective. Just as is the case with meaning in general, exactly what additional information maps with the landmark is determined in (as opposed to provided by) context, so that one and the same adjective may mean different things in different combinations and on different occasions. That is, whereas the phonological pole of a certain adjective always remains the same (if it did not, we would not consider it to be the same adjective), the semantic pole may, and very often does, vary from one context to another. For instance, the content structure mapping with the landmark of *white*, as used in *a white dress*, is not the same as that mapping with the landmark of *white* as used in *a white man*. In the former case, we are dealing with the basic meaning WHITENESS (i.e. a region in the colour domain), whereas in the latter case, the structure mapping with the landmark is CAUCASIANESS (i.e. a region in the race domain), established through extension from the original colour sense. I will discuss the internal organisation of adjectives in terms of content in further detail in Chapter 3.

1.4 Concluding Remarks

In this chapter I have considered in some detail the linguistic school of thought within which the present work is set, more precisely that of cognitive linguistics. I have shown that language, according to this view, is an inherently mental phenomenon that is inextricably interrelated with thought and cognition in general, at the same time as it is a functionally motivated thing, which is developed, shaped and determined in close interaction with external experiences of communication and language use. With this general approach in mind, I will now turn to the main topic of the present work, namely interpretation and, in particular, interpretive functions of adjectives in English.

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prepositions, the latter of which are generally unspecified in terms of landmark as well as in terms of trajector. The schematic entities profiled by a preposition such as *on*, could, for example, be elaborated by nominals such as [THE BOOK/the book] and [THE TABLE/the table] respectively, forming the more specific higher level conceptual structure symbolised by *the book on the table*, but in themselves, they are devoid of any specific information.

2 Outlining Theory

2.1 Preliminaries

The specific topic of the present work is what functions – that is: what effects – adjectives could be assumed to have in interpretation of communicative input. In order to say something meaningful about this, however, I first have to elaborate on my approach to notions such as communication, interpretation and function in general. How can these phenomena be modelled in cognitive terms? This is a question in need of proper consideration in its own right – without a sound theoretical foundation, any specific queries into the nature of interpretive function fall flat. In the present chapter, therefore, I discuss in some detail the various assumptions that I make as regards the foundational notions of communication, interpretation and function.

Whereas the approach taken to the notion of communication generally accords with mainstream assumptions, the view of interpretation and function respectively is, to a greater or lesser extent, deviant in comparison to that presented in most standard work. As regards interpretation, first, the present work picks up and elaborates on the idea that there are no fixed meanings in language, but that interpretation is a creative process of 'making' meaning more or less from scratch. This approach is rapidly gaining ground in cognitive linguistics, but the specifics of the process of meaning creation as such are yet to be accounted for. In Section 2.3, therefore, I present a tentative suggestion as to how (part of) this process could be modelled. As I touched upon in Section 0.3, the purpose of this is two-fold: the discussion aims, on the one hand, at refining and elaborating on a theory of meaning creation as such, and, on the other hand, at providing the framework necessary for the subsequent (and more specific) modelling of interpretive functions of adjectives. As regards the notion of function, next, the present work puts forth a view that differs from much other cognitive work. Unlike many

other cognitive linguists, I do not consider *function* to be synonymous with *meaning*, but rather with *interpretive effect*. That is: the function of a certain 'something' – either a spoken or written linguistic form, or the meaning determined for this form – is the effect that this 'something' has in the process of meaning creation. Meanings *as well as* forms thus have functions in the present view.

2.2 Communication as a Conceptual Phenomenon

In this section I consider the notion of communication. I begin with a brief comment on what interlocutors 'do' when they communicate, before I turn to a discussion of how a communicative event could be assumed to manifest itself as a conceptual phenomenon.[53]

Communication could be seen as co-operative event of negotiating meaning, in which speaker and addressee are equally involved. From the speaker's point of view, any communicative act involves encoding and verbalising a conception of some kind, for some particular purpose, the latter of which may or may not also be linguistically encoded, alongside the encoding of the conception itself. From the addressee's point of view, on the other hand, a communicative exchange could be seen as involving, on the one hand, interpretation, and, on the other hand, some kind of reaction to the interpreted input. The interpretation part of this process could, in turn, itself be seen as comprising two main aspects: on the one hand re-creation of speaker conception – or, to use more conventional terminology: re-creation of propositional meaning[54] – and, on the other hand, determination of

53. For more in-depth discussion of the general approach to interlocutors' roles in communication upon which the present work is based, see, e.g., Tomasello (2008).

54. I use the term *proposition(al)* in the Searlian sense of semantic meaning that is filtered out from any pragmatic meaning such as, especially, the illocutionary meaning of speaker intention. Another point should also be made in this context: The term *proposition* is sometimes used in the literature (more precisely in logic and formal semantics) in a sense that differs from Searle's use, not so much in terms of denoting semantic as opposed to pragmatic meaning, but in terms of referring to what Searle calls the *sense* (i.e. the decontextualized, 'independent' meaning) of a certain utterance, rather than to what he calls the *propositional meaning* (i.e. the contextualized meaning as understood relative to a particu-

speaker intention – also referred to as *illocutionary meaning*.[55] Although these two aspects are clearly very closely interrelated – from a strict processing point of view probably so much so that they are inseparable – I nevertheless think that it is perfectly possible to tear them apart for the sake of theoretical discussion. That they are two different phenomena is clear from the fact that the one may, under certain circumstances, occur without the other. For instance, in a situation where someone is speaking in some unknown language, it may well be possible to determine speaker *intention,* notably from intonation, but since the words are unfamiliar, the intended *proposition* fails. This in turn brings us to the fact that to the extent that conception and intention are encoded by language, the specific linguistic means used for the former typically differ from those used for the latter.[56] Rather sweepingly, one could say that propositional meaning is typically encoded by specific morphemes (content words, closed class items such as articles, and tense markers), whereas illocutionary meaning (speaker intention) is typically encoded by prosody in speech and/or by schematic clausal constructions of various kinds (notably declarative, interrogative and imperative constructions). Consider the two utterances *Julius gave Hilding a hug* and *Did Julius give Hilding a hug?* Whereas illocutionary meaning is perceived of as being different in these two cases – giving and requesting

lar communicative event) of that same utterance. The logic/formal semantics use of the term furthermore applies only to factual statements, which are subsequently assessed in terms of truth-value relative to situations in the world (or some possible world). I will return to the present view of propositional meaning in Section 2.3.2, suffice it to say at this point that I use *proposition / propositional meaning* in the Searlean sense of semantic meaning that has been fully connected to the ground of an actual communicative event.

55. This is a simplification of matters; to be more precise, I suggest that propositional meaning is itself a sub-kind, together with other sub-kinds, of a super ordinate kind of meaning, namely what I refer to as *semantic meaning*. Likewise, I hold that illocutionary meaning is itself a sub-kind, along with other sub-kinds, of a super-ordinate kind of meaning that I refer to as *pragmatic meaning*. In short: I believe that interpretation involves more intricate determination of a wider range of meanings than the two-fold description given here would suggest. However, I think that this simplified version is sufficient for the present purpose of describing the general nature of communication.

56. As I will come back to in Section 2.3, speaker conception and intention is modelled by the addressee not only on the basis of explicit linguistic elements, but also in accordance with various kinds of contextual input.

information respectively –, propositional meaning is felt to be essentially the same: the conception of a past situation in which Julius hugs Hilding. The reason for this is, of course, that the words and tense markers used are mainly the same, whereas there is a difference in the schematic constructions in accordance with which the words are structured into a coherent whole.

Recapitulating, I have shown that communication consists in the negotiated exchange between interlocutors of particular conceptions (propositional meaning) for particular purposes (illocutionary meaning). It is now time to turn to the matter of how a communicative event could be assumed to manifest itself conceptually.

The overall conceptual context of which any proposition is part comprises the conceptualisations of, on the one hand, the current speech event, and, on the other hand, the discourse that this event yields. The conceptual construct reflecting the various aspects of the relevant speech event, first, is generally referred to as **the ground** (e.g. Langacker 1991a:ch. 3 and 6, 1991b:ch. 12). Aspects comprised by the ground include our conceptualisations of

i. the participants in the speech event and their relative communicative status vis-à-vis each other (for instance the alternating roles of speaker and addressee),
ii. the setting for the event (the physical location in which it occurs as well as the circumstances under which it occurs), and
iii. the time of the event.

Our conceptualisation of actual discourse, next, is conveniently referred to as **the current discourse space** (**CDS** for short) (e.g. Langacker 1991a:97ff, 1999a:262ff). It could be said to consist in a highly structured, yet constantly evolving conceptual 'record' of what has been, what is being, and what is expected to be said at any given moment in the flow of discourse. More specifically, it constitutes an increasingly complex network of particular, interconnected propositions tied to various so-called mental spaces.

The idea of mental spaces – which is similar to the notion of possible worlds in formal semantics (e.g. Lewis 1973, 1986) – was first introduced by Fauconnier (1985), who suggested that whenever we engage in some kind of language interaction, we create and make use of mental spaces for the

assignment and manipulation of reference.[57] In an utterance such as, for instance, *I wish I had an elephant*, interlocutors make use of two mental spaces: they start out from what is currently perceived as present reality, in which the speaker is understood to exist, and then build a new space representing the speaker's wish, which is the space in which the envisaged elephant exists, and in which a correspondent of the speaker in the current reality space is also found. New spaces are triggered continually throughout the communicative event by so-called space builders. Space builders include adverbials of location and time (although cf. Harder 2003:94[58]), certain verbs such as *wish* and *hope*, etc. Each space is related in various (often very intricate) ways to previous spaces. Together, all the mental spaces that are directly or indirectly available to interlocutors at a specific point in discourse constitute the higher order CDS.

For the purposes of the present work, I suggest a broad division of mental spaces into two main kinds, namely on the one hand, **reality spaces** and, on the other hand, **structural spaces**.[59]

By *reality space*, first, I primarily mean any representation of 'true' reality (as conceived of by the interpreter himself and/or by someone else), or of the fictive reality of myth or fiction. Consider the following sentences:

(6) I had an apple for lunch.
(7) Valdemar believes that there is a witch under his bed.
(8) In *Harry Potter and the Deathly Hallows*, Harry finally vanquishes Voldemort.

57. Since its introduction, mental space theory has been exploited and elaborated on by numerous people, including Fauconnier himself. For two major developments, see, e.g., Langacker (1999c) and Fauconnier and Turner (2002) respectively.

58. Harder argues that adverbials of location and time do not necessarily build new spaces; in most cases they could be assumed to merely construe spatial and temporal dimensions within one and the same mental space.

59. I would like to stress in this context that the following is a highly simplistic account of what kinds of mental 'worlds' we tend to form. In Langacker's words, "there are many kinds and levels of departure from actuality, which have to be clearly distinguished and individually characterized" (Langacker, personal communication). For the present purposes of examining interpretive functions of adjectives, however, I maintain that the simplistic two-way account given here is sufficient. For an in-depth discussion of notions of reality, actuality and virtuality, see, e.g., Langacker (1999c).

Examples (6)–(8) all involve reality spaces only. In (6), the relevant proposition is located in the space representing interlocutors' conception of true reality. In (7), two propositions are conveyed, each of which is tied to a different space: on the one hand there is the conception of Valdemar believing that there is a witch under his bed, which is located in the space representing true reality as conceived by the speaker, and, on the other hand, there is the embedded conception of a witch under Valdemar's bed, which is tied to a space triggered by the space-builder *believes that*, which represents Valdemar's conception of true reality. In (8), finally, the space-builder *In Harry Potter and the Deathly Hallows* triggers the representation of the fictive reality created by the books about Harry Potter, within which the conception of Harry's vanquishing Voldemort is located.

In addition to the relatively straightforward kind of reality space discussed so far, there is also another kind, which I refer to as **alternative reality space** (as opposed to 'actual' reality). This kind of space could be described as a representation of something that is perceived of as a more or less potential, yet so far only virtual version of what is currently thought of as actual reality. Examples include the 'hope version' of actual reality set up by an utterance such as *I hope that he's behaved today*, and the 'wish version' triggered by an utterance such as *I wish I had an elephant*.

By *structural space*, finally, I mean a representation of the *structure* of what is currently perceived of as reality.[60] This kind of space is not in any way tied to, or specified in terms of, any particular ground; on the contrary, it generalises over any spatio-temporal specificities of what is currently perceived of as reality, reflecting general, stable *characteristics* of this reality, as opposed to actual, substantial things and situations, idiosyncratically *manifesting* such characteristics. I will come back to this distinction in Sections 2.3.2.1 and 4.3, suffice it for now to give a few examples of utterances setting up, and making use of, structural spaces:

(9) An elephant eats a lot.
(10) Black dresses are beautiful.
(11) That man always helps me out.

60. I have borrowed the term *structural (space)* from Langacker (e.g. 1999a:247ff, 1999c), and my understanding and use of this term is basically the same as that presented by him.

Each of these examples comprises one single proposition only, but the number of mental spaces exploited varies. Examples (9) and (10) state facts about the general nature of the world (or, more precisely: of elephants and black dresses respectively), and only one mental space is set up, namely a structural space. In (11), on the other hand, two mental spaces are evoked. The proposition as a whole is tied to a structural space, stating a stable, timeless fact about 'how things are' (albeit delimited to 'that man' and 'me' respectively), rather than describing a specific act of helping, but there is also an actual reality space set up, hosting the conceptions of 'that man' and 'me'. Correspondents of these elements are set up in the super ordinate structural space, but the elements as such are thought of as existing in reality. I refer to the space in which a certain element is 'actually' felt to exist as its **native space**. I will come back to this and related issues in Section 2.3.2.

So far, I have treated the ground and the CDS as separate, more or less self-contained phenomena. This does not mean that the two are independent conceptual constructs, however. On the contrary, they are closely interrelated with general background knowledge, as well as with each other. As regards the relation between, on the one hand, the specific conceptions of ground and CDS and, on the other hand, general background knowledge, the former are, obviously, firmly grounded in, and fully dependent on, the latter. (Shared) background knowledge constitutes – in one form or another – the very material from which the CDS is created, and it is, furthermore, only against the background of general knowledge that the ground can be conceived and understood. As for the relation between the ground and the CDS themselves, there is, of course, a sense in which the latter is part of the former; an obvious component of any speech event is the discourse that it yields. Conversely, the ground is always, to some extent, present in the CDS. The most obvious example of this is the kind of situation in which the ground is the very object of discussion, as in *I can see you,* where the situation talked about is the here and now of the speech event itself, and where the relevant discourse elements (symbolised by *I* and *you* respectively) correspond directly to elements of the ground. In the vast majority of cases, however, the ground is only indirectly present, serving as a mere point of reference in relation to which the content of discourse is viewed. This is the case with utterances such as *A man came to the house yesterday* and *Julius will*

join the karate club in the spring, which contain component items such as articles, tense markers and deictic adverbials – in short, items that do not themselves profile actual ground elements (such as the interlocutors, or the here and now of the communicative event) but that nevertheless make crucial reference to the ground as part of their conventionalised meaning. The effect that such items have of relating something to the ground is referred to as **grounding** (e.g. Langacker 1991a:ch. 3 and 6, 1991b:ch. 12), something that I will return to in Section 2.3.2.1.

In this section I have discussed in some general terms the nature of communication and its function as a negotiated exchange of, above all, propositions, intentions and reactions between speaker and addressee. In the next section I look in some more detail at the addressee aspect of this exchange, more specifically at interpretation of what is communicated.

2.3 Interpretation as Creation of Meaning

In this section I turn to the notion of interpretation, and the view of this phenomenon as a dynamic process of meaning creation. Before I can go into any detail about this, however, two important points have to be made.

Firstly, a clarification is in order. In the previous section I concluded that in any full communicative event, interpretation consists in the creation and integration of, on the one hand, propositional meaning (that is speaker conceptualisations) and, on the other hand, illocutionary meaning (that is speaker intention). However, as I also pointed out in Footnote 55, propositional and illocutionary meanings are themselves sub-kinds of two super ordinate kinds of meaning, namely what could be referred to as **semantic** and **pragmatic meaning** respectively. Consequently, a more accurate formulation would instead be to say that interpretation consists in the creation and integration of semantic and pragmatic meaning (of which propositional and illocutionary meaning constitute two important sub-kinds).

By *semantic meaning* I mean information consisting in conceptual representations proper – the interpreter's mental re-creations of (schematic as well as contentful) thing and relation conceptions, encoded and 'sent' by the speaker. The ultimate kind of (theoretically) distinguishable semantic

meaning formed in interpretation of discourse is propositional meaning. Apart from this top-level kind of semantic meaning, there are, however, also other kinds of semantic pre-meanings, which are created at lower levels of conceptual organisation, along the way towards fully-fledged discourse meaning. I will return to this matter below. With *pragmatic meaning* I have in mind not only the interpreter's understanding of speaker intentions (*illocutionary meaning*), but also of speaker attitudes (*attitudinal meaning*), speaker/addressee roles and social status (*social meaning*), stylistic level (*stylistic meaning*), and so on.

I am not at present prepared to make any claims as to the cognitive/conceptual status of pragmatic meaning, nor as to how this kind of meaning could be assumed to come about; in the remainder of the present work focus will lie on (the creation of) semantic meaning – with the caveat that the semantic/pragmatic distinction is, of course, purely artificial.[61] Whereas I do think that it is possible to separate semantic and pragmatic meaning for the sake of theoretical discussion, this is not so in practice: in any actual discourse interpretation the two kinds of meaning are completely and inextricably merged (cf. previous section).[62]

The second point that has to be made here is that terms such as *meaning creation*, *interpretation* and *processing*, as used in the present work, should not be taken to refer to processing in the psycholinguistic sense of actual neurological activity involved in decoding language. I make no claims concerning this aspect of interpretation. Likewise, although I find it useful to discuss meaning creation in terms of steps, stages, and levels, this should not be understood as though I suggest that this is the actual, neurological nature of processing. Although some interpretation probably occurs in a reasonably

61. This is not to say that adjectives – which is what I am specifically concerned with in the present work – never play any part in the creation of pragmatic meaning. On the contrary, there are many adjectives that trigger pragmatic meaning – notably attitudinal and stylistic meaning (cf. Paradis 2000). For practical reasons, however, the line has to be drawn somewhere, which is why I concentrate on semantic meaning only.

62. This is presumably so also when it comes to meaning creation itself; I find it reasonable to assume that the two kinds are *co*-created, from the very beginning, rather than created as separate phenomena that are integrated only at the very end of meaning creation. Or, in other words: in practice, inextricability applies not only to the end product, but also to the creative process itself.

straightforward, uni-directional manner, most meaning creation is presumably much messier, consisting in interpretation and re-interpretation that goes back and forth between levels of comprehension. For recent work on processing from a psycholinguistic point of view, the reader is referred to, among others, Reichle *et al.* (1998), Rayner *et al.* (2003), Reichle *et al.* (2003), and Pollatsek *et al.* (2006).

Having made the above points, I will now turn to the matter of interpretation as such. I start with a brief overview of the various factors involved in interpretation, and then turn to more in-depth discussion of how this process could be described from the point of view of procedural structure.

As I have already established, the present work rests on a view of interpretation as a dynamic process of meaning creation, whereby communicated meaning is re-created rather than simply re-assembled in the mind of the interpreter: rather than starting out from ready-made units of lexical meaning, which are simply activated and 'put back together', interpretation is assumed to start out from some kind of underlying 'raw material' that is activated and successively transformed into fully construed, fully accessible discourse meaning (e.g., Lakoff and Sweetser 1994, Croft 2000c, Cruse 2000b, 2002, Croft and Cruse 2004, Paradis 2004 [2010], 2005, 2008, forthcoming, and Harder 2007).[63] Put another way, interpretation consists in an intricate set of construal operations of various kinds (cf. Sections 2.3.1 and 2.3.2), which are triggered, guided and organized by conventional as well as non-conventional factors: on the one hand by formal linguistic input, and, on the other hand, by context and contextually associated background knowledge.[64] This can be illustrated with a word such as *watch*. In itself, this word (i.e. the formal linguistic input) triggers activation of underlying raw material along with a number of further conventionalised operations that delimit, map and organise the material into successively more construed,

63. The nature of this material will be further discussed in Section 2.3.1 below.

64. Contextual factors are of two main kinds: on the one hand linguistic context in the form of previously created meaning, and, on the other hand, extra-linguistic – physical and social – context (that is what we see and hear, the kind of situation we are in, the various social relationships that we have with our interlocutor(s) and so on). For further discussion of the importance of context to interpretation, see, e.g., Clark (1996) and Oakley (2009).

and therefore successively more accessible pre-meanings.[65] Pre-meanings that may arise in response to the form *watch* include

i. meanings reflecting kind concepts[66] such as PHYSICAL OBJECT TELLING TIME[67] and PROCESS OF PAYING VISUAL ATTENTION, and
ii. schemas such as, for instance, THING and TEMPORAL RELATION.

However, the conventionally determined construal operations are also further constrained by context: For instance, in an utterance such as *They watch a lot of TV*, the meaning created for immediate linguistic context prevents creation and mapping of structures such as PHYSICAL OBJECT TELLING TIME and THING, and promotes only creation and mapping of structures such as PROCESS OF PAYING VISUAL ATTENTION and TEMPORAL RELATION.[68] Likewise, in a context where a sign on the office wall of a security company reads *Thomson's watch: 7am-3pm*, physical context, along with general background knowledge about security companies and how they work, blocks creation and mapping of structures such as PHYSICAL OBJECT TELLING TIME and TEMPORAL RELATION, and encourages instead creation and mapping of structures such as PROCESS OF PAYING VISUAL ATTENTION and THING.

So far I have considered what factors are involved in interpretation. I have shown that the main components of this process are, on the one hand,

65. I will return to the notion of pre-meaning in Chapter 3 below. Suffice it for now to say that pre-meanings are transitional structures appearing on a sub-conscious level between raw material and fully contextualised interpretation (cf. e.g Croft and Cruse 2004:103).

66. I will come back to the notion of kind in Section 2.3.1 below.

67. It should go without saying that although I use small capitals to indicate conceptual structure, the paraphrases used here are precisely that: paraphrases conveniently used to enable theoretical discussion. I do not intend them as psychologically real representations. Another point of crucial importance in this context is the fact that although the conventional effects triggered by a word form presumably restrict raw material to the potential for only a limited set of concepts, it does not, of course, filter out the vast amount of information held by the domains within which these concepts are understood (cf. Section 1.2.1).

68. To the extent that non-conventionalised constraining effects are triggered by specific meanings in the immediate context (as is the case here), they constitute what I refer to as **secondary semantic interpretive functions** of the items symbolising these meanings. I will come back to this matter in Section 2.4 below.

underlying raw material, and, on the other hand, various (conventionalised as well as non-conventionalised) operations that activate and transform this material into fully contextualised meaning. I will now turn to more in-depth discussion of how meaning could be considered to unfold – that is of the dynamic, procedural structure of interpretation. In this discussion I will also consider in some detail the nature of underlying raw material, as well as of some important kinds of meaning created along the way towards the fully interpreted end product.

The interpretive process could be conveniently described in terms of 'stages' or 'levels', distinguished on the one hand on the basis of the kinds of processing involved (subconscious and conscious processing respectively), and, on the other hand, on the basis of kinds of meaning yielded 'along the way'. As regards the former of these two aspects, I suggest three main levels in interpretation of full discourse: the **pre-crystallization level**, the **crystallization level**, and the **post-crystallization level** respectively (cf. Croft and Cruse 2004:99f). This division rests on the observation that a vast amount of processing takes place 'behind the scenes' (e.g. Fauconnier and Turner 2002), so that it is only at a fairly late stage in interpretation that meaning becomes clear, or, using present terminology: **crystallizes**. As the terms would suggest, then, the pre-crystallisation level comprises sub-conscious (or, perhaps better: pre-conscious) processing, the crystallization level comprises crystallization as such, and the post-crystallization level comprises further modulation of consciously accessed meaning.

Each level comprises a more or less intricate complex of sub-processes. Processes found on the pre-crystallization level, first, are creative and transforming, giving rise to (parallel as well as successive) chains of pre-meanings. Processes found on the crystallization level, next, together constitute crystallization, which could be described as the process in which 'all pieces fall into place' and meaning becomes clear to the conscious mind. According to Cruse, crystallization is a fairly clear-cut event – an instant of comprehension, comparable to the event of recognizing a familiar face, or of realizing that what we are seeing is, for instance, a dog (Croft and Cruse 2004:99). Whereas I find this a useful, and essentially adequate analogy, I nevertheless maintain that crystallisation too is best considered in terms of a number of sub-processes (at least for purposes of theoretical discussion of discourse interpretation). Post-crystallization processes, finally, are inferential in

nature, modulating (as opposed to creating) already crystallized meaning. Pre-crystallization and crystallization processes will be discussed in further detail in subsequent sections. For in-depth discussion of post-crystallization processes, the reader is referred to e.g. Mey (2001:45ff) and Horn and Ward (2004).

As regards the latter of the two aspects mentioned above – that is description of the interpretive process based on kind of meaning produced (as opposed to kind of processing involved) – I propose, again, three different levels appearing in discourse interpretation, namely what I refer to as the **morphological level** (which yields **morphological meaning**), the **propositional level** (which yields **propositional meaning**), and the **discourse level** (which yields **discourse meaning**) respectively.[69] Morphological and propositional meaning will both be discussed in further detail in subsequent sections. Discourse meaning, on the other hand, is outside the scope of the present study; suffice it to say here that by *discourse meaning* I mean the full, integrated pragmatico-semantic crystallized meaning, along with any

69. It should be emphasized in this context that apart from being a purely theoretical construct, this division is also somewhat arbitrary, in that it brings up *some* kinds of meaning (more precisely morphological, propositional, and discourse meaning respectively) but ignores other kinds that are equally important and, at least from a theoretical point of view – equally distinct (cf. also Footnote 74). Specifically, apart from completely ignoring pragmatic aspects (which I have already established as falling outside the present scope), it obscures the complexity of propositional meaning – as I shall come back to below, propositional meaning is in itself made up by several different kinds of semantic structure (notably by **discourse referents**, **discourse relations** and (at times) **discourse properties**). However, whereas it makes intuitive sense to treat morphological, propositional and discourse meaning as pertaining to distinct 'levels', a similar analysis of the components of propositional meaning does not seem productive. This is because unlike creation of morphological, propositional, and discourse meaning respectively, creation of discourse referents, discourse relations and discourse properties does not quite have the appearance of clearly distinct processes, which appear in successive order, and which yield clearly different kinds of meaning. Instead, creation of discourse referents, creation of discourse relations and creation of discourse properties seem to occur in parallel – as I mentioned above, crystallization (of which these processes are all part) happens in an instant; all pieces fall into place at the same time as it were –, and together they yield one single kind of meaning – namely propositional meaning. This is why I posit different levels for morphological, propositional and discourse meaning, but not for discourse referents, discourse relations and discourse properties.

further implicatures inferred from this meaning. Because there is no definite limit to inferential processes, the discourse level could be said to be open-ended; although there is presumably a definite starting point – namely crystallized meaning – processing on the discourse-level may, in principle, go on indefinitely, yielding a string of implicatures of decreasing strength (e.g. Sperber and Wilson 1998, Croft and Cruse 2004:100).[70]

The morphological, the propositional and the discourse level are organised hierarchically in terms of procedural order – creation of morphological meaning precedes creation of propositional meaning, which, in turn, precedes discourse meaning – as well as in terms of conceptual complexity, the morphological level being the least, and the discourse level the most complex.[71]

Correlating the morphological, the propositional and the discourse level

70. It might be argued that Sperber and Wilson and Croft and Cruse have diametrically different views on this matter, the former considering interpretation as starting out from a determinate starting-point (an explicature) and ending up with an indeterminate series of implicatures, whereas the latter consider interpretation to start out from an *in*determinate starting-point (purport) and end up with a determinate crystallised meaning. However, as far as I can see, this is just a matter of focusing on two different parts of the interpretive process; whereas Sperber and Wilson concentrate on post-crystallisation processes, Croft and Cruse focus on pre-crystallisation interpretation; an explicature (the starting-point) in Sperber and Wilson's terms, is basically the same as crystallized meaning (the end-point) in Croft and Cruse's terms. Whereas Croft and Cruse consider the end-point of the part of interpretation that *they* are concerned with as being determinate, they do not disagree that *subsequent* processing is open-ended.

71. Again, it is important to realize that the account given here is theoretical rather than empirical. As I have already pointed out, actual processing is presumably a lot less straightforward than this. Although it seems reasonable that the main trend in processing should be uni-directional, there is probably also a fair amount of going back and forth between levels. For instance, (to the extent that levels could be said to exist at all) it seems reasonable to assume that interpretation of adjective-noun combinations such as *red breast* (referring to a kind of bird) and *softball* (referring to a kind of team sport) would involve going from the morphological level, onto the propositional level, and back again (cf. Section 4.2). Furthermore, there is another aspect to bi-directionality: Despite the impression given above, meaning yielded at the discourse level does not simply disappear somewhere in the distance; on the contrary, it feeds back to subordinate levels, functioning as non-conventionalised constraints on subsequent meaning creation (cf. above). Having said this, I believe that the naive account given here and in the following is nevertheless concordant with (if not strictly descriptive of) interpretive reality, and as such it does serve its purpose of simplifying theoretical discussion.

with the pre-crystallization, the crystallization and the post-crystallization level, I suggest that creation of morphological meaning occurs at the pre-crystallization level, creation of propositional meaning occurs at the crystallization level[72] and creation of discourse meaning occurs at the post-crystallization level.[73] This can be summarized as in Table 1.

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72. That is, in line with e.g. van Dijk and Kintsch (1983:37ff), Givón (1990:896), and Langacker (2008:486), I assume that crystallization in communicative events happens on a clause-by-clause basis.

73. It should be pointed out in this context that the account given here models interpretation of full discourse, as encountered in an actual communicative event. In any other kind of interpretive situation, the kinds of meaning yielded are presumably different, as is the alignment of different kinds of processing (pre-crystallization, crystallization and post-crystallization) vis-à-vis different kinds of meaning. For instance, in a situation where the interpreter is confronted with a single word in isolation, the only meaning created is (obviously) morphological meaning, and crystallization happens at the output stage of the morphological level. Likewise, in a situation where the interpreter is confronted with an isolated clause, without any proper (linguistic or extra-linguistic) communicative context, the kinds of meaning that are produced are (I suggest) morphological meaning, followed by what could perhaps be referred to as *clausal meaning*, the latter of which is, furthermore, the kind of meaning that is crystallized. By *clausal meaning* I have in mind basically the same phenomenon as that which Searle refers to as the *sense* (as opposed to the propositional meaning) of an utterance – that is: a fully-fledged conception of some kind of situation, which nevertheless (unlike propositional meaning) 'floats about' unattached to any particular ground (since there is no proper communicative event, there is no proper ground). The possible difference between Searle's view and mine is that whereas Searle seems to consider the *sense* of an utterance to be a pre-requisite preliminary to full propositional meaning, I suggest that the two kinds of meaning – sense (i.e. 'clausal meaning') and propositional meaning respectively – are produced in two different kinds of situation: in confrontation with a decontextualised clause and in confrontation with an utterance as part of an actual communicative event respectively. The way I see it is that they do not occur successively in one and the same kind of interpretive event. Finally, it should be emphasized that even though the meaning created in response to an isolated, decontextualized word or clause is not tied to a particular ground, this does not mean that it constitutes some kind of objective, 'true' meaning that is unaffected by context. Even in situations where there is no *communicative* context, there is, nevertheless always other kinds of contextual factor that influence meaning – physical context, mental context and so on. Let me give a simple example involving interpretation of just one word (cf. also discussion of *watch* in Section 2.3): If someone is asked what the word *bank* means while (s)he is sitting by a river (physical context), or if the same thing happens when (s)he is sitting thinking about last summer's barge holiday (mental context), (s)he is probably most prone to offer

Table 1: Creation of Meaning[74]

Level	Over-all process
The pre-crystallization level/the morphological level	Pre-crystallization processes/creation of morphological meaning
The crystallization level/the propositional level	Crystallization processes/creation of propositional meaning
The post-crystallization level/the discourse level	Post-crystallization processes/creation of discourse meaning

For the specific purpose of discussing functions of adjectives in creation of semantic meaning (as appearing within the larger context of discourse), the levels of prime interest are the pre-crystallization and the crystallization level, which comprise the morphological and the propositional level respectively. In subsequent sections I will discuss each of these two sub-levels in some more detail.

a definition such as 'the ground at the edge of a river', whereas if this same person is asked about the meaning of *bank* when (s)he is standing in front of a bank building (physical context), or while (s)he is pondering the unfortunate financial situation in the world, (s) he will most probably first offer a definition such as 'a kind of financial institution'.

74. Note that this table primarily covers creation of semantic (as opposed to pragmatic) meaning; whereas the phrase *creation of morphological meaning* is neutral in terms of the semantic/pragmatic divide (*morphological meaning* could be used to include either kind), *creation of propositional meaning* obviously is not. This may or may not be misrepresentative of interpretive reality; it may be that the meaning created in crystallization is initially a 'pure' proposition, which is only subsequently overlaid with illocutionary meaning, as Table 1 would suggest (this would, I think, be the view taken by, for instance, Searle (e.g. 1969) and Langacker (2009)), but the more plausible assumption would probably be that semantic (including propositional) and pragmatic (including illocutionary) meaning are inextricably co-created, so that crystallization as well as pre-crystallization processes amount to creation of meaning that is inseparably semantico-pragmatic right from the start. However, as I have already made clear, I allow myself to ignore these matters in the present work, for purposes of simplifying theoretical discussion of adjective function.

2.3.1 The Morphological Level and Creation of Morphological Meaning

The morphological level comprises interpretation from the initial point of input, up to the appearance of fully-fledged morphological meaning. In the following I will first consider morphological meaning as such, and then turn to a discussion of how such meaning could be assumed to come about.

By **morphological meaning** I have in mind a basic unit of meaning of some kind, including the semantic poles of idiomatic multiword phrases such as *spill the beans* ('tell') and *bite the dust* ('die'), as well as of what is traditionally considered as morphemes – the common denominator being that they all constitute atomic conceptual units of information.

Morphological meanings can be divided into (mainly) schematic and (mainly) contentful units of meaning respectively (cf., e.g., Cruse and Togia 1996, Paradis 1997, 2001, 2003, 2004 [2010], 2005, 2008, forthcoming, and Talmy 2000). This classification corresponds to the traditional linguistic division of words into, on the one hand, grammatical words (closed word classes) and, on the other hand, content words (open word classes). Schematic and contentful morphological meanings will henceforth be referred to as **grammatical** and **lexical** meanings respectively.

Grammatical meanings consist in information about how to view any content that they may combine with; in themselves, they are typically completely devoid of any contentful information.[75] They may be symbolised by affixes (derivational as well as inflectional), as well as by free word forms belonging to the closed word classes, but not by idiomatic phrases or by words belonging to the open word classes. Lexical meanings, on the other hand, typically incorporate rich, 'descriptive' information, which is intimately connected with encyclopaedic knowledge in general (cf. Section

75. Whereas this is generally true, there are, however, some grammatical meanings that seem to comprise certain content in addition to schematic information. For instance, the meanings created for pronouns such as *he* and *she* comprise contentful information about gender, in addition to their schematic information about antecedence, and those created for derivational affixes such as *-less* (as in *childless*) and *-free* (as in *duty-free*) contain, in addition to the ATEMPORAL RELATION schema, contentful information about the nature of the relevant relation. I will discuss this matter in more detail in Section 3.3.

1.2.1.1), and they may be symbolised by idiomatic multi-word phrases, as well as by free word forms belonging to one of the open word classes, but not by closed class words or affixes. In the present work, focus will (for obvious reasons) lie on lexical rather than grammatical meaning, although grammatical meaning will be discussed to the extent that it affects creation of lexical (or, subsequently, propositional) meaning.

Although lexical meaning is perceived of as being contentful rather than schematic, this is, of course, not to say that it does not include schematic information at all. On the contrary, the phonological representation of any open class word form activates not only content (also referred to as *purport*, see below), but also the potential for a number of different construals – not least of which is the complex construal giving rise to Gestalt – which grant potential conscious accessibility.[76] However, contentful information tends to be dominant in relation to schematic ditto – upon taking in a word such as *cat*, for instance, we are much more prone to consciously thinking about 'contenty' aspects such as appearance and behaviour than we are to contemplating the fact that we consider cats to be bounded in space, or that we generally see them as being three-dimensional – and so, lexical meanings are nevertheless perceived of as being contentful rather than schematic.[77]

Construal in terms of Gestalt, boundedness etc. differs from one lexical meaning to another – a lexical meaning created for, say, *chair* is typically construed as BOUNDED THING, whereas one constructed in response to, for instance, *grow* is likely to be construed as UNBOUNDED TEMPORAL RELATION. There do, however, also seem to be certain construals that are the same for

76. If there were no schematic information at all, the supposed meaning would be inaccessible to the conscious mind, since we are simply not capable of entertaining conscious thoughts about anything without viewing it in a particular way.

77. Another, related point should be made in this context. Apart from realizing that even the most prototypical lexical meaning comprises schemas as well as content, it is also important to understand that the line as such between lexical and grammatical meaning is fuzzy rather than clear-cut: There is a continuum ranging from highly contenty to mainly schematic structures. Specifically, the category of content words covers a rather wide scope, including primarily schematic as well as primarily contentful structures. I will return to this matter in Chapter 3 where I suggest a classification of structures evoked by adjectives that is based on this precise factor. Conversely, as I pointed out above (Footnote 75), there are grammatical meanings that seem to comprise some contentful information in addition to their primarily schematic essence.

lexical meanings in general. For instance, I suggest that all lexical meanings are, to a greater or lesser extent, *information-focused*, *ungrounded*, and *atomic*. Since this is particularly obvious with lexical meanings reflecting concrete phenomena – so-called *first-order entities* (cf. Section 3.2.1 below) – focus will lie in the following on this concrete kind of meaning.

By saying that lexical meanings are **information-focused**, first, I mean that they are perceived of as abstract conglomerations of information as such, as opposed to conceptions of manifestations of this information. This could be explained in terms of relation to domain of instantiation (cf. Section 1.2.1.1): Although a lexical meaning certainly incorporates information about domain of instantiation as part of its overall essence, it is not itself thought of as being 'pinned down' in this domain (cf. Langacker 1987:57). Put another way, it is not conceived of as being *manifested* or *embodied* by anything; it is merely thought of as an abstract conglomeration of information, nothing more, and nothing less.

Information-focused construal is elusive and hard to put the finger on; in fact, I believe that in most conscious thought it is overridden by **manifestation-focused construal**, which arises through **instantiation** of lexical meaning.[78] Despite its elusiveness, there are, however, occasions when information-focused construal seems to be maintained even on a conscious plane. Consider, for instance, an utterance such as *He always wears shirt and tie for work*, where I believe that the ultimate meanings established for *shirt* and *tie* are information-focused lexical meanings, constituting aspects of a conceptually unitary – lexical – notion WEAR SHIRT AND TIE, rather than conceptions of actual occurrences of SHIRT and TIE respectively.

Closely interrelated with the fact that lexical meanings are information rather than manifestation-focused is the fact that they are also ungrounded: being information-focused – perceived of as mere descriptions (or *type specifications* to use Langacker's terminology) – they are not themselves related in any way to any particular ground, nor do they in any way invoke the

78. In instantiation the content comprised by the original lexical meaning is construed instead as an individual manifestation, or occurrence, of the relevant information, tied to, and delimited by, some kind of (concrete or abstract) 'embodier that manifests it. I will come back to this and related issues in Section 2.3.2.1 below.

conception of a ground for their understanding.[79] I will return to the matter of grounding in Sections 2.3.2.1.

By claiming that lexical meanings are atomic, finally, I mean that they are perceived of as *units* of information. That is, although they generally comprise a vast amount of data, lexical meanings are nevertheless perceived of as single, atomic pieces of information. In this, they differ from complex, non-lexical meanings such as RUSTY CAR or TIRED MOTHER (i.e. meanings of the kind created for free combinations of words), which are perceived of as *ad hoc*, non-atomic co-conceptions of distinct pieces of information.

The reason that a lexical meaning such as CAR or MOTHER is perceived of as a single unit of meaning, whereas a non-lexical, *ad hoc* meaning such as RUSTY CAR or TIRED MOTHER is not, is that the former, but not the latter, is *experientially* coherent and unit like. That is, a lexical meaning, unlike a non-lexical one, reflects a naturally coherent whole, from which stable, generally relevant predictions can be made; a "culturally sanctioned [...conceptual unit] of proven relevance and utility" (Langacker 2008:264), against the background of which we can process and understand the experiences that we have in our lives. In short: lexical meanings reflect kinds,[80] which are abstracted on a more general plane, as part of growing up and learning about the nature of the world that we live in (e.g. Taylor 1995:66, Langacker 1987:373ff, 1999a:271).[81] *Ad hoc* conceptions, on the other hand, consist of what is perceived of as co-conceived, but nevertheless distinct, 'bits' of information, the co-conception of which may serve some specific purpose in a particular situation, but has no impact on, or relevance for, the way in

79. This is obviously not to say that they are *unaffected* by ground elements; on the contrary, as is the case with context in general, factors to do with the relevant ground generally has at least some effect on determination of lexical meaning. However, being *affected by* the ground is not the same as being *existentially assessed* in terms of the ground (the latter of which is basically what being grounded is all about (see also Section 2.3.2.1 below)).

80. It should be noted, however, that there is no one-to-one relationship here; although general kind concepts and lexical concepts often co-occur, there are other situations too. See e.g. Murphy (2002:389ff) for further discussion.

81. Note however, that the psychological status of kind concepts has been (and still is) debated to the same extent as that of lexical meanings (cf. Section 1.3.2); see, for instance, Smith and Samuelson (1997) for an approach to conceptual structure that is very similar to the dynamic construal approach to linguistic meaning.

which we generally interact with and understand the world around us. For instance, meanings such as MOTHER, CAR and BIRTHDAY are atomic because they reflect information that is generally useful in the conceptualisation and interpretation of experiences in general. Meanings such as TIRED MOTHER, RUSTY CAR and RAINY BIRTHDAY on the other hand, are perceived of as transient, complex co-conceptions of distinct 'chunks' of information (namely TIRED and MOTHER, RUSTY and CAR, and RAINY and BIRTHDAY respectively), which may well serve a categorizing purpose on a specific occasion (as in utterances such as *Tired mothers snap at their children*, *Rusty cars are useless*, and *Rainy birthdays are depressing* respectively), but which, unlike kinds, are not felt to be useful to categorisation in general.[82]

Of course, the line between kind concepts, which are reflected by lexical meanings, and *ad hoc* conglomerations of information, which are reflected by the meaning determined for free combinations of words, may be a very fine construct, and it is often difficult to determine what we conceive of as which, at least when we are dealing with clearly categorizing situations. For instance, apart from being equally useful in 'spur-of-the-moment' categorization, kind concepts and *ad hoc* conceptions both seem to have clear internal structure, in that they both exhibit prototypicality effects (e.g. Barsalou 1983). The distinction as such is nevertheless quite real: some conglomerations of information are felt to constitute kinds, whereas others are not. For instance, as I have already implied, entities categorised as 'mothers' are felt to be of a common kind MOTHER, but entities categorised as 'tired mothers' are not felt to be of a common kind TIRED MOTHER; rather, they are felt to be of a common kind (MOTHER) *and to have the further feature in common that they are tired*. The difference is seen even more clearly when we take away the categorizing context: the entity referred to in an utterance such as *The tired mother kept snapping*, is felt to be of the kind MOTHER, and to

82. There is a vast body of literature on the subject of categorisation, both in the sense 'creation of a category' and in the sense 'abstraction of a kind'. Some important works dealing with prototype theory are those by Rosch and her co-workers (e.g. Rosch 1975, Rosch and Mervis 1975, Rosch et al. 1976). Other works include (among countless others) Barsalou (1983 and 1991), Taylor (1995) and Murphy (2002). In this context I would also like to mention Wittgenstein (1968, first published in 1953) who suggested that we categorise in a sort of 'chain reaction', according to 'family resemblances', an idea that has also been suggested by, for instance, Greenough and Kittredge (1902).

furthermore have the feature that she is tired. She is not felt to be of a kind TIRED MOTHER. That this is so is precisely because the property TIRED is not generally relevant to further categorisation of MOTHER; rather than being generally and consistently found with a particular sub-set of mothers, it is idiosyncratic, transient and unpredictable, and so, TIRED MOTHER in turn fails as a stable, naturally coherent, generally relevant unit of information – i.e. a kind – and is instead perceived of as a complex of two distinct pieces of information: 'tiredness' and 'motherness' respectively.

Recapitulating, I have suggested that interpretation on the morphological level amounts to creation of morphological meaning, which in turn is either grammatical or lexical in kind, the former being schematic in nature, whereas the latter is predominantly contentful. I have furthermore suggested that lexical meaning is information-focused, ungrounded and atomic. Creation of lexical meaning is closely interrelated with conception of a kind; although there is no perfect one-to-one relationship between, on the one hand, the infinite number of lexical meanings that we may create, and, on the other hand, the infinite number of kind concepts that we may abstract, lexical meanings could nevertheless be said to reflect kinds.[83] Having considered in some detail the nature of morphological meaning, I will now turn to the matter of how such meaning could be assumed to come about.

Interpretation at the morphological level could be simplistically described as follows: Formal linguistic input is registered and translated into a phonological representation, which is compared against stored phonological structures until a matching structure is found. This matching structure in turn triggers a number of conventionalised operations, which, together with constraining operations prompted by context and background knowledge, successively form meaning.[84]

The most fundamental of the operations triggered by the phonological form is activation of underlying raw material. The exact nature of underlying material is far from clear. In line with Cruse (e.g. 2002, Croft and

83. That creation of lexical meaning is closely interrelated with the formation of general kind concepts is particularly clear in cases of a process that I refer to as *redirection*. I will discuss this matter in further detail below and in Section 4.2.

84. As I mentioned in the previous section, the conventionalised operations are what I refer to as *formal interpretive functions*, see also Sections 0.1 and 2.4, and Chapter 3.

Cruse 2004) I assume that it consists in part of some kind of 'contenty', but consciously inaccessible, sub-conceptual 'mass' – henceforth referred to as **purport** (Croft and Cruse 2004) – which has arisen (and which continues to form) as some kind of function of all our actual, fully interpreted experiences with language. This material is completely unstructured and unconstrued, and could thus be said to constitute 'pure' content. Or, as Cruse puts it:

> Purport is not to be thought of as a variety of construed meaning. Purport is to interpretation as egg is to omelette, or flour to bread: it is of a different ontological category. Purport is an ingredient of meaning, not a constituent. It cannot be explained, in general, as an abstract, or super ordinate meaning, which becomes specified in context. Interpretations are not contextual specifications of purports, they are transformations. (Croft and Cruse 2004:101)

In addition to purport, I suggest that the raw material for meaning creation also comprises schemas of various kinds. As I showed in Section 1.2.1, schemas are conceptual representations of ways of construing meaning. Purport and schemas are both representational (as opposed to operational) in nature, and serve together as the raw material for the creation of meaning.[85]

Once raw material has been activated, further conventionalised processes

85. It should be pointed out in this context that Cruse (who is probably the main proponent of the dynamic construal approach (e.g. 2002)) seems to have a slightly different view compared to the one presented here. Although he does not say this explicitly, it seems that he thinks of raw material as consisting of purport only, which is subsequently transformed by construal processes as such. Personally, I think it is reasonable to assume that we have abstracted both purport and schemas, and that construction of meaning to a large extent consists in delimiting, mapping and organizing these structures in different ways. It seems to be in the nature of the human mind to create representations of all kinds of experiences. I fail to see why we should abstract content (purport) but no schematic structures. I am not alone among proponents of the dynamic construal approach to interpretation in having this view; in fact, Cruse himself acknowledges the existence of purely schematic structures in earlier works (e.g. Cruse and Togia, 1996). See also Paradis (e.g. 2004 [2010], 2005, 2008, forthcoming). In the end, the possible difference in view is of little relevance to the main idea – that in the creation of meaning, we start out from an abstract representational raw material, which is subsequently transformed into consciously accessible meaning.

start operating on it. I suggest that there are two major kinds of such operations, namely delimitation and mapping respectively. Delimitation, on the one hand, serves to narrow down activated material to the meaning potential conventionally associated with the phonological form at hand. Mapping, on the other hand, serves to integrate lower-order structures into higher-order structures.[86] This process could be metaphorically described in terms of superimposing transparencies – each holding different, but somehow overlapping and corresponding, information –, so that each transparency contributes its own specific content and/or configuration, thus giving rise to a more or less composite, yet merged end-product.[87] Delimitation and mapping are both triggered by the formal input itself, and guided by convention. In addition to these operations, there are, as I have already mentioned, also various non-conventionalised operations, triggered by contextual factors and background knowledge tied to these factors. Such operations constrain conventionalised meaning creation so that only the most plausible interpretation emerges clearly (cf. the discussion of *watch* in the previous section).

Activation, delimitation and mapping could be seen as the most fundamental of the conventionalised operations at work on the morphological level, giving rise to the most elementary kind of morphological meaning. Such basic meaning is subsequently further exploited for higher-order meaning creation, either on the morphological, or on the propositional level. Further creation of meaning on the morphological level – which is what I am dealing with in the present section – starts out from two individual morphological meanings, but always results in what is perceived of as one single lexical meaning.[88] There seem to be two kinds of component

86. Note that I use the words *higher-order* and *lower-order* in a completely non-technical sense of 'subsequently created', 'ensuing', 'appearing at a more advanced stage', and 'previously created', 'appearing at a less advanced stage' respectively.

87. The transparency metaphor has been used in the literature to explain various phenomena more or less closely related to mapping as such, see e.g. Langacker (1999a:269) and Michaelis and Ruppenhofer (2001:54).

88. It should be pointed out, however, that although I treat all higher-order interpretation as though the semantic pole of each component morpheme is always turned into a fully-fledged morphological meaning before it is exploited for further meaning creation, this is, of course, not always the case. Many combinations of morphemes are so well-

constellation possible in higher-order creation of morphological meaning: on the one hand combinations of one lexical meaning and one grammatical meaning of the kind symbolised by derivational affixes, and, on the other hand, combinations of two lexical meanings, involving at least one nominal, adjectival, and/or verbal meaning. Which two out of several morphological meanings are co-interpreted, and in which order, is determined by the various schemas that we have formed from repeated exposure to, and parsing of, complex linguistic input (cf. Section 1.3.1).

Higher-order creation of morphological meaning may, I suggest, be initiated by either of two operations. The most obvious of these is again that of mapping, whereby the relevant meanings are integrated with one another, so that a new meaning emerges. Apart from mapping, interpretation at this point may, however, also take another direction, starting off, instead, with comparison. Which of the two operations – mapping or comparison – is primarily triggered on any specific occasion, and what (chains of) effects this in turn brings about, seems to depend on the nature of the relevant component meanings themselves. Let me elaborate.

Mapping, first, seems to be the operation opted for in interpretation of combinations of lexical and derivational meanings. Such interpretation may, I suggest, follow two main routes: either mapping —> Gestalt alteration, or mapping —> redirection. Consider the meanings that arise (in any default situation) from mapping of the meanings created for, for instance, *convention* and *-al*, and *dine* and *-er* respectively. In the former case, the resulting meaning – CONVENTIONAL – reflects (or *mentions*, see Section 3.2) the same underlying kind concept as does the lexical meaning created for the root

entrenched that it seems reasonable to assume that their phonological poles are stored as single structures (in addition to being stored as separate structures), something that, in turn, means that the ultimate content and Gestalt construal potentially appearing with forms like this should be settled for already at the initial stage of delimiting raw material, by phonological interpretive functions conventionalised with the complex forms themselves. This is true of compounds as well as of derivations, and seems to be all the more clear with words of the kind where the form of the stem is somehow altered compared to the corresponding free form, e.g. *picture – pictorial*, *staple – stapler*. However, the present discussion is intended to shed some light on how analytic interpretation as such could be approached, regardless of the exact degree to which it applies in each individual case. I will come back to the issue of atomic *vs.* analytic interpretation in Section 4.2.

(namely CONVENTION), only with a different kind of Gestalt construal. In other words: in this case mapping entails Gestalt alteration, whereas the same underlying content is retained. In the latter case, on the other hand, the resulting meaning – DINER – reflects a different kind concept (namely the concept of a kind of restaurant) compared to the one typically profiled by the root (which is the concept of a kind of eating process). In this latter case, mapping is thus followed by the process that I refer to as *redirection* (along with Gestalt alteration). By redirection I have in mind a process by which attention is diverted from any kind concepts reflected by component words, and focused, instead, on a *separate* concept that is somehow associated to via (but not itself profiled by) component words themselves. I will return to the process of redirection below as well as in Chapter 4 (Section 4.2).

Comparison, next, is the operation that I think is opted for in creation of higher-order lexical meaning from combinations of two lower-order lexical meanings (or, in other words: in interpretation of compounds). Contrary to common assumption, I do not believe that lexical meanings are mapped with each other in this kind of interpretation. Instead, to the extent that analytic interpretation is involved at all (cf. Footnote 88), I think that we take another course of action here: Using the head meaning as a reference-point that gives access to a limited set of sub-ordinate kind concepts, we try to redirect, by comparing the modifier meaning to salient aspects of the relevant sub-concepts.[89] If a match is found, this effects redirection. Consider, for instance, a combination such as *soft cheese*. To the extent that this combination is interpreted analytically, I suggest that we use the meaning determined for *cheese* as a reference point that gives access to a set of cheese kinds, and compare the meaning of *soft* with salient aspects of these different kinds, until we find the particular kind of cheese that has the typical characteristic of being soft. This accomplished, we settle for the

89. Which of the two relevant meanings is thought of as 'head', and which is classified as 'modifier' is determined by conventionalised valence relations (cf. Section 1.3.1). Note that I use the terms *head* and *modifier* for convenience rather than for theoretical accuracy; as should be clear from my discussion, the present analysis does not necessarily accept the idea of a head that is modified by a pre-head item. This said, I nevertheless find the terms as such useful, being well-established and close-at-hand, so long as it is kept well in mind that what I refer to as a modifier meaning does not have to modify anything; as I shall demonstrate shortly, it may equally well merely reflect information that is already 'there'.

individual concept SOFT CHEESE as the lexical meaning of the combination as a whole. The route in this case is thus comparison —> match —> redirection. There are various versions of this main route, involving more or less elaborate chains of intermediate effects, but to the extent that two lexical meanings give rise to a new morphological meaning, I believe that this always involves comparison at some point, and ends with redirection. I will discuss the various possibilities in detail in Chapter 4 (Section 4.2).

Recapitulating, I have shown that morphological meanings may be exploited for further meaning creation on the morphological level, and that the situations in which this happens comprise confrontation with combinations of either one derivational and one lexical meaning, or two lexical meanings. More precisely, I suggest that confrontation with combinations of lexical and derivational meanings, as well as of two lexical meanings that have the same Gestalt (e.g. noun-noun combinations), invariably triggers creation of a new lexical meaning, whereas confrontation with combinations of two lexical meanings that have different Gestalts (e.g. adjective-noun combinations) in the majority of cases does not. That confrontation with the two former kinds of combination always triggers co-interpretation on the morphological level is most obviously due to convention – more precisely to the syntagmatic schemas that we have stored in our mental grammar.[90] What it is that determines level of co-interpretation in confrontation

90. It seems reasonable to assume that in the case of noun-noun combinations, our mental grammar furthermore 'tells' us that it is impossible for two nominal meanings to map with each other at any level, something that leaves co-interpretation on the morphological level (through comparison-re-direction) the only option left. That nominal meanings cannot map is, of course, in turn determined by the 'nature-of-the-world-constraint' (Croft and Cruse 2004:101); two separate things cannot co-exist as one. This analysis is, I think, a more attractive alternative compared to the oft-presented idea that the first component of a noun-noun compound takes on the ATEMPORAL RELATION schema as its Gestalt, thus allowing for mapping on a post-morphological level. It furthermore neatly explains why noun-noun compounds seem to always redirect, and give rise to a new lexical meaning, regardless of whether or not they point to an entrenched kind concept; again, because two nominal meanings cannot map with each other (on any level), we simply have to find a (novel) kind concept to which the relevant noun meanings can be understood to redirect. Having said this, however, there are words such as *darling* (pointed out to me by Warren, personal communication), which is formally a noun, but which I believe does take on the atemporal relation schema rather than the thing schema when followed by another noun, and which I furthermore believe is co-interpreted with the succeeding noun meaning on a

with combinations of lexical meanings with different Gestalts, on the other hand, is not altogether clear. Obviously, convention plays an important role in this context too, in that some combinations of this kind have become lexicalised (cf. also Footnote 88), but there also seem to be other factors at play, such as the nature of the meaning indicated by the adjective and the status of the adjective meaning relative to the sub-kinds given access to by the noun. As regards the former of these two factors, it seems that adjectives denoting, for instance, information to do with features such as function or origin are more likely to be co-interpreted with the noun on the morphological level, than are adjectives indicating information about, say, mood or appearance (cf. Warren 1984a) – regardless of whether or not the combinations as such are conventionalised. As regards the latter factor, that is the status of the adjective meaning relative to the sub-kinds given access to by the noun, it appears that if the adjective meaning points to a feature that is very salient with one of the kinds indicated by the noun, it is likely that we redirect to this sub kind – again, regardless of convention. For instance, if we know that bread is generally classified into sub kinds on the basis of what kind of flour has been used – whole grain or refined grain – and if we know that instances of the one kind typically tend to be brownish, whereas instances of the other kind tend to be whitish, odds are, in any default situation, that the combinations *brown bread* and *white bread* will make us associate to the respective sub kind (thus redirecting and creating a new morphological meaning), even if we do not know that these are conventionalised labels for these particular kinds of bread.

I have shown that the order in, and the level at which separate morphological meanings are co-interpreted is determined (to a large extent) by conventionalised syntagmatic schemas. More specifically, I have suggested that some such schemas 'tell' us that sequences of lexical and derivational meanings, as well as sequences of lexical meanings with identical Gestalts,

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post-morphological level (through mapping), rather than on the morphological level (through comparison-redirection). For instance, the meanings determined for *darling* and *husband*, in an expression such as *my darling husband*, are not co-interpreted on the morphological level, yielding a single lexical meaning reflecting a kind of husband. Rather, they are co-interpreted (together with the meaning determined for *my*) on the propositional level (assuming that the phrase in question appears in actual discourse), thus giving rise to a discourse referent. I will come back to this matter below.

invariably form higher-order morphological units (which in turn means that such sequences are always co-interpreted on the morphological level), whereas sequences of lexical meanings with different Gestalts may or may not be co-interpreted on the morphological level. In addition to these generalisations, there are supposedly further schemas, reflecting the interpretive options that we have with other kinds of sequences of morphological meanings. On the one hand, there are schemas organising co-interpretation of combinations of lexical and inflectional (as opposed to derivational) meanings (e.g. CAT+PLURAL) – schemas that, in addition to the ones discussed above, correspond to what is traditionally referred to as *word formation rules* – and, on the other hand, there are schemas organising co-interpretation of sequences comprising free grammatical and one or several lexical meanings (e.g. THE+BLACK+CAT) – schemas that correspond to what is traditionally known as *phrase structure rules*. Either kind tell us that 'their' kind of co-interpretation entails a move from the morphological to a post-morphological level (which in cases of full communicative events is the propositional level), and that the resulting meaning is thus no longer a morphological meaning, but rather (again: in cases of full communicative events) a meaning that constitutes part of a proposition. This is what I turn to now.

2.3.2 The Propositional Level and Creation of Propositional Meaning

This section deals with interpretation on the propositional level and creation of propositional meaning. In the following, I will consider, on the one hand, propositional meaning as such – what it is and what components it comprises – and, on the other hand, what creation of such meaning might involve.[91]

As I have already suggested (Section 2.3), propositional meaning could

91. Note that although many of the terms used in the following are common in the philosophical, logical and linguistic literature alike, the ways in which they are defined and employed are all but uniform. I take the liberty, therefore, of positing my own 'nomenclature' in this context, discussing with each term what I mean by it, rather than citing all the various uses found in the literature.

be seen as the 'top-most' kind of (theoretically) distinguishable semantic meaning created in discourse interpretation (although cf. Footnote 74). The way I use the term, *proposition* (or *propositional meaning*) refers to a fully situated, and fully specified conception of some kind of situation or scenario, involving various kinds of **elements** and (at times) **traits**, between which various kinds of **relation** – more precisely **process** relations, **event** relations and **state** relations – hold.[92]

Elements, first, are THINGS that are thought of as existing in some kind of mental space, and that, in any particular proposition, constitute stable entities somehow partaking in the profiled scenario as a whole.[93] Elements come in two 'versions', namely what I refer to as **referential elements** (examples (12)–(14) below) and **non-referential elements** respectively (example (15)). The most common kind of element is the referential one, which not only constitutes an element of the CDS, but which ultimately represents some external, discourse-independent entity which thus is the ultimate 'target' of any information given about the relevant element. Non-referential elements, on the other hand, do not have the additional external link characteristic of referential elements. They could be described as 'archetype conceptions', which reflect commonalities across sets of external, discourse-independent entities, but that do not as such *represent* such entities. They are existentially restricted only to a schematic, structural space set up by current discourse, and they persist only for as long as they are 'kept alive' by the discourse that created them.[94] I will return to this and related issues in Section 2.3.2.1 below.

Traits, next, are either THINGS or ATEMPORAL RELATIONS, which, unlike

92. By *situated* I mean that the relevant conception has been fully determined in terms of how it relates to the current ground. A synonymous – and more common – term used for the process of fitting meaning in with the speech event at hand is *grounding* (e.g. Langacker 1991a:Chapter 3). I will come back to the matter of grounding in Section 2.3.2.1 below. What I refer to as *trait* is the same as that often referred to as *property* (e.g. Fauconnier 1985). The reason that I prefer the term *trait* is that I use the term *property* for another (albeit related) phenomenon, which I will discuss further in Section 3.2.1).

93. As I have already established, a mental space is a mental 'realm' of existence, specifically specified in terms of relation to (what is currently perceived of as) the actual reality of the speech event at hand (cf. Section 2.2).

94. A structural space is a space that reflects the stable *structure* of a reality space of some kind, cf. Section 2.2, see also, e.g., Langacker (e.g. 1999a:247ff, 1999c).

elements, are not themselves thought of as existing, but which constitute mere descriptions, predicated of some element.

Process, event, and state-relations, finally, constitute three kinds of TEMPORAL RELATION – a dynamic, unbounded relation, a dynamic, bounded relation, and a static, unbounded relation respectively – which, when they constitute part of propositions, are felt to occur or take place in time as perceived relative to the current ground.[95]

Consider the following examples:

(12) The boy was whistling.
(13) A man opened the door.
(14) I love my family.
(15) An elephant is a mammal.

Example (12) profiles a grounded process in which there is one referential element (symbolized by *the boy*), (13) profiles a grounded event featuring two referential elements (symbolized by *a man* and *the door*), (14) profiles a grounded state involving two referential elements (symbolised by *I* and *my family*), and (15) profiles a grounded state involving one non-referential element and one trait (symbolised by *an elephant* and *a mammal* respectively).

Somewhat simplified, a proposition reflecting a relation between elements only could generally be said to 'be about' the relation as much as about the relevant elements, whereas one reflecting a relation between an element and a *trait* could be said to be primarily about the relevant element. In the former case, illustrated by (12)–(14), the ultimate, most salient aspect of the proposition is the information that it conveys about the process, event or state as a whole (including the parts played by the relevant elements). In the latter case, on the other hand, illustrated by (15), the relation as such is completely schematic; all that the verb indicates in this case is that there is some kind of unspecified static relation between the element and the trait that persists through time (Langacker 1991a:64). In this case, the most salient aspect of the proposition as a whole is thus instead the relevant element, and the information given about it.

Element, *trait* and *relation* are 'formal' terms, referring to different kinds

95. I will return to the notions of process, event and state in Chapter 3 (Section 3.2.1).

of semantic structure, which together make up a proposition. From an interpretive functional point of view, on the other hand, these different kinds of semantic structure each have specific effects (i.e. functions, cf. Section 2.4) in the ultimate *creation* of propositional meaning. In order to be able to discuss these effects, however, I have to turn to the other main matter of the present section –namely the matter of how propositional meaning could be assumed to come about.

Creation of propositional meaning involves a range of more or less complex sub-processes, all of which seem to interact in an extremely close fashion, more or less to the point of inseparability. In order to enable theoretical discussion, I will, however, again, treat processes (and sub-processes at any level of embedding) as though they were clearly distinguishable from one another.

Very much simplified, I suggest that creation of propositional meaning could be broken down into four main processes, namely

- creation of relations,
- creation of elements,
- (creation of traits),[96] and
- integration of elements, traits and relations.

For the specific purpose of examining interpretive functions of adjectives, the processes of prime interest are, I suggest, the three latter ones. In the following, therefore, I will discuss each of these processes in some further detail.

2.3.2.1 CREATION OF ELEMENTS

Creation of elements comprises two obligatory processes, namely on the one hand **instantiation**, and, on the other hand, **grounding**, each of which, in turn, comprises a number of further sub-processes.[97] In addition to these,

96. The reason that I put this process within parenthesis is that unlike elements and relations, which are 'obligatory' in any kind of full proposition, traits are only found in certain kinds of proposition.

97. In itself, this is, of course, not an original claim – on the contrary, since it was first made by Langacker (see, especially, 1991a:Chapter 3), it has come to be generally recognized

there is, I suggest, also a third operation – **specification** – which is carried out only with what I refer to as specific referential elements (see below).[98] The main processes and sub-processes are summarized in Table 2.

Table 2: Creation of Elements

Main Process	Component Sub-Processes
Instantiation	Conception of embodier[99]
	Introduction of embodier into base of lexical meaning
	Connection of embodier and lexical meaning
Grounding	Determination of conceptual status of the IE relative to addressee[100]
	Determination of existential status of the IE
	Determination of conceptual status of the IE relative to speaker
	Fitting of meaning under construction into CD
Specification	

Instantiation, first, is a process by which lexical meaning created on the morphological level for any noun phrase component is construed as being specifically tied to a certain kind of THING structure, henceforth referred to as an **embodier**. More specifically, I suggest that instantiation involves (i) the conception of an embodier, (ii) the introduction of the embodier into the base of the relevant lexical meaning (more precisely into the domain of instantiation) and (iii) the connection of embodier and lexical meaning. An embodier is highly schematic – it differs from the basic THING schema only in that it is conceived of as having some unspecified kind of 'existential extent'; that is, it is thought of as actually occupying a portion of some (completely schematic) domain of instantiation.[101] It is furthermore thought

in the cognitive linguistic literature. The description of these two processes is, however, in some respects new, as is the further analysis into sub-processes.

98. As I shall come back to in Chapter 4, it may be misguided to consider specification of any kind to be part of creation of elements. For now, I will, however, ignore this fact. What *is* correct is that specification appears in close connection to element creation.

99. It should be emphasized that *embodier* does not in any way relate to the notion of embodiment, discussed in Section 1.2.1.

100. *IE* is shorthand for *intended.*

101. In the case of instantiation of nominal lexical meaning, the schematic domain of instantiation found with the embodier conception is specified by the particular domain of instantiation pertaining to the nominal meaning. In instantiation of adjectives (or any

of as an *individual*, which has its own 'identity', and which is thus uniquely distinguishable from any other entity potentially found in the same (mental) realm of existence.

When the embodier conception is introduced into the base of, and connected to, the relevant lexical meaning, the lexical meaning comes to be thought of in terms of being *manifested* – that is, it becomes manifestation-focused instead of information-focused (cf. Section 2.3.1). The main import of this is that in being tied to an embodier, which is felt to have some kind of existential extent, the relevant description too takes on a sense of existential delimitation – of being bound to a particular (albeit as yet completely unspecified) existence. This is the main way in which instantiated, manifestation-focused meaning differs from information-focused lexical meaning; as I have already suggested, lexical meaning is completely unattached to its domain of instantiation. Notions such as existence and existential delimitation simply do not apply to information itself.

Whereas instantiated meaning could be said to take on a sense of existential extent, it is nevertheless important to realize that instantiated meaning is not the *same* as a (specified) embodier. On the contrary – the embodier itself remains in the *base* of the instantiated meaning; what is profiled is still a *description* (albeit a manifestation-focused description) – not a thing *described*. The two differ mainly in terms of identity: As I mentioned above, embodiers are thought of as individuals, with some kind of identity that sets them apart from any other individual in the same domain. Descriptions, on the other hand, are universals, in that they may pertain to any number of entities.[102]

Let me now turn to the process of **grounding**. Grounding could be generally defined as the process of relating the meaning under construction – that is: the manifestation-focused meaning arrived at in instantiation – to various aspects of the ground, thereby turning it into an element that is

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other lexical item construed as ATEMPORAL RELATION), on the other hand, I suggest that it is only the trajector of the relational schema that is connected to the embodier. Consequently, since the trajector is left completely schematic with adjectives themselves, instantiation of such items does not in itself specify the embodier's domain of instantiation.

102. These observations are, of course, not new, but date as far back as to ancient Aristotlean philosophy.

fitted in a specific way into the current discourse space (CDS, cf. Section 2.2). More specifically, I suggest that grounding comprises four main subprocesses:[103]

i. the process of determining conceptual status of the intended element relative to addressee knowledge,
ii. the process of determining existential status of the intended element,
iii. the process of determining conceptual status of the intended element relative to speaker knowledge
iv. the process of fitting the meaning under construction itself – that is the meaning arrived at in instantiation – into the CDS, thus turning it into a fully-fledged element.

The process of determining conceptual status of the intended element relative to addressee knowledge, first, is a process by which the interpreter is 'told' whether or not the relevant element has already been (or may easily be[104]) individually conceived, independently of the noun phrase currently being processed. This process is guided mainly by the meaning of the determiner of the relevant noun phrase:[105] somewhat simplified, the meaning of a definite determiner (e.g. *the*, *this*, *that*) 'says' that the relevant element is already (or may easily be) 'there' in the mind of the interpreter – or, in Langacker's (1991a:91) terms: that the interpreter has already made **mental contact** with it – whereas that of an *in*definite determiner (e.g. *a(n)*, *ø*, *some*) 'says' that there has *not* been previous mental contact with the intended element.[106] The two situations are exemplified by the following passage,

103. Again, it must be emphasised that these different processes obviously do not take the form of distinct, sequenced operations, the way they are described here. On the contrary, they are most likely carried out in parallel. The present arrangement is intended only as a means of theoretical clarification.

104. Sometimes an independent representation is formed only after the intake of the relevant noun phrase. I will discuss this in more detail in Section 4.3.1.

105. Put in other words, indication of conceptual status relative to interpreter knowledge constitutes a major SIF of any determiner.

106. Note that in the case of referential elements, what the interpreter has ultimately made mental contact with is, of course, the substance that the element *represents*, rather than the element as such. In order to avoid long paraphrases I use the word element nevertheless.

where the indefinite form of the noun phrases *a huge suitcase* and *a young boy* respectively indicates that the intended elements are new to the interpreter's mind, whereas the definite form of *the boy* and *the suitcase* respectively signals that the elements in question have already been individually conceived in response to some kind of input other than the noun phrases at hand (more precisely in response to the corresponding indefinite noun phrases):

> *A huge suitcase* came bouncing down the stairs and almost knocked *a young boy* off the platform, before it landed flat on the tracks. *The boy* escaped unscathed, but *the suitcase* was crushed beyond recognition by a passing train.

The second grounding process – namely that of determining existential status – is a process by which the interpreter determines the intended element's native mental space (cf. Section 2.2) – more precisely whether this space is some kind of reality space (in which case the intended element is referential, thought of as ultimately representing some external entity, with its own, discourse-independent existence), or whether it is a structural space (in which case the element is non-referential, representative of nothing but itself – a virtual 'archetype' that is created only for some discourse-dependent, generalising purpose, and which consequently exists nowhere outside the limited space set up for its conception (cf. Section 2.2 and below, see also Langacker e.g.1999a:247ff, 1999c). The italicised phrases in the passage above are examples of noun phrases symbolising elements tied to a reality space. Examples of noun phrases symbolising elements whose mental space is structural include, for instance, *an elephant* in *an elephant is a clever animal* and *black dresses* in *black dresses are beautiful*.

Existential status is worked out from a range of different, yet closely cooperating factors, such as determiner meaning, clausal grounding predications, lexical meaning established for the main verb, over-all clause structure, and so on.[107] Exactly how this happens is, however, beyond the scope of the present study.

107. Clausal grounding predications include meanings such as those established for modal markers, tense markers, markers of aspect etc.

The third grounding process – i.e. that of determining conceptual status relative to speaker knowledge – differs from the seemingly similar process of determining conceptual status relative to *addressee* knowledge (i.e. the first of the grounding processes), in that in this case, the question is (obviously) not whether or not a conception of the element has been formed independently of the relevant noun-phrase,[108] but rather whether or not the (independently conceived) element is **specific** or **non-specific** – that is whether or not it is determined (in the mind of the speaker) in terms of **identity**. Consider the utterance in (16):

(16) I'm looking for *a black dress*.

Here, the speaker may have a particular dress in mind, in which case the meaning ultimately symbolised by the italicised noun phrase is a straightforward referential element, which is located in the current reality space, and which thus ultimately represents an external, discourse-independent entity (more precisely the particular dress). This is the specific interpretation. On a non-specific reading, on the other hand, the speaker does *not* have a particular dress in mind, but any entity that fits the description will (presumably) do. That is, the entity that the relevant element ultimately represents, is an actual, real entity – it is an *actual* dress that the speaker is looking for, not the mere *idea* of a dress – but its actual *identity* is yet to be determined. This is a peculiar situation, in that in any other case, what the speaker is talking about is a *specific individual*, something that is uniquely identifiable within its realm of existence – either a specific substance, existing in what is currently perceived of as reality, or a specific 'archetype', existing in a structural space. In non-specific cases, on the other hand, it is not a specific individual *as such* that is of importance, but rather an individual *in its capacity of embodier of a particular description*. I shall discuss these matters in further detail below and in Section 4.3.

The question of whether or not the intended element is specific arises only in cases of indefinite noun phrases determined in the second grounding

108. If the speaker had *not* had an independent conception of the relevant element, (s) he would not have been able to encode it linguistically. From the speaker's perspective, conception always precedes encoding.

process as belonging to a reality space. In any other case – that is in cases of definite noun phrases or indefinite noun phrases determined to belong to a structural space – there is only one interpretation available, namely the specific one. This is because in any such case, a specific individual is inevitably either reflected or provided by the meaning under construction itself. I shall come back to this issue presently.

Conceptual status relative to speaker knowledge is not indicated by any specific linguistic means; on the contrary, utterances featuring indefinite noun phrases of the relevant kind are quite simply ambiguous between the two readings. As is commonly the case in language interpretation in general, however, the intended reading can, in most cases, be worked out from larger context.

The fourth of the grounding processes, finally, is the crux of the whole grounding procedure – the ultimate process for which the preceding ones have prepared the ground, as it were (no pun intended). In successful communication, it completes and concludes grounding, so that at its output stage, the meaning under construction is located in the CDS in the way envisaged by the speaker. There are two main ways in which the meaning under construction becomes part of the CDS: it either *identifies* an independently formed element, or it *introduces* a new element. Which alternative is opted for on any particular occasion is determined by the outcome of the first of the four grounding processes: **element identification** is triggered in cases where the meaning under construction is marked as reflecting an element that has already been (or may be) independently formed, whereas **element introduction** happens in cases where the relevant meaning is understood *not* to reflect such an element.

Element identification is by far the less complicated of the two, in that it always follows the same pattern: the interpreter compares the meaning under construction against the various representations already (more or less saliently) found in the space determined as native mental space, until a match is found. Attention is then directed, instead, towards this matching element.[109] Element identification will be discussed further in Section 4.3.1,

109. The route found with element identification is thus very similar to that found in interpretation of compounds (see Sections 2.3.1 and 4.2), something that I will return to in Section 4.3.2.

suffice it at this point to establish, on the one hand, that the identifying process as such is carried out by means of various tools, among which the most obvious are probably the meanings established for noun phrase components – in other words: element identification may be a SIF of noun phrase components (cf. Section 4.3.1.) – and, on the other hand, that once the independent element conception has been identified, noun phrase component meanings are mapped and merged with the identified conception as such, something that, in turn, concludes the process of element creation with definite noun phrases.

Whereas element identification seems to always follow the same basic route, element introduction varies depending on the outcome of the second and third of the four grounding processes. As I have already touched upon, these processes – that is determination of native mental space (process 2), and determination of conceptual status relative to speaker knowledge (process 3) respectively – marks the element-to-be-introduced as (i) a non-referential, structural element (as in '*black dresses* are beautiful'), (ii) a referential specific element (as in 'I've bought *a black dress*'), or (iii) a referential non-specific element (as in 'I'm looking for *a black dress*'). In each case element introduction follows a specific route, as indicated in Table 3.

Table 3: The Various Routes of Element Introduction

Introduction of non-referential element	**Introduction of referential specific element**	**Introduction of referential non-specific element**
Shift in profile: description→embodier	Shift in profile: description→embodier	Shift in profile: description→embodier
Identity provision	Substance construal	Substance construal
	Specification[110]	Stipulation

Common to all cases of element introduction is a fundamental *shift in profiling*. Up to this point, the meaning under construction has been an instantiated but un-grounded meaning – that is a meaning that comprises an embodier conception as part of its base, but that nevertheless still profiles a

110. Note, however, that specification is probably best thought of as an independent process, outside the process of grounding (cf. Footnote 98).

mere description, rather than an individual thing to which the description applies. In element introduction this construal is, I suggest, altered. In order for a semantic structure to be able to take on the status of an element, it must profile something that is felt to have *existence* and *individual identity* (cf. Section 2.3.2). As I have already shown, however, a mere description (which is what an instantiated, yet ungrounded meaning profiles) is not itself felt to have either of these characteristics. Consequently, in any case of element introduction, focus has to be shifted from the description itself to the embodier conception found in its base; as was made clear above, an embodier – as opposed to a mere description – is conceived of as having the characteristics necessary for elementhood[111].

Once focus is shifted to the conception of an embodier of a particular description, one out of two things may happen: the embodier conception may either be introduced into CDS without further alterations, or it may be subjected to yet another kind of construal before it is introduced. The former of these scenarios is found with meanings determined in the second of the four grounding processes as belonging to a structural space. Here the embodier conception is taken at its face value, as it were, and is introduced just the way it is into the relevant space, whereby it gains status as a non-referential element. As I have already mentioned, a structural space is a transient, fully discourse-dependent conception of the *structure* of what is currently perceived of as reality, a conception that reflects general, stable *characteristics* of the relevant reality, as opposed to actual, substantial things and situations, idiosyncratically *manifesting* such characteristics. Consequently, the *identity* of any non-referential element – that is: that which sets such an element apart from any other element in the relevant mental space – is the description that it is thought of as embodying. That is, the description that a structural element embodies constitutes its very essence, all that it amounts to, nothing more, nothing less (cf. Footnote 111). Consequently, when an embodier conception is introduced as a new element into a structural space, the description that it is felt to embody *provides* it with its identity, thus making it uniquely identifiable within its realm of existence.

111. This does not mean, however, that the description is no longer important; on the contrary, at this point in interpretation, the description constitutes all that there is to the embodier, and thus qualifies as its *identity*, in the absence of indications to the contrary. I will return to this matter below.

I refer to this as **identity provision**, something that I will discuss in further detail in Section 4.3.2. Identity provision concludes creation of non-referential elements.

Whereas a meaning that is determined in the second grounding process as belonging to a structural space is introduced into the CDS at its face value, an element that is determined to belong to a reality space is subjected to further construal before it is introduced, which gives it a sense of amounting to something more than meets the eye. I refer to this as **substance construal**.

By *substance* I have in mind some kind of entity that is thought of as existing independently of the current speech event, in some kind of external, discourse-independent reality (which, in turn, is *in*ternally represented by a reality space, cf. Section 2.2). Barack Obama, the Eiffel Tower, Harry Potter, the stone table to which the lion Aslan was tied, and the witch that Valdemar believes lives under his bed are all substances, thought of as existing and persisting, independently of any particular speech event. The defining trait of substances is that they consist in some kind of underlying 'constant', which may be described or experienced in terms of contentful information of various kinds, but which itself goes beyond any such information.[112] For instance, I may describe my son Julius as 'my son', 'a charmer', 'the little hooligan', 'Hilding's, Valdemar's and Teodor's brother' and so on and so forth, but as an embodier of all these descriptions, there is the sense of Julius *himself* – the *substance* – which can never be captured by any description, however detailed.[113] It is this underlying *je ne sais quoi* that constitutes the *identity* of a substance – that which sets it apart as an individual in its world.

When a substance is to be represented in discourse, the embodier conception used to this end must cater for the additional sense of an identity that

112. My use of the term *substance* is thus somewhat similar to that found in Aristotlean substance theory, with the difference that whereas traditional theory typically traces substance back to one single, omni-present entity (generally what is thought of as 'God'), I take the exact opposite approach, seeing substances as individual 'identities', much the same as what is also generally referred to as *particulars* in the philosophical literature.

113. Note that there is a difference between being *captured* (in the sense 'defined') and being *identified* (in the sense 'found'); a particular substance (and thus its identity) can be *identified* (i.e. 'found') by means of a distinctive description (this is the case in element identification (see above and Section 4.3.1)), but it cannot be *captured* by it.

goes beyond any particular description. In short: it must be construed as a substance. Through substance construal the element becomes capable of *representing* a substance, and thus also gains referential status. Once this is achieved there is only one objective left, namely the actual introduction and establishment of the meaning under construction as an element in the relevant mental (reality) space. Depending on whether the intended element is determined in the third of the four grounding processes to be specific or non-specific, this process manifests itself in two different ways.

If the intended element is determined to be a specific element, representative of a specific substance, the meaning under construction – which now profiles a 'substance-construed' embodier of the description symbolised by component lexical words – introduction is relatively straightforward. The relevant meaning is simply taken to represent a specific substance in the relevant space. This introduction is, however, different from that found with structural, non-referential elements. Whereas a *non*-referential element is completely new to the interpreter's mind, since it exists only as a consequence of the intake of the noun phrase that symbolises it, a referential element has, in a sense, been 'there' in the mind of the interpreter even prior to the intake of the relevant noun phrase, although only as part of his more general, non-particularised knowledge that there are an infinite number of individual people, things and phenomena that have their own existential identity in the world, without being known to him personally. Consequently, whereas the introductory process found with non-referential elements could be said to be true introduction, in that it in this case equals *creation*, that found with referential elements is more of an 'individualising' process.[114] What happens in this case is that the interpreter understands the intended element to be representative of one of all those individual things that he knows exist in the world, but that he has not previously had any individual (mental) contact with, and so, he 'individualises' one of these entities into a specific substance, which is felt to be existentially determined by discourse-independent factors (cf. Footnote 116).

As should be clear from the above, the entity represented by a specific referential element is both dependent and independent relative to the noun

114. I will nevertheless continue to use the same term – *(element) introduction* – regardless of whether it is a question of 'true' introduction or of 'individualisation'.

phrase at hand: it is only through the intake of the noun phrase that it is individualised as a separate substance – that is, it is dependent on the noun phrase to bring it out for individual conscious awareness – but at the same time it is *in*dependent in that it is felt to be something that has its own existential status – something that is 'there' on independent grounds, apart from the intake of the noun phrase as such. Or, put in other words: whereas a non-referential element is existentially as well as 'attentionally' dependent on the noun phrase that symbolises it, a specific referential element – or, rather, the thing that a specific referential element represents – is only dependent in that it is the relevant noun phrase that draws attention to it as an individual substance. This, in turn, means that whereas the content comprised by a non-referential element *provides* this element with identity (see above and Section 4.3.2), that of a specific *referential* element *specifies aspects of* an identity that is already 'there'. Since it does not in any way affect the existential fit of the relevant element relative to the CDS, however, this process – which I refer to as **specification** – is not part of grounding, but constitutes a separate process, pertaining to the relevant element only when it has been grounded.[115] Specification will be discussed in further detail in Section 4.3.4.

Recapitulating, I have shown that meanings that become non-referential elements are introduced into their space as completely new entities, the identities of which are provided by the content comprised by the meanings themselves, whereas structures that are turned into specific referential elements are introduced as representing pre-existing but previously non-individualised substances, the non-definable, underlying identity of which is understood to be determined by equally non-definable discourse-independent factors.[116] What both kinds of structure have in common, however, is that they are *existentially determinate* – at the close of the grounding process, they are fully situated in the CDS, either constituting (in the case of non-referentials) or representing (in the case of referentials) a specific entity that is understood to be uniquely identifiable within its realm of existence.

115. Cf. also Footnote 98, and Section 4.3.

116. That is, in the same way as it is impossible to actually define the identity of a substance, it is impossible to say exactly what it is that makes us *perceive of* a substance as an individual entity with its own non-definable identity.

Let me now turn to introduction as found with the final kind of element, namely non-specific referential elements. With this kind of element, the process of introduction is more complicated than it is with the two other kinds – in a sense, a meaning that becomes a non-specific referential element could be said to be introduced only 'half-way' into the CDS. It is fitted in to the extent that it is determined in terms of what kind of mental space it 'belongs to' (namely some kind of reality space), but this is as far as it is taken. Since the third of the grounding processes has established it to be representative of a non-specific substance, the ultimate settling down in the given space is not finalized. Instead, the element structure could be thought of as hovering above the relevant space, waiting to be ultimately pinned down by a unique connection to a specific substance.[117] This, in turn, means that instead of either providing a specific identity, or specifying an aspect of a substance the identity of which is obtained on independent grounds, the content comprised by a non-specific referential element *stipulates what the substance that it represents should be like* in order to qualify as the referent of the relevant element in the relevant proposition. For instance, in order for a certain substance to qualify as the referent of the element defining what 'I' am looking for in the proposition created from *I'm looking for a black dress*, it has to be black and of the kind DRESS, as stipulated by the description provided by the element structure itself. The function of **stipulation** will be discussed in some further detail in Section 4.3.3.

2.3.2.2 CREATION OF TRAITS AND INTEGRATION OF ELEMENTS, RELATIONS AND TRAITS

In this section I consider briefly on the one hand the process of trait creation, and, on the other hand, the process of integrating proposition components – that is elements, relations and traits.

A fully-fledged trait is a description that is predicated of some kind of specific element – either a non-referential element or a specific referential element – and that thereby specifies an aspect of this element.[118] Conse-

117. This process of providing a 'unique connection' is, however, understood as falling outside the specific communicative event; it is open for potential, but completely unspecified future finalization.

118. I use the term *predicate* in the sense 'integrate/connect traits with an element'.

quently, creation of traits, just like creation of elements, must involve the process of instantiation of lexical meaning; if it did not, subsequent predication of an element would not be possible, since non-instantiated, information-focused lexical meaning is simply not compatible with conceptions of specificity and existential individuality. Instantiation is, however, the only component process that creation of elements and creation of traits have in common. Unlike meanings that are turned into elements, meanings that are turned into traits retain focus on the description that they comprise; the embodier conception introduced in instantiation remains a schematic, non-profiled, non-grounded structure that merely acts as an inferred 'stand-in' for whatever phrase-external thing turns out to be the 'true' embodier of the trait.[119] Consider (17) and (18):

(17) Grisebjörnen is *a teddy bear*.
(18) An elephant is *clever*.

The italicised phrases in (17) and (18) both symbolise traits, which incorporate, but which do not profile, the sense of some kind of embodier. This embodier acts as a non-focused, ungrounded 'stand-in', or 'embodier representative', which is there to make the interpreter perceive of the information provided by the respective lexeme as a delimited manifestation of information rather than as limitless information as such, but which is not itself of any relevance. As should be clear, then, creation of traits is a far less complicated process than creation of elements: there is the process of instantiation, but the manifestation-focused meaning thus arrived at is subsequently kept exactly the way it is, without being subjected to any further operations of construal. I will return to the issue of traits and how traits are predicated in Section 4.3.4.

Once the relevant element(s), relation and trait(s) comprised by a certain proposition have been determined, they are integrated with each other, so as to form the ultimate conception of a scenario that constitutes fully-

119. The ultimate process of connecting the relevant trait with its 'true' embodier – that is a specific, grounded element – lies outside the process of trait creation as such, and takes place, instead, in ultimate integration of proposition components, something that I will return to presently.

fledged propositional meaning. In such integration, each component meaning has its own specific interpretive effect (or, in my terms: interpretive *function*, cf. Section 2.4). Very briefly, elements specify the schematic participants comprised by relations and, conversely, relations assign to elements particular participant roles.[120] In cases of transitive relations – that is in cases of relations featuring more than one explicit element – they furthermore relate the relevant elements in the particular way described by the relation itself. Traits, finally, elaborate some aspect of an element. I suggest that this function is the same as the effect that contentful meaning has on specific indefinite referential elements, and consequently I refer to the function of traits by means of the same term, namely **specification**. I will discuss this function in some further detail in Section 4.3.4.

2.3.3 Section Summary

In this section I have presented a view of interpretation as a dynamic process of meaning creation. The main components of this process are summarized in Table 4.

Table 4: Creation of Meaning[121]

Level	Process
The pre-crystallization level/the morphological level	Pre-crystallization interpretation of morphological meaning (including processes such as activation, delimitation, mapping-Gestalt alteration, mapping-redirection, and comparison-redirection).
The crystallization level/the propositional level	Crystallization / creation of propositional meaning (including processes such as creation of relations, elements, and traits, and subsequent integration of proposition components.
The post-crystallization level/the discourse level	(Continuous) post-crystallization creation of discourse meaning

120. Note that there is an exception to this, namely propositions featuring the copula. In line with, e.g., Langacker (1991a:64ff), I suggest that the copula is completely schematic, so that it does not comprise any specification of participant roles.

121. Note that this figure is in no way exhaustive; it focuses mainly on processes of relevance to the present work, and above all, it completely ignores creation of pragmatic meaning – creation that presumably occurs in cooperation with creation of semantic meaning (cf. Footnote 62 above).

Meaning creation is triggered by the communicative situation in general, and by confrontation with formal input in particular. Formal input is translated into a conceptual representation, which, in turn, activates purport and schemas along with various delimiting and mapping operations initiating the transformation of raw material into fully-fledged meaning. Such operations are entrenched – conventionalised – with the formal structure itself, and constitute what I refer to as the **formal interpretive functions** of the relevant symbol (for further details, see Section 2.4 and Chapter 3). Conventionalised operations are, in turn, constrained by various kinds of inferences based on non-conventionalised linguistic and extra-linguistic contextual factors, along with background knowledge tied to these factors. To the extent that such factors consist in the meaning created for surrounding linguistic items, the constraining effects constitute what I refer to as **secondary semantic functions** of these items (for further details, see Section 2.4).

The most basic kind of distinct meaning to arise in interpretation is morphological – grammatical or lexical – meaning. Such meaning is subsequently further exploited for higher-order meaning creation, either on the morphological- or on the propositional level. To the extent that such creation is determined by the meaning of component morphemes, this is what I refer to as **primary semantic interpretive functions** of these morphemes (for further details, see Section 2.4 and Chapter 4).

Further meaning creation on the morphological level always results in a new lexical meaning, created through mapping and ensuing redirection and/or Gestalt alteration with combinations of derivational and lexical meanings, and through comparison-redirection with combinations of lexical meanings. Further creation on the propositional level, on the other hand, ultimately results in propositional meaning, created through an array of more or less inextricable sub-processes, such as creation of proposition components (elements, relations and traits), and subsequent integration of such components. For the specific purpose of accounting for adjective function, the processes of most relevance are creation of elements, creation of traits and integration of proposition components respectively. Creation of elements involves sub-processes such as instantiation and grounding (both of which comprise even further sub-processes), and, sometimes, specification, whereas creation of traits involves instantiation only. Integration of propo-

sition components involves elaboration of relational participants, assignation of participant roles to elements, and specification of elements.

Having presented my view of interpretation, I will now turn to the last of the three fundamental notions mentioned in Section 2.1, namely that of function.

2.4 Function as Conceptual Effect

What do we mean when we talk about *function*? Although we often tend to treat this term as if it referred to one single, straightforward phenomenon, it is, in fact, used in the literature for a range of different phenomena, involving more or less radically different aspects of language (cf., e.g., Nuyts 1992:26 and Harder 1996:88). In the present work, *function* (or, more explicitly: *interpretive function*) refers to the dynamic, momentary *effects* that linguistic items have on *creation of meaning*.[122] As I have already mentioned (e.g. Sections 0.1 and 2.3.3), I suggest that such functions in turn divide into two further kinds, namely what I refer to as **formal interpretive functions** (or **FIF**s) and **semantic interpretive functions** (or **SIF**s) respectively.

With FIFs I have in mind the conventionally determined conceptual effects that written or spoken formal input triggers in the mind of the interpreter; more precisely the entrenched operations of activating, delimiting and mapping underlying raw material for the creation of meaning[123]. I dis-

122. In this, my approach is similar to that taken by, for instance, Harder (1996). As should become clear in the following discussion of primary and secondary SIFs, however, I take a wider view of the notion of function; whereas Harder (1996:88) holds that a certain effect must be ranked higher than others – i.e. be intentionally meant to be – in order to constitute a function, I consider all kinds of effects to be functions. The difference between me and Harder is, however, basically a matter of terminology; whereas Harder divides effects into functions and non-functions, I classify them as primary and secondary functions (see below).

123. Of course, in practice, conventional restrictions cannot be separated from contextual constraints; as should have become clear from the previous section, the two are inextricably interrelated and interdependent. Still, I nevertheless believe that it is quite possible to tear them apart for purposes of theoretical discussion. Whereas there is clearly no situation of activation where convention serves as the only restriction on what an item comes to mean – even in default readings, as in situations where we encounter a word in isolation,

cussed this in some detail in Section 2.3.1; consequently, I will say no more about it here. For an in-depth discussion of the consequences of FIFs, see Chapter 3. With SIFs, next, I have in mind the effects that the resulting meaning of a certain item, at any given moment, has on the meaning of any other construct, at any level of conceptual organisation.

SIFs divide, in turn, into two main kinds, namely what I refer to as **primary SIFs** and **secondary SIF**s respectively. Primary SIFs are the entrenched effects that the semantic pole determined for item *X* has on the creation of the higher-order meaning resulting from the conventionalised co-interpretation of item *X* and some other item or items. Consider, for instance, an utterance such as that given in 20:

(20) After a short walk, we came to a grassy bank.

In this example**,** the lower-order meanings A, GRASSY and BANK are co-interpreted in accordance with conventionalised patterns to yield the predictable higher-order meaning symbolised by the noun phrase as a whole (more precisely a specified specific referential element). In this process, I suggest that GRASSY and BANK both have the primary SIF of **specifying** the element in question (cf. the previous section; for further details, see Section 4.3.4).

Again, primary SIFs occur as well-entrenched, predictable results of conventionally determined creation of successively more complex meaning. Secondary SIFs, on the other hand, could be said to be unintentional 'by-products' of the *non*-conventionalised aspect of interpretation in general – more precisely of inferences made from context and background knowledge. That is: whereas primary SIFs are the predictable effects that lower-order meanings have on creation of the higher-order meaning of which they constitute part, secondary SIFs are unpredictable (and less salient) effects of one meaning on the creation of another meaning of which the affecting meaning is *not* felt to be a direct part. Consider again the adjective *grassy* in 20 above. Apart from the primary SIF of specification, I suggest that the meaning

there are nevertheless a number of extra-linguistic contextual constraints at play (cf. Section 2.3, especially Footnote 73) – this does not mean that we cannot, at least on a general level, determine what contributions to meaning creation are down to convention, and what contributions pertain to context. I will return to this matter in Section 3.2 below.

determined for this adjective also has certain more or less obvious secondary SIFs, including, on the one hand, effects on the creation of the basic morphological meaning determined for the noun (*bank*), and, on the other hand, effects on the propositional meaning determined for the entire clause. As regards effect on creation of noun meaning, first, the adjective meaning constrains focus to one specific lexical meaning for *bank* out of several potential candidates created as a result of the FIFs of the noun itself – the main ones of which could be given as SLOPING LAND, FINANCIAL INSTITUTION and PROCESS OF DEPOSITING MONEY respectively.[124] On the basis of our knowledge of, on the one hand, what it means to be covered with grass, and, on the other hand, sloping land, financial institutions and processes of depositing money respectively, we (subconsciously) decide that the most plausible sense of *bank* in this case is SLOPING LAND; we know that whereas land is often covered with various kinds of vegetation, financial institutions are not usually so, and processes of depositing money simply cannot be. This delimitation of noun meaning is triggered (at least in part) by the presence of the adjective meaning, and so, it is a SIF of this adjective. It is, however, a *secondary* SIF because it is a constraint on another meaning at the same level as the adjective meaning itself – a by-product of the nature of the adjective meaning in relation to that of the noun – rather than a predictable, intentional, creative effect on a higher-order meaning of which the adjective meaning constitutes part.

As for effect on the proposition as a whole, next, the presence of GRASSY might trigger the conclusion that the scene being described is set in the country, or in a small town, rather than in the middle of a big city. A clearer example of the meaning of an adjective affecting the view of overall propositional meaning is, however, obtained if *grassy* is substituted with *flowery* – *After a short walk, we came to a flowery bank* –, in which case FLOWERY prompts the (more or less salient) conclusion that the scene is set in summer. Again, such an effect is a secondary SIF of the relevant adjective, in that it pertains to creation of over-all propositional meaning, rather than

124. FINANCIAL INSTITUTION in turn comprises a number of sub-meanings (also referred to as *facets*, see e.g. Croft and Cruse (2004) and Paradis (2004 [2010])), each of which can also be selected by a prenominal adjective, as in *friendly bank* – 'staff'; *huge bank* – 'building'; *versatile bank* – 'service' and so on.

to creation of an element (the latter, but not the former, kind of conception being what the adjective meaning in this case is felt to constitute a direct part of).

Whereas I consider all effects that a particular linguistic meaning has on the creation of other – higher-order and/or separate – meaning as constituting interpretive functions, I focus in the remainder of the present work on primary, rather than on secondary functions.[125] Consequently, unless I specifically say otherwise, all references to interpretive functions pertain to primary functions only.

Recapitulating, I have suggested that any particular linguistic item realizes two main kinds of interpretive function in any given usage event: (the representation of) the item's *form* has the function of activating, delimiting and organising underlying meaning potential in a specific way, thus crucially affecting the creation of meaning for the item *itself*, whereas the *meaning* determined for the same item has the function of somehow affecting the determination and creation of meaning for *other* items at any level of conceptual organisation. In cases of primary SIFs this 'other item' is the *immediately super ordinate* meaning resulting from conventionalised co-interpretation of component elements.

2.5 Concluding Remarks

In this chapter I have outlined a theoretical framework for the study of meaning creation in general, and interpretive functions in particular. The discussion has focused on the fundamental notions of communication, interpretation and function respectively, showing how these notions could be described in generally cognitive terms. It is now time to turn to the more specific matter of interpretive functions of adjectives.

125. For further discussion of the power of inference in creation of meaning (which is what secondary SIFs are mostly about), the interested reader is referred to, e.g., Medin and Shoben (1988) and Murphy (1988, 1990, 2002).

3 Formal Interpretive Functions of Adjectives in English

3.1 Preliminaries

In this chapter I discuss various important aspects of the **formal interpretive functions** (**FIF**s) of adjectives. As I have already established, FIFs include

i. the conventionally determined activation and delimitation of the conceptual material (i.e. purport and schemas) that constitutes the word's full meaning potential, and
ii. the conventionally determined organisation, mapping and merging of selected material into a coherent morphological meaning.

These functions are, of course, the same for all kinds of linguistic forms, and so, the discussion of FIFs of any *specific* kind of item – in this case adjectives – must concern itself with, on the one hand, *what* material is conventionally exploited, and, on the other hand, *how* this material is conventionally mapped and merged to form the meaning of the particular item of interest. As regards adjectives, neither of these questions has been very thoroughly dealt with in the literature. Within the cognitive framework, pioneering work has been carried out by Paradis as part of her model of Lexical Meaning as Ontologies and Construals (e.g. 2005), especially in terms of the former question – that is what kinds of conceptual structure adjectives seem to exploit[126]. Apart from Paradis's work, which takes a strictly cognitive approach, there are also a couple of studies of interest to the present purposes that are of a more eclectic nature, but that can easily be adapted to the

126. See also, e.g. Hetzron (1978) and Dixon (1982) for suggestive surveys of semantic categories evoked by adjectives.

cognitive view. These studies include Ljung (1970) Levi (1975), Aarts and Calbert (1979), and, above all, Warren (especially 1984a).[127] Taken together, these studies provide a good starting-point for the development of a detailed account of adjective FIFs (and, by extension, also of adjective SIFs). In the following, I will take the next step towards such an account, elaborating on the question of what kinds of conceptual material seems to be of relevance to the meaning of adjectives (Section 3.3.1), as well as on the matter of how this material is internally organized by such items (Section 3.3.2).

3.2 The Material Aspect

As regards the material aspect of adjective FIFs – that is what portion of purport and what different schemas are singled out as raw material for the creation of adjective meaning – there is, of course, one structure that is common to all adjectives, namely the ATEMPORAL RELATION schema; as I showed in Section 1.3.3.2 the presence of this schema is precisely what makes us conceive of adjectives as adjectives in the first place. Consequently, ATEMPORAL RELATION is always evoked as part of the semantic pole created for an adjective. This is, however, the only constant found with this kind of item; on all other accounts adjectives may vary, in terms of material delimited as well as in terms of internal organisation of this material (the latter aspect of which I will return to in Section 3.3.2).

In the following discussion of conceptual material, I will not track FIFs from the very beginning of lexical meaning creation, but rather 'jump in' at a (theoretically, if not psychologically, distinct) point where an ontologically and experientially coherent **pre-meaning** has been determined, and what remains is basically the superimposition and alignment of the ATEMPORAL RELATION schema, which provides ultimate construal in terms of Gestalt. Pre-meanings are semantically relevant structures that are construed in some way(s), but that are nevertheless – at the moment of their creation – still

127. To the extent that I discuss these studies in the following, I will make reference to Warren only. I believe that I do remaining studies no injustice by doing this; their claims are similar to Warren's and differ basically only in terms of terminology and extensiveness, Warren's study being the most exhaustive by far.

sub-conscious, and still susceptible to further construal (e.g. Cruse 2002, Croft and Cruse 2004). They arise as a result of the 'successive' nature of interpretation; each chain of construal operations gives rise to a pre-meaning, which in turn serves as fundamental input to higher-order meaning creation. Note that the present treatment of pre-meaning and Gestalt as two distinct kinds of structure should not be taken to suggest that Gestalt is necessarily assigned only when all else is said and done. As I have already established, I am not concerned in the present work with the actual neurological process of interpretation. From a theoretical point of view, I maintain that it is possible to separate ontologically and experientially motivated underlying meaning structures (or pre-meanings) that emerge in the creation of adjective meaning, from the specifically adjectival Gestalt construal of ATEMPORAL RELATION. Although both are essential to the final meaning of the adjective, they are not the same, nor are they, in most cases, indistinguishable. On the contrary, as I will show in the present section and the next, it may well be the case that an underlying meaning structure emerging as the semantic basis for a particular adjective reflects something that, from an ontological point of view, is an autonomous, independent entity of some sort, something that clearly sets it apart from the dependent, relational construal afforded by the adjective Gestalt. The independent status of, on the one hand, Gestalt, and, on the other hand, the ontologically and experientially motivated pre-meaning upon which Gestalt is superimposed, is, furthermore, highlighted by the fact that the same ontological material to a large extent serves as the semantic basis for words from different word classes (that is for words applying different Gestalts), not only for adjectives. This is seen particularly clearly with words such as *fat*, *yellow*, and *numb*, which not only exploit the same underlying ontological material regardless of which Gestalt is opted for, but which also retain the same form in doing so.[128] In an attempt to keep underlying, ontological pre-meaning apart from fully-fledged morphological meaning, specifically construed in terms of Gestalt, I use the terms *mention* and *mentioned structure* (or *m-structure*) for

128. In the case of *fat*, the Gestalt opted for would be THING or ATEMPORAL RELATION, in the case of *yellow* it would be THING, ATEMPORAL RELATION or TEMPORAL RELATION, and in the case of *numb* it would be ATEMPORAL RELATION or TEMPORAL RELATION (cf. Section 1.3.3).

the former, and *profile* and *profiled structure* for the latter. Thus, an adjective *mentions* different kinds of ontologically supported pre-meanings (kinds that will be surveyed below), but what it *profiles* is always an atemporal relation of some sort, which somehow involves the mentioned structure. An adjective such as *pictorial*, for instance, *mentions* a so called first-order structure (see Section 3.2.1) – namely PICTURE – which is, in fact, ontologically and experientially autonomous and non-relational – but what it *profiles* is an atemporal relation of some unspecified kind, between PICTURE and something else (which is also unspecified by the adjective itself).

In the present section I will consider in some detail the nature of the structures conventionally mentioned (as opposed to profiled) by adjectives. What main kinds of structure can we distinguish? It may be argued that in order to say anything about the material conventionally delimited by adjectives (or by any linguistic item for that matter) we need to go back to the very beginning of interpretation, since once we find ourselves well on our way towards a fully-fledged morphological meaning, the material originally activated and delimited is 'corrupted' and changed beyond recognition. However, as I mentioned in Section 2.4, I nevertheless believe that it is possible to filter out idiosyncratic contextual interpretations from more basic, default pre-meanings that remain reasonably stable across contexts and speakers. Such default meanings can, I believe – at least in most part – be attributed to material 'picked out' by the form of the relevant word itself, rather than to information provided by, or concluded from, context. Regardless of which, the question of exactly where to draw the line between, on the one hand, the conventionalised FIFs of the relevant word as such, and, on the other hand, non-conventionalised, contextual constraints, is a non-question, since convention is just a stabilized version of context. Furthermore, the true value of FIFs lies not in their strictly conventional origin, but rather in their capacity of providing a set of reasonably stable meanings on the basis of which we can make generalisations and predictions of relevance to linguistic (above all semantic) analysis.

The various ontological structures that adjectives conventionally mention can be roughly divided into two main kinds: on the one hand *content-biased*, and, on the other hand, *schematicity-biased structures* (Paradis 2005). As the terms would suggest, the former kind foregrounds content, whereas the latter kind consists of what is felt to be essentially schematic information

– that is information about how to view content, rather than content *per se*. The reason for using the term *biased* in this context, is that once we get to the point of conscious access, meaning is by necessity always construed, and so always comprises schematic structures. The question is whether it also holds content, and, in that case, whether this content is prominent enough to prevent us from paying conscious attention to any specific viewing arrangements. For instance, an adjective such as *rainy* in, say, *rainy day* seems to call up the image schema of CONTAINMENT, construing the trajector (which in this case is elaborated by DAY) as a container for the landmark (in this case elaborated by RAIN). Still, the rich content that is also associated with this word – our encyclopaedic knowledge of rain – takes precedence over the configuring information so that content is most prominent. Hence, *rainy* could be said to mention a content-biased structure. With a word such as *first*, as in *the first book*, on the other hand, there is little salient content called up – what this adjective does is simply to provide a particular way of viewing, namely in terms of position in an ordered sequence. Consequently, the structure profiled by *first* could be said to be schematicity-biased.

Although salience of schematic information is an important aspect of bias along the schematicity scale, this is not all there is to it. There is, I suggest, also another factor that determines whether a certain adjective should be seen as content or schematicity-biased, namely the extent to which schematic information applies to content called up by the adjective itself versus content elaborating the trajector (that is, content supplied by any combining noun). Consider, for instance, an adjective such as *long*. The meaning of this word holds very saliently a sense of 'high degree', which, of course, is clearly schematic information. Nevertheless, despite the salient presence of this information, the structure mentioned by *long* should, I think, be considered to be content rather than schematicity-biased, simply because the construal in terms of degree applies to the notion of being of a particular length, not to whatever content maps with the trajector.[129] In summary, then, content-

129. We could, however, also consider the structure mentioned by *long* to be schematicity-biased, arguing that the notion of being of a certain length is already inherent in whatever content elaborates the trajector, so that the only addition made by the adjective is one of schematic information (namely degree), which, furthermore, does apply to the content elaborating the trajector – albeit to an intrinsic aspect of this content, rather than to the

biased and schematicity-biased structures respectively are structures that are mainly 'contenty', or mainly schematic, *in relation to the trajector*.[130]

Apart from the rough classification into content and schematicity-biased structures, further distinctions can be made within these two main kinds. In the following, I will consider each kind in turn, starting with content-biased structures.

3.2.1 Content-Biased Structures

In this section I discuss content-biased structures conventionally mentioned by adjectives. Although focus will be on the nature of these structures as such – that is, disregarding any particular Gestalt construal – I will nevertheless discuss to some extent the various possibilities as regards Gestalt too, so as to highlight important aspects of this matter.

Broadly along the lines laid out by Paradis (2005), I suggest that content-biased structures mentioned by adjectives could be divided on the most general plane into the following three ontologies:[131]

i. first-order structures,
ii. second-order structures, and
iii. third-order structures[132]

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content as a whole. In the end, the question of where to draw the line between content and schematicity-biased structures is a practical, rather than a theoretical matter. In the development of tools for empirical research, we must be aware of, and pay attention to, the exact way in which a certain structure could be said to be either content or schematicity-biased so as to make consistent classifications of data. From the present, strictly theoretical point of view, on the other hand, it is enough to establish that there is a continuum from very 'contenty' to essentially schematic information – a continuum that must be properly dealt with in any actual application to data.

130. For similar discussion, see Paradis (2000).

131. My version of Paradis's model differs from the original particularly in terms of how so called third-order structures are defined and exemplified, as well as in terms of where the line is drawn between second and third-order structures. I will come back to this issue below.

132. These terms are borrowed from Paradis (2005), who, in turn, has borrowed them from Lyons (1977).

These could be seen as running from most concrete to most abstract, and, to some extent, also from most contentful to least contentful; whereas all first-order structures are clearly contentful, many (although by no means all) third-order structures could be said to occupy the border area between content and schematicity-bias.

First-order structures are conceptualisations of concrete phenomena of various kinds, which can be seen and/or heard. They include our concepts of animals (e.g. MOUSE, HORSE, CAT), people (e.g. GIRL, PERSON, PUBLIC), plants (e.g. GRASS, OAK, FLOWER), artefacts (e.g. GLASS, MUSIC, ROBOT), natural objects and phenomena (e.g. CELL, DUST, FLESH), concrete places and locations (e.g. MEXICO, PARIS, CITY), substances (LIQUID, WATER, AIR), and so on.[133]

The phenomena described by first-order structures exist in three-dimensional space; consequently, THREE-DIMENSIONAL SPACE is included as domain of instantiation (cf. Section 1.2.1.1) in the domain matrix of any first-order structure. They are furthermore stable phenomena that are generally felt to persist through time, and as such they are also autonomous: they need nothing but themselves for their conception. We can easily think of a table or a ball without involving other entities in their conception. In this, the phenomena reflected by first-order structures differ from dependent phenomena such as relations (reflected by second-order structures); relations hold *between* entities, and consequently, their conception necessarily also involves the conception of entities between which they hold.[134]

First-order structures are typically associated with nouns, but adjectives have at least limited access to them too, so that to some extent, adjectives as well as nouns can mention this kind of structure: *horsy (girl)*, *personal (belongings)*, *flowery (dress)*, *dusty (shelves)*, *robotic (arm)*, *Mexican (museum)*, *watery (soup)*. From a Gestalt point of view, however, first-order structures are, themselves, compatible only with the THING schema. They can be conceived of *in relation to* something else, (hence, they can be *mentioned* by adjectives), but they cannot themselves be *turned into* relations, (hence, they

133. For more in-depth discussion of each main kind of first-order entity, see Paradis (2005).

134. I will come back to a discussion below of relations as well as of another kind of dependent structure, namely what I refer to as *property*.

cannot be *profiled* by adjectives). In other words: if we apply a relational schema to a first-order structure, the structure *itself* will retain its autonomous, non-relational nature, although we will also conceive of it as being related in some way to something else. For instance, the first-order structure OIL is perceived of as being an autonomous, non-relational entity quite regardless of whether it is evoked by a noun (which applies the equally non-relational THING schema) or an adjective (which applies the relational ATEMPORAL RELATION schema); the content most saliently mentioned by *oily*, as in *oily cloth*, is not a relation, it is an autonomous first-order structure (namely OIL), albeit a structure that is related by means of the specific adjectival construal to another thing (namely CLOTH), in a way paraphrasable as 'cloth that has oil on it'. It may, of course, be argued that *oil* used as a *verb* – as in *We have to oil those hinges* – does construe the profiled structure as a relation (more precisely as TEMPORAL RELATION) rather than as THING, but in this case we are not dealing with the first-order structure OIL at all, but rather with a different structure altogether – namely the second-order event of oiling, which involves, but which is certainly not the same as, the first-order structure OIL.

The fact that a first-order structure cannot itself be construed as a relation may seem self-evident; if something is a concrete, autonomous entity we cannot conceive of it as a dependent relation. However, the converse is perfectly possible; something that is, from an ontological and experiential point of view, a relation – perceived of as holding between entities of some sort – may well be conceived of as a THING, so that we think of it as an independent, self-contained entity; for instance, the second-order event OIL (as opposed to the first-order entity OIL) may in turn be construed as THING, as in *the oiling of the hinges*, where the noun *oiling* superimposes the THING schema and thereby turns the underlying ontologically and experientially relational concept OIL into an autonomous structure. I will return to this matter below.

Second-order structures, next, reflect ontological relations (as opposed to autonomous entities). They have TIME as their domain of instantiation; that is, the phenomena that they reflect are felt to occur in, and evolve through, time. There are three main kinds of second-order structure that seem to be of relevance to adjectives, namely PROCESS/ACTIVITY, STATE, and EVENT respectively (cf. Section 2.3.2). Examples of process/activity include notions

such as CRY, WHISTLE and SWIM, which reflect dynamic phenomena that have no clear beginning or end, and which are consequently felt to be unbounded in their domain of instantiation (i.e. TIME). Examples of state include notions such as PAINTED, SIGNED and WASHED, all of which in turn constitute the end-point of the events PAINT, SIGN, WASH. States are static relations continuing indefinitely through time, whereas events are dynamic relations involving a change of some sort, and which consequently have a definite beginning and end. All three kinds of second-order structure may be mentioned by adjectives (although states are mentioned only to the extent that they are parts of events[135]), but it is only processes and states that may also be profiled by them. Events cannot themselves be profiled by adjectives; if the ATEMPORAL RELATION schema is applied to this kind of structure, it will inevitably be the end-point only – that is: a state – that is profiled, albeit against the domain of the corresponding event; adjectives such as *painted*, *signed*, and *washed* (as in *painted fence, signed document* and *washed clothes*) all *mention* events – namely PAINT, SIGN and WASH – but what they profile is a state against the base provided by the respective events.[136]

Again: second-order structures reflect ontological relations – that is dependent phenomena that are experientially perceived of as holding between separate entities external to themselves. It is not too surprising then, that adjectives should lend themselves easily to the profiling (in addition to the mentioning) of second-order entities: *singing (girl)*, *bubbling (water)*, *sleeping (baby)*, *broken (vase)*, *ironed (shirt)*, *crumbled (bread)*. However, as I mentioned in my discussion of first-order entities, second-order structures may also be profiled by nouns, so that they are turned into what we look upon as autonomous, independent phenomena. This is particularly easy with intransitive processes/activities, as can be seen from utterances such as

135. There are other kinds of state as well, that are not parts of events, for instance LIKE, LOVE and CONTAIN. Such states cannot, however, be either mentioned or profiled by adjectives.

136. This is, I suggest, because the suffix deriving adjectives from event verbs (namely the suffix *-ed*) in itself constitutes an instruction not only to apply the adjective Gestalt of ATEMPORAL RELATION, but, furthermore, to do this only to the end-state of the event mentioned (and profiled) by the relevant verb. Cf. the discussion of Gestalt alteration – redirection in Section 2.3.1; see also Section 3.3 (especially Footnote 155).

I had a good cry, or *Let's go for a swim*. In short, whereas first-order structures cannot be conceived of as dependent phenomena holding between entities, relations can be conceived of as independent, autonomous things: *(a) cry* and *(a) swim* profile exactly the same underlying *ontological* relations as do *(to) cry* and *(to) swim* – no more, no less. The only difference between them is that in the former case, what is a relation from an experiential and ontological point of view is construed as THING by linguistic means.

The category of third-order structures, finally, is an extremely heterogeneous category, which is consequently very hard to define. In a sense, it could be seen as a ragbag for any reasonably content-biased structure that is neither a first-order, nor a second-order structure. In an attempt at making some kind of classification here, I suggest that we distinguish two main – though still internally very heterogeneous – categories of relevance to adjectives, namely what I will refer to as *properties* and *mental objects* respectively.[137]

Properties, first, reflect dependent phenomena that exist only as aspects of something else, and that consequently are a bit like relations. However, they differ from relations in that they do not *hold between* what is perceived of as separate entities. Rather, they *inhere in* some entity, and their domain of instantiation could thus be said to be the entity of which they form an intrinsic part. Table 5 gives some idea of the wide range of properties.

Properties could, I suggest, be roughly divided into, on the one hand, 'external' properties, which are observable from the outside, and which could thus be said to be *manifested by* the thing through which they exist, and, on the other hand, 'internal' properties, which are not themselves observable from the outside, but which are instead *experienced by* the thing through which they exist. This is not clear-cut, however. Among the properties suggested in Table 5, SIZE, LENGTH, SHAPE, TEMPERATURE, MALLEABILITY, TEXTURE, TASTE, APPEARANCE-, DEMEANOUR, DISPOSITION, and MERIT properties are clearly external, whereas MOOD, LIFE, AGE, and HEALTH prop-

137. What I refer to as *property* is included among states in Paradis. There is a fine line between states and properties, especially since both are static and indefinitely continuous. I draw the line between the two on the basis of whether the relevant notion is clearly the end result of some event, or whether it is an inherent trait with unknown (or irrelevant) origin. See also Gärdenfors (2000:60ff) for a discussion of the term *property*.

Table 5: A Selection of Common Properties

Primary Domain[138]	**Example of Property**
SIZE	BIG, SMALL
LENGTH	LONG, SHORT
SHAPE	ROUND, OBLONG
TEMPERATURE	HOT, COLD
MALLEABILITY	HARD, PLASTIC
TEXTURE	SMOOTH, ROUGH
TASTE	SOUR, SWEET
APPEARANCE	BEAUTIFUL, UGLY
MOOD	ANGRY, HAPPY
HEALTH	HEALTHY, SICK
LIFE	ALIVE, DEAD
AGE	OLD, YOUNG
DEMEANOUR	KIND, MEAN
DISPOSITION	BRAVE, RASH
MERIT	GOOD, BAD

erties could be considered to be mainly internal, albeit with publicly observable results.

Apart from generally being either mainly external or mainly internal, properties also differ in terms of whether they are 'natural' properties inhering in a physical or psychological being formed by nature, or whether they are 'social' properties inhering in a social being formed by socio-cultural attitudes and values. The former kind of property, which includes, for instance, SIZE, SHAPE, TASTE and AGE properties, is generally relatively objectively verifiable, whereas the latter kind, which includes APPEARANCE, DEMEANOUR, DISPOSITION and MERIT properties, is completely subjectively determined, on the basis of socio-cultural views and attitudes.

138. The domains against which properties are primarily understood are mental objects (see below). Interestingly, it seems that in most cases these objects cannot themselves be mentioned by adjectives, not even as partaking in a relation. To the extent that it is at all possible to derive adjectives from the nouns used to denote these mental objects, the resulting adjectives tend to mention a property in the domain afforded by the mental object profiled by the corresponding noun, rather than the mental object as such, in relation to something else. That is, whereas for instance oily in oily cloth and dusty in dusty shelves mention the first-order entities OIL and DUST, and relate them in a particular way to CLOTH and SHELVES, adjectives such as sizeable in sizeable portions and tasty in tasty food do not mention the mental objects SIZE and TASTE, and relate them in some way to PORTION and FOOD. Rather, they profile properties of being big and tasting good – that is, properties in the domains SIZE and TASTE. Other examples include mood/moody and health/healthy (cf. Table 5).

Properties range from relatively concrete to highly abstract, depending on the nature of the thing in which they inhere. External natural properties, the domain of instantiation of which is (the exterior of) a first-order entity, are found at the concrete end of the scale, in that they are perceivable through our senses. At the opposite, abstract end we find social properties, the domain of instantiation of which is an abstract social being. Internal natural properties, finally, are found 'in the middle', inhering in 'the inner workings' of an animate being, and therefore not publicly available, but still perceivable (as opposed to merely *con*ceivable) by the being itself.

Although properties may be more or less concrete – and therefore more or less like first-order structures – they all differ from first-order entities in that they are dependent rather than autonomous; as I have already established, properties exist only through something else, so that without someone or something that *is* cold, mean, happy, and so on, there will be no *properties* of coldness, meanness, or happiness. I have also mentioned that properties nevertheless differ from relations as such, since they do not themselves hold between what is perceived to be separate phenomena – rather, they form intrinsic aspects of one single entity. However, the line between, on the one hand, properties and, on the other hand, actual relations is sometimes rather fine. For instance, it could be argued that adjectives such as *annoying* and *interesting* mention a structure that is a merge between PROPERTY and PROCESS/ACTIVITY and that one or the other aspect is brought out in different contexts. For instance, an *annoying beep* highlights the PROCESS aspect, whereas *annoying man* brings out the PROPERTY aspect, as a consequence of the nature of the structure profiled by the noun; a beep is hardly endowed with properties, but a man certainly is. There are also a number of adjectives that are derived from verbs – notably by means of the suffixes *-y* and *-able* – but that seem to mention a property rather than the second-order structure that the corresponding verb profiles: *picky (boy)*, *jumpy (girl)*, *spreadable (cheese)*, and *breakable (goods)* are only a few examples. With adjectives like this, the structure that the adjective mentions is, I think, clearly a property, albeit a property (originally) associated to via a second-order structure. I will come back to the matter of distinction between PROPERTY and RELATION in my discussion of schematicity-biased structures below; as I will show, there are, apart from content-biased second-order relations also schematicity-biased relations that border on PROPERTY.

PROPERTY constitutes the kind of meaning that is most typically associated with, and most easily mentioned by adjectives, or, in other words, properties go well with the ATEMPORAL RELATION schema. That this should be so is, of course, only natural since properties are themselves atemporal – their domains of instantiation are atemporal beings rather than time – at the same time as they have an intrinsic relational aspect to them – they always relate (via inherence) to something else. The *TEMPORAL* RELATION schema is also perfectly compatible with properties, although not by derivation (that is, not as evoked by a single verb form), but by paraphrasis with *be*: *be long*, *be round*, *be brave*. The temporal construal applies (of course) to the relational aspect as such, focusing on the fact that the relation between a given property and the thing in which it inheres continues through time. Many – although by no means all – properties can also be construed as THING, as nouns such as *roundness, smoothness, kindness* and *ugliness* would illustrate.

Mental objects, next, are purely abstract notions such as EXPLANATION, THEORY, and RELIGION, which 'exist' only on some abstract plane of completely mind-internal understanding. They have been established only in response to our experiences as socio-cultural or psychological, cognising beings, with no direct component of concrete sensory-perceptual experience. That is, unlike first-order structures, which reflect actual physical 'things', existing independently of human categorization, mental objects reflect socio-cultural and cognitive constructs that exist only as products of our efforts to structure human interaction and cognition.[139] In short, mental objects are *con*ceived, but they cannot be *per*ceived.

Mental objects that can be mentioned by adjectives include notions to do with interpersonal communication (e.g. LANGUAGE, ARGUMENT, COMMUNICATION, EXPLANATION), conceptions of instruments, objects and products of mental activity (e.g. THEORY, PROBLEM, FACT, FICTION, CONCEPT, IDEA, SCIENCE, PSYCHOLOGY), cultural notions (e.g. LAW, RELIGION, SOCIAL CLASS, EDUCATION, TRIBE, RELATIVE), temporal notions (e.g. MONTH, AUTUMN, SEASON, HOUR), and so on and so forth – the list goes on.

Mental objects seem to be autonomous rather than dependent (hence the term *object*), and in terms of Gestalt construal, they are compatible only

139. For similar observations see, e.g. Asher (1993:57) and Paradis (2005:553).

with the THING schema. As is the case with first-order structures, they can be conceived of as partaking in a relation; consequently they may well be mentioned by adjectives (as in *linguistic (research)*, *legal (affairs)* or *monthly (magazine)*), but they cannot themselves be turned into relations.

3.2.2 Schematicity-Biased Structures

So far, I have considered the material aspect of adjective FIFs mainly from the point of view of content-biased structures. It is now time to turn to schematicity-biased structures – that is structures that reflect mainly schematic (as opposed to contentful) information. In my discussion of content-biased structures I focused on the actual structures themselves, referring only indirectly to the domains within which these structures are primarily understood. In my discussion of schematicity-biased structures, on the other hand, I start out from underlying domains, describing specific structures more clearly in terms of their conceptual base.

Paradis (2005) provides a provisional classification of schematicity-biased adjectives, suggesting, more precisely, that such items may denote notions of ORDER (*first* (*example*)), DEGREE (*absolute* (*idiot*)), FREQUENCY (*frequent* (*visits*)), FOCUS (*main* (*reason*)), and MODALITY (*possible* (*solution*)). Obviously, these five notions are not exhaustive of the kinds of schematic information that may be encoded by adjectives (nor are they claimed to be). On the contrary, there seems to be a range of further schematic meanings that adjectives may mention. Clearly, as is the case with most areas of adjective semantics, an immense amount of work remains to be done here, both in terms of what main kinds of schematic information adjectives may mention, and in terms of how different kinds interact and combine in different adjectives. The list given in Table 6 is obviously only suggestive and in no way exhaustive.

As regards ORDER, first, it seems that this domain may be organised relative to three different kinds of scale, namely the counting scale, a non-count scale, and the time scale respectively. Consequently, there are also three main kinds of order. With order along the counting scale, first, we have a series of distinct points, each of which corresponds directly to a number along the counting scale. The points in this kind of order thus include FIRST, FOURTH and SEVENTEENTH. The scale is bounded at one end (there is no position before FIRST), but open at the other (there is no particular point at which

Table 6: Schematicity-Biased Structures of Relevance to Adjectives

Primary Domain	**Example of Schematic Structure**
ORDER	
COUNTING SCALE	FIRST, SEVENTEENTH, EIGHTIETH
NON-COUNT SCALE	INITIAL, INTERMEDIATE, FINAL
TIME SCALE	BEFORE REFERENCE POINT, AFTER REFERENCE POINT
CONTAINER	EXTERIOR, INTERIOR
CENTRE-PERIPHERY	CENTRE, PERIPHERY
SPATIALLY ORIENTED WHOLE	FRONT, BOTTOM, BACK, TOP, SIDE
DISTANCE	CONTACT, CLOSE, RELATIVELY CLOSE, FAR APART
QUANTITY	SEVERAL, NUMEROUS, FEW, MANY, MUCH, LITTLE
FREQUENCY	HIGH FREQUENCY, LOW FREQUENCY
MATCHING	COMPLETE MATCH, PARTIAL MATCH, NO MATCH
FOCUS	FOCAL POINT, NON-FOCAL POINT
GRANULARITY	SPECIFICITY, GENERALITY
EPISTEMIC MODALITY	
POSSIBILITY	POSSIBILITY, NO POSSIBILITY
CERTAINTY	CERTAINTY, LOW CERTAINTY
TRUTH	TRUTH, NO TRUTH
DEGREE	HIGH DEGREE, LÖW **DEGREE**

numbered order ends). It should be noted, however, that any specific point in order along the counting scale seems to take as its immediate scope only preceding points; for instance, the position THIRD is dependent for its import only on the notion of two preceding positions.

With order along the non-count scale, next, we also have an indefinite number of discrete points. However, unlike the counting scale, this scale makes no reference to the counting numbers. Despite the exact number of locations being undetermined, this scale is furthermore bounded at both ends. It seems to fall into three parts, each of which adjectives may mention: INITIAL and FINAL, which are the respective end points of the scale, and INTERMEDIATE, which constitutes the area in between these points. It may seem odd to say that this kind of order comprises an indefinite number of points; certainly, it seems rather as though it holds three positions only, namely the ones just mentioned. However, I believe that this is to do with what adjectives are able to mention – we simply have no individual words for individual points between INITIAL and FINAL. Still, I think it is clear that the non-count scale as such nevertheless may be construed as comprising more than three positions. There may be several entities found between initial and final position, each of which we think of as occupying a distinct point along the scale. The fact that we have only one word (*intermediate*)

for the full range of points between INITIAL and FINAL does not change this – it only means that the meaning of the *word* (*intermediate*) construes the scale as tripartite.

With order along the time scale, finally, we seem to have a simple dichotomy of an indefinite and open-ended number of positions before, and an equally indefinite and open-ended number of positions after a particular, contextually specified, point of reference. As is the case with the non-count scale, the time scale seems, from an ontological point of view, to have a clear sense of discrete positions preceding and following the point of reference, but, again, we have no individual words for these points, and so, language construes the scale as falling only into two parts.

Points within either of the three kinds of ORDER may be mentioned by an adjective (although, as I have shown, there are no separate adjectives for individual points between INITIAL and FINAL, or for individual points in temporal order): *first (book)*, *fourth (latte)*, and *seventeenth (time)* mention points in order along the counting scale, *initial (attempt)*, *intermediate (points)*, and *final (hit)* mention points/a sequence of points in order along the non-count discrete scale, and *previous (year), subsequent (event)*, and *preceding (discussions)* mention sequences of points along the time scale.

CONTAINER, CENTRE-PERIPHERY, and SPATIALLY ORIENTED WHOLE, next, are all configurational image schemas, with no sense of axiality to them.[140] Adjectives may mention parts in each of these schemas; in the case of CONTAINER, adjectives mention either the interior or the exterior (as in *external (antenna)*, *internal (combustion)*, *inner (voice)*, *outside (world)*), in the case of CENTRE-PERIPHERY, adjectives mention either the centre or the periphery (as in *marginal (regions)*, *central (cafés)*, *outermost (areas)*, *central (heating)*), and in the case of SPATIALLY ORIENTED WHOLE, adjectives mention the front, the back, the side, the top, or the bottom (as in *front (door)*, *back (yard)*, *side (window), bottom (drawer)*, *top (shelf)*).

The next kind of schematicity-biased structure brought up in Table 6 comprises structures reflecting different degrees of DISTANCE between entities. Distance concepts are thus relations. Typically, they consist in the con-

140. By *spatially oriented whole* I mean a conception of a completely schematic object with a fixed, inherent orientation in space. For the difference between locational and configurational structures, see Langacker (e.g. 1987:152ff).

ception of a single relation of distance between two components, although it may be argued that the conception of several relations of (equal) distance between several components is a possible alternative (see comment on overlap between DISTANCE and PROPERTY below).

The domain of DISTANCE seems to be organised relative to a continuous scale running between minimal distance (contact) and some indeterminate point of great distance. In other words: the scale of DISTANCE appears to be bounded at the 'close' end, and unbounded at the 'far apart' end. Towards the 'close' end of the scale, adjectives seem to be expressive of successive degrees rather than of one single degree: adjectives such as *adjoining*, *close* and *near(by)* successively express an increase in distance, although they are nevertheless all relatively 'close'. Degrees towards the other extreme of the scale seem to have less spread; possibly, *remote* could be said to denote greater distance than *distant*, but other than that, I cannot off-hand think of adjectives indicating varying degrees of great distance. Nor do there seem to be any adjectives profiling intermediate areas between the 'close' and the 'far apart' end of the scale.

Adjectives of DISTANCE may be deictic in nature, expressing distance between the conceptualiser and some other entity (e.g. *nearby (shop)*, *distant (area)*), or non-deictic, expressing distance between two non-deictic entities (e.g. *adjoining (rooms)*, *close (lines)*). I will return to this matter in my discussion of organisation relative to Gestalt below. Non-deictic distance adjectives sometimes point to an overlap between DISTANCE and the third-order structure PROPERTY, so that these two domains could be seen as being partly merged with certain kinds of entity.[141] For instance, the meanings created for *tight* in *tight knot*, *dense* in *dense atmosphere*, *loose* in *loose weave*, and *compact* in *compact bouquet* clearly have a sense of 'degree of distance between parts' about them, at the same time as they could well be seen as indicative of properties in the domain of DENSITY. It all seems to be a matter of whether we focus on individual parts and their contiguity (or lack thereof) – in which case the adjectives could be said to bring out the DISTANCE aspect – or on the holistic impression of 'character' of the relevant thing as a whole – in which case the adjectives highlight the PROPERTY aspect.

141. Recall that this 'merger phenomenon' also appears with some second-order structures in relation to PROPERTY, cf. Section 3.2.1 above.

QUANTITY, next, is described by Langacker (1991a:84ff) as the conception of, on the one hand, a 'measuring scale' and, on the other hand, something being calibrated relative to this measuring scale. The measuring scale is either the counting scale or a continuous scale of magnitude, and the 'something' that is being calibrated is either a mass of discrete entities (in which case the relevant measuring scale is the counting-scale), or a continuous, non-discrete mass (in which case the relevant measuring scale is the continuous scale of magnitude), in short: it is something with an intrinsic aspect of magnitude, to which any particular value of quantity may pertain.

The scale of QUANTITY is, as I have already mentioned, either the counting scale or the continuous scale of magnitude, both of which seem to run from a bounded zero point of no quantity, to an indefinite, unbounded point of great quantity. Langacker further suggests that both 'versions' of QUANTITY – that is, quantity relative to discrete entities as well as quantity relative to continuous mass – sometimes also comprise the sense of a 'norm', dividing quantity into values falling below and above the norm, respectively. Values of quantity along the counting scale with no conception of a norm include THREE, FORTY, HUNDRED etc. – that is specific values, pinned down at a particular point on the counting scale – as well as more vaguely delimited notions such as SEVERAL and NUMEROUS, which presumably reflect a range of three to (approximately) seven, and more than seven respectively. MANY and FEW are also values along the counting scale, this time with the conception of a norm, which falls at some contextually determined point along the counting scale. Values of quantity along the continuous scale of magnitude, finally, include MUCH and LITTLE, both of which are determined relative to the conception of a norm. As should be clear from what has just been said, adjectives may mention all kinds of quantity value, except specific values along the counting scale (unless, of course, we count numerals as adjectives).

The next kind of structure brought up in Table 6 reflects FREQUENCY. FREQUENCY is a complex notion, which seems to involve several different domains. It pertains specifically to the domain of TIME, in that it could be said to concern distribution of something through time. It could furthermore be said to depend on the notion of DISTANCE, in that any specific concept of FREQUENCY reflects a certain distance in time: frequent phenomena are phenomena that occur close to each other in time, whereas infrequent phenomena are phenomena that occur with a long time span between

them. This is not all there is to it, however. Concepts of frequency are not only about relations of temporal distance between entities. To an equal extent, they also comprise the notion of QUANTITY: frequent phenomena are plentiful, whereas infrequent phenomena are few. Finally, there is also a strong sense of regularity about FREQUENCY concepts: the time span occurring between component parts is of equal length throughout. All these different aspects feature in the notion of FREQUENCY.

Frequency seems to be organised relative to a continuous, unbounded scale, running between high and low frequency. Frequency adjectives seem to divide this scale into two halves by means of some contextually determined norm, in much the same way as quantity adjectives sometimes do, so that there are, on the one hand, values falling above the norm – all of which may be mentioned by an adjective such as *frequent* – and, on the other hand, values falling below the norm – all of which may be mentioned by an adjective such as *infrequent*.

Let us now turn to structures of MATCHING. MATCHING could be seen as our highly schematic conceptual representation of experiences of comparing and noting similarities and deviations among two or more entities. The scale in this case appears to be a continuous scale running between a point of no match at all, and a point of complete match, which in turn means that it is bounded at both ends. MATCHING adjectives seem to map onto one out of three 'stages' along this scale: the point of no match at all (*different (clothes)*, (*another (man)*), the point of complete match (*identical (pen)*, *same (dress)*), or the area between these extremes, at which we have partial match (*similar (ideas)*, *like (occasions)*).

On any given occasion of activation, the MATCHING scale seems to be mapped onto a particular domain specifying what it is that is being compared – for instance, APPEARANCE (*similar faces* could be interpreted as 'faces that look alike'), FUNCTION (*similar tools* could be interpreted as 'tools that work/can be used in a similar way'), BEHAVIOUR (*similar girls* could be interpreted as 'girls behaving in a similar way') and so on. With most adjectives of MATCHING, there seem to be more than one possible domain like this (as was just illustrated with *similar*), so that exactly which domain is opted for on any particular occasion of activation is determined by context (generally context larger than the combining noun). There are, however, certain MATCHING adjectives the forms of which seem to provide a definite

constraint in this respect, delimiting the number of possible domains to one, namely what we could, perhaps, label IDENTITY.[142] Examples of such adjectives include *same* and *another*. Thus, whereas *an identical pen* indicates a pen that *looks* exactly the same as some other pen, *the same pen* or *another pen* (as in, for instance, *This is the same pen as/another pen than the one you thought didn't work*) indicates match/no match in terms of *identity*. That *same* indicates match in terms of identity is, I think, seen from the fact that whereas an utterance such as *Her dress was covered with small, identical pearls* is perfectly acceptable, *Her dress was covered with small, same pearls* is not. This is precisely because *same* indicates match of *identity*, which in turn clashes with the only possible construal of the comparison event as such. The only possible interpretation of the relevant utterance is that it is the entities denoted by the plural noun (that is the pearls) that are compared, and since these are construed as co-existing as *individual* 'identities' in the same mental space, they cannot simultaneously be said to *match* in terms of identity. The fact that *same* can only occur with the definite article is also, I think, a consequence of IDENTITY being the domain for this adjective; because it indicates that the referent of the noun phrase in which it occurs coincides in terms of identity with another, previously encountered entity, the referent of the current noun phrase has to be marked as known – that is, it has to occur with the definite article. If it is marked as *un*known, it cannot possibly be the same as some previously encountered – and therefore known – entity.

IDENTITY seems generally to be indicated only by adjectives confined to this domain; adjectives that are able to express matching in terms of other domains are, conversely, excluded from IDENTITY. I have already illustrated this with *identical* above: *identical pen*, for instance, can never express match in terms of identity. For obvious reasons, the same holds true for adjectives such as *similar* and *like*, which indicate only a certain degree of match. A possible exception is the adjective *different*, which seems to be capable of indicating no match in terms of other domains as well as in terms of IDENTITY; for instance, in an utterance such as *I bought a different dress than*

142. By *identity* I mean identity in the sense used in the phrase *identity card*, that is, in the sense of a particular, individual entity with definite, specific existence distinguishing it from any other particular individual. Cf. also Sections 2.3 and 4.3.

the one you liked, *different* can only be interpreted as indicating no match in terms of identity, but in *I bought a different dress*, *different* could, I think, equally well be interpreted as 'a dress that looked like no other dress', thus indicating no match in terms of appearance, rather than in terms of identity.

Our notions of FOCUS and GRANULARITY, next, are both based on the more general domain ATTENTION, of which they could be said to be two aspects. I commented on the psychological phenomenon of attention and some of its many aspects in Section 1.2.2.1 above. Suffice it to repeat here that

i. attention has a tendency to come in degrees of strength, with a focal point of greatest strength and a surrounding 'area' (generally referred to as *scope of attention*) with decreasing strength, and
ii. attention tends to vary in terms of how much attention is paid to detail; one and the same focal point may be viewed with greater or lesser specificity.

Our conceptual domains ATTENTION, FOCUS, and GRANULARITY (as opposed to the corresponding actual psychological phenomena) could be assumed to reflect all this. Consequently, adjectives that specify FOCUS could be said to indicate strength of attention, whereas GRANULARITY adjectives indicate degree of specificity. FOCUS adjectives seem to construe the scale of strength of attention as a dichotomy of FOCAL POINT VS. NON-FOCAL POINT. Adjectives mentioning FOCAL POINT include *main* and *prime* (as in *main concern* and *prime objective*), whereas adjectives mentioning non-focal point include *secondary* and *minor* (as in *secondary issues* and *minor problem*). GRANULARITY adjectives, unlike FOCUS adjectives, appear to retain the intuitive continuity of the GRANULARITY scale, although they seem to mention only values towards the respective ends (GENERALITY and SPECIFICITY respectively); there are no individual adjectives for intermediate values along the scale. Examples of GRANULARITY adjectives include *general, main* and *specific* (as in *general definition*, *main classes*, and *specific questions*).

It is interesting to note in connection with FOCUS that this kind of structure appears to be particularly prone to being indicated by means of conceptual metaphor. There seem to be a number of adjectives that indicate

this notion via some other schematic structure, such as the CENTRE-PERIPHERY image schema (*central (ideas)*, *peripheral (theories)*), the COUNTING SCALE ORDER schema (*secondary (questions)*, *prime (solution)*) or the mental object SIZE (*minor (problem), major (crime)*). The use of the CENTRE-PERIPHERY schema seems to be a direct reflection of the metaphor of ATTENTION itself, as a spatial construct with a centre (the focal point) and a surrounding area (the scope of attention). The use of the ORDER schema appears to reflect the fact that in our everyday experience, things that we encounter first in a sequence tends to receive a much higher degree of attention than any subsequent thing. The use of the mental object SIZE, finally, is, of course, explicable in terms of the fact that, all else being equal, big things tend to catch our attention more easily than small things do.

Finally, the fact that the third-order notion of IMPORTANCE is very closely associated with that of FOCUS should be commented on. It may be argued that IMPORTANCE and FOCUS are basically the same – the more important we find something, the more attention we pay to it, and paying attention to something is to regard it as being of importance. In a way, IMPORTANCE could be said to be the more 'socialized', abstract version of the more basic domain of FOCUS; in short: FOCUS is used to structure our understanding of IMPORTANCE. Consequently, what I have referred to here as FOCUS adjectives could equally well be referred to as adjectives indicating IMPORTANCE.

The next kind of schematicity-biased structure that adjectives may mention reflects EPISTEMIC MODALITY – notions of CERTAINTY, POSSIBILITY and TRUTH.[143] These seem to be organised relative to continuous scales running between positive and negative. These scales all appear to be bounded at the positive end – at a point of absolute certainty, a point of complete possibility and a point of absolute truth respectively – but they seem to differ in terms of bounding at the negative end: it appears to me that whereas the scale of CERTAINTY is unbounded at the negative end, those of POSSIBILITY and TRUTH have a boundary to them at the negative end as well as at the positive end. This seems to be indicated by the observation that whereas adjectives mentioning negative POSSIBILITY or negative TRUTH readily co-occur with degree modifiers such as *completely*, adjectives profiling negative CERTAINTY seem to be less frequent with this modifier; a quick google search

143. For a recent, in-depth study on adjectives and modality, see Van Linden (2009).

shows that the relative frequency with which adjectives such as *impossible* and *false* co-occur with *completely* is significantly higher than it is with adjectives such as *uncertain* or *doubtful*.

Adjectives profiling relations of EPISTEMIC MODALITY seem to divide the relevant scales into two parts – with POSSIBILITY, an adjective such as *impossible* mentions the negative end-point, whereas *possible* seems to refer to the rest of the scale; with TRUTH, an adjective such as *true* maps onto the positive end-point whereas *untrue* covers the rest, and with CERTAINTY, *certain* denotes, again, the positive end-point, whereas *uncertain* seems to mention the remainder of the scale.

As regards DEGREE, finally, this domain is highly reminiscent of the domain of QUANTITY, in that it seems to comprise, on the one hand, a range of values along an scale of DEGREE, and, on the other hand, the conception of something being calibrated with this range of values of DEGREE. The scale seems to be continuous rather than discrete, and it may be either bounded or unbounded, depending on the conceived boundedness of the 'something' being calibrated.[144] The 'something' being calibrated may, in turn, be of various kinds – the only general specification made is that it has an intrinsic aspect of gradability, to which DEGREE pertains – although in most cases it seems to be a matter of either a property (in the sense used in the present work, cf. Section 3.2.1 above) or an activity. This is illustrated by *absolute idiot* and *heavy smoker* respectively, where the DEGREE adjectives *absolute* and *heavy* applies to a property (IDIOTIC) and an activity (SMOKING) respectively.

Adjectives of DEGREE seem to typically mention values towards the 'high' extreme of the relevant DEGREE scale: for instance *absolute*, *complete*, and *total* (as in *absolute pleasure*, *complete fool*, and *total satisfaction*) mention the 'high' end-point of a bounded scale of DEGREE, and, for example, *terrible*, *awful*, and *heavy* (as in *terrible bore*, *awful mess*, and *heavy user*) mention a 'high' value on an unbounded scale of DEGREE. There are, however, also adjectives that mention a low degree, for instance *slight* and *no* (as in *no pleasure* and *slight satisfaction*).

As a consequence of the fact that DEGREE pertains only to phenomena

144. For detailed accounts of DEGREE and the nature of scales mapping with DEGREE, see e.g. Paradis (2001, 2008).

that have an intrinsic aspect of gradability, (e.g. a property or an activity) the noun that any degree adjective combines with will have to profile such a thing in order for the adjective to be able to modify it directly. This is the case in combinations such as *absolute idiocy* and *heavy smoking*. However, in many DEGREE adjective-noun combinations, the noun does not profile a property or an activity (or any other gradable phenomenon for that matter), but rather a first-order entity – for instance, PERSON – which, in itself, obviously is not gradable. This is the case with, for instance, *absolute idiot, complete fool*, and *heavy user*. In combinations like these, the noun *mentions* a gradable structure of some kind, but what it *profiles* is a non-gradable entity to which the gradable structure in turn is understood to pertain. In default interpretation of *absolute idiot*, *complete fool*, and *heavy user* respectively, the noun *mentions* a property of idiocy, a property of foolishness, and an activity of using respectively, but what it *profiles* is the conception of a first-order entity (e.g. PERSON) that somehow exhibits one of these phenomena. In order to explain this more clearly, I need to consider, again, the main components of nouns.

In Section 1.3.3.1, I described the conceptual nature of nouns in terms of, on the one hand, the THING schema, which gives any noun meaning its Gestalt, and, on the other hand, the qualia template, which could be said to organise the various aspects of nominal content into a coherent whole. In this account, I discussed the four qualia – the formal, the constitutive, the agentive and the telic quale respectively – indiscrimenately, as though they were all on a par with each other. I would now like to modify this impression, by suggesting that the formal quale is, in a sense, super ordinate to the other three, in that the information that it comprises – more precisely information about kind – pertains to the relevant thing conception as a holistic whole, whereas that comprised by the remaining qualia pertains only to parts of this conception – sub aspects such as constitution, origin or function. Put differently: what we perceive of as 'kind' could be said to be the all-inclusive, though completely merged, 'total sum' of any information comprised by the other three qualia.[145] This, in turn, means that what a noun profiles is the information held by the formal quale, which, in turn, includes an infinite number of 'sub pieces' of more focused information,

145. Cf. Section 2.3.1.

held by the other three qualia and their substructures. In short, as is generally agreed, a noun profiles a *kind* of thing. When the meaning of a noun is created (initially in response to formal input), any contentful structure that it mentions is, I suggest, typically mapped with the formal quale. That is, the content mentioned by words such as *cow*, *explosion* and *foolishness* respectively, specify what *kind* of thing we are dealing with – a kind of animal, a kind of event, and a kind of property respectively. In these cases, then, the structure that the noun mentions is also what it profiles. However, there are also situations where there is a discrepancy between a noun's profile and the content that it mentions. This is the case in examples such as the ones discussed above – *idiot*, *fool* and *user*. In these cases, the content mentioned by the respective noun – more precisely the property of idiocy, the property of foolishness, and the activity of using respectively – does not specify the formal quale, but rather a substructure of the constitutive and the telic quale respectively.

Returning, now, to the role of degree adjectives in combinations such as *absolute idiot*, *complete fool*, and *heavy user*, it is clear that the modification that they supply pertains not to the profiled thing as such, but rather to a property or activity exhibited by this thing. In *absolute idiot* and *complete fool*, the properties mentioned by *idiot* and *fool* respectively apply to the constitutive quale of PERSON, specifying the substructure of DISPOSITION, and in *heavy user*, the activity mentioned by *user* applies to the telic quale, specifying the substructure of HABIT.[146]

Before I leave the material aspect of adjective FIFs, there is one further point that I need to comment on, namely the fact that the domains of QUANTITY and DEGREE both seem to comprise the notion of something in which quantity and degree respectively inheres. That is, quantity *inheres* in

146. It is interesting to note in this context that DEGREE adjectives generally seem to be non-predicating: **the idiot is absolute*, **the bore is terrible*, **the smoker is heavy*. The reason that these adjectives cannot appear in predicative position is, I suggest, that predicative modification can only apply to a direct substructure of the subject nominal meaning, not to a substructure of a substructure. Consequently, DEGREE modifiers are generally ruled out in this position, since they apply to the dimension of GRADABILITY, which is usually not a direct substructure of a nominal meaning, but rather of a substructure (or sub dimension) of another substructure, which in turn *is* a direct substructure of the nominal meaning. For further discussion, see Paradis (2000).

the mass being calibrated with the scale of QUANTITY, and degree *inheres* in the property or activity being calibrated with the scale of DEGREE. In short, our respective concepts of QUANTITY and DEGREE seem to mirror our various PROPERTY domains (LENGTH, DEMEANOUR, SIZE, TEMPERATURE etc., see discussion of PROPERTY above): these too seem to comprise the conception of, on the one hand, a range of values (properties) and, on the other hand, some kind of being in which the relevant property inheres. This, in turn, raises an important question: seeing that the definition given for property was that it is something that *inheres* in something else (cf. Section 3.2.1), why do I not include QUANTITY and DEGREE adjectives among adjectives that denote PROPERTY? This would, perhaps, seem to be the most logical approach. However, the meanings of QUANTITY and DEGREE adjectives differ from each other, as well as from the meaning of 'proper' PROPERTY adjectives, in ways that seem to justify a distinction between the three. In the following I will consider briefly the ways in which they differ.

The phenomenon that I refer to as PROPERTY, first, inheres in some experientially and ontologically supported physical or social being, which is felt to exist as a bearer of the relevant property in the cultural or physical world that we live in. QUANTITY, on the other hand, inheres only in a conceptual structure as such – more precisely in the conception of an unbounded mass, comprised by any expression of QUANTITY. There is no 'existing' (imagined or real), ontological 'thing' to which this conceived bearer of quantity corresponds. In an utterance such as *There were several boys standing around the car*, there is a corresponding set of actual boys, (or so we picture it), but the co-conception of these boys as a mass (which is what quantity is inherent in) is to do with construal only: 'mass' in itself does not exist in any ontologically supported world (real or imagined), it exists only as a conceptual schema. DEGREE, finally, does inhere in an ontological phenomenon, just like PROPERTY does. However, ontologically relevant though it may be, this phenomenon is nevertheless different from that in which PROPERTY inheres, in that it is itself normally either a property or an activity. That is, as I established above, DEGREE inheres in a property or an activity (or some other kind of gradable phenomenon) rather than in some kind of autonomous, physical or social, being.

So far, I have discussed adjective FIFs from the point of view of what kinds of conceptual material adjectives *mention*, in addition to the univer-

sally activated ATEMPORAL RELATION schema. It is now time to turn to the second main aspect of FIFs mentioned above, namely how adjective forms structure – map and organise – the particular material evoked relative to the Gestalt schema as such.

3.3 The Mapping Aspect

As I have already pointed out, the matter of how adjectives map and organise the material that they evoke seems to have been generally ignored in the cognitive literature. It has, however, received some limited attention outside the cognitive framework, in, above all, the works by Warren (e.g. 1984a).

Very briefly, Warren suggests that adjective meaning consists of two parts, namely the *referential content* and a *connecting link/relation* respectively. In cognitive terms, the former of these corresponds to the part of the relational schema that is construed as landmark, whereas the latter could be seen as corresponding to the relation relating landmark and trajector. Furthermore, Warren is careful to point out that adjectives can never be fully appreciated without the notion of a noun that they combine with. As can be seen, then, Warren's view of adjective structure is very similar to that put forth in cognitive linguistics. The similarities and differences in view and terminology between Warren and the general cognitive approach could be represented graphically as in Figure 6 (although note that Warren does not herself give this exact graphic representation; it serves only to show similarities and differences compared to cognitive theory):

Figure 6a: The Cognitive Representation of Adjective Structure

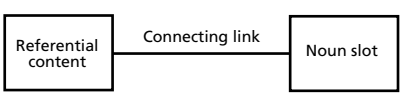

Figure 6b: Warren's View of Adjective Structure

One of the great advantages with Warren's work is that it makes explicit the internal organisation of adjectives, in a way that cognitive works generally fail to do. Specifically, by proposing that adjective content is to be found in the 'referential content part' rather than in the 'connecting link' (which instead has to be inferred), it brings out the fact that contrary to what one might assume, the structure that a particular adjective explicitly *mentions* is far from always the profiled relation itself. As I have shown, the ontological material mentioned by any one adjective is as often as not a 'non-relation'; certain such structures (more specifically: properties) even constitute the kind of material that is most naturally and typically associated with adjectives. What seems to get lost in Warren's work, however, is the fact that even though adjectives often do not specify the relation itself, they nevertheless *may* do so. That is, Warren's emphasis on implicit links that have to be inferred obscures the fact that adjectives are, after all, capable of mentioning relational structures too – second-order content structures as well as relations of a more schematic kind.

In the following, I use the somewhat technical term **m-structure** (as in 'mentioned structure') for the structure that a certain adjective explicitly *mentions*, so as to distinguish it from the structure that the adjective *profiles* – that is, the fully construed meaning of the adjective as a whole (cf. Section 3.2). As I have already suggested, and as I shall elaborate on in the following, the two may or may not coincide. Put in simple terms: An adjective always profiles an atemporal relation of some kind. Consequently, if the m-structure is non-relational, as is the case with, for instance, first-order structures, the m-structure and the profile of the relevant adjective will differ – the m-structure will be part of, but not the same as, the full meaning of the adjective. If, on the other hand, the m-structure reflects a relation, as is the case with, for instance, second-order structures, the m-structure and the profile will coincide. Thus, as I established in the previous section, the m-structure of an adjective such as *pictorial* is the first-order entity PICTURE, whereas the profile of this same adjective is an atemporal relation of some (unspecified) kind, holding between PICTURE and something else. Conversely, the m-structure of an adjective such as *covered* is the specific second-order relation COVERED, and this is also the structure that the adjective in question profiles. On the basis of these observations, I suggest that adjectives can be divided into two main kinds when it comes

to how their m-structures are organised relative to the Gestalt of ATEMPORAL RELATION, namely

i. adjectives whose prime m-structure maps only with part of the relational Gestalt, as in *American (boy)*, *pictorial (atlas)*, and *front (door)*,[147] and
ii. adjectives whose m-structure maps with the relational Gestalt as a whole, as in *similar (ideas)*, *covered (box)*, and *singing (girl)*.

With the former kind of adjective, it is always the landmark part that is specified – that is, the (prime) m-structure of these adjectives maps with the landmark of the Gestalt schema. With the latter kind, on the other hand, the m-structure maps with the Gestalt schema as a whole, although the relation part as such (as opposed to the landmark and the trajector) is generally that which is most obviously specified; although the m-structure inevitably comprises the conception of participants involved in the relevant relation (so that there are parts in the m-structure that match the landmark and the trajector of the relational Gestalt more or less directly), these participants may be more or less schematic (in the sense unspecified). The relevant relation as such, on the other hand, is always, in comparison, specific and salient. I will return to this matter below. In the following I will refer to the former kind of adjective as **LM-adjectives** (*LM* standing for *landmark*), and the latter as **REL-adjectives** (*REL* standing for *relation*).

As is so often the case with linguistic and conceptual matters, there is a continuum rather than a definite break between LM-adjectives and REL-adjectives respectively. Adjectives such as *American*, *pictorial* and *front* clearly mention non-relational structures, which map with the landmark part of the adjective Gestalt, and so they are LM-adjectives. Conversely, adjectives such as *similar*, *covered*, and *singing* equally clearly mention relations, which map with the adjective Gestalt as a whole, and so they are REL-adjectives. But what about adjectives such as *several*, *hot*, and *absolute*? These seem to fall somewhere between prototypical LM- and prototypical REL-adjectives: They comprise as an intrinsic part of their base the conception of a relation (namely a relation of inherence, cf. Section 3.2.1 above), which makes them

147. I will come back to what I mean by *prime m-structure* below.

similar to REL-adjectives, but at the same time they seem to focus on a value of quantity/temperature/degree, rather than on the relation as such, something that, in turn, makes them similar to LM-adjectives. I will return to a more detailed discussion of this matter at the end of the present section. Suffice it for now to establish that I treat adjectives like these as LM- rather than as REL-adjectives. In the following I will consider each kind of adjective in some more detail, starting with LM-adjectives.

3.3.1 LM-Adjectives

LM-adjectives probably constitute the most common – or, at least, the most typical – kind of adjective. As can be seen from Table 7, m-structures found with this sort of adjective belong to a number of different categories – they may be first and third-order entities, as well as schematic structures of various kinds (but not, as I have already mentioned, relations).

Table 7: M-Structures Found with LM-Adjectives

Kind of m-structure	**Adjective Exponents**
FIRST-ORDER STRUCTURE	American (boys), wooden (fence), icy (road), musical (instrument)
THIRD-ORDER STRUCTURE	heavy (suitcase), pretty (girl), linguistic (society), criminal (man)
POINT IN ORDER	third (step), initial (idea), previous (years), subsequent (events)
PART OF CONTAINER SCHEMA	internal (organ), external (antenna), inside (information)
PART OF CENTRE-PERIPHERY SCHEMA	central (shops), peripheral (areas)
PART OF SPATIALLY ORIENTED WHOLE SCHEMA	front (garden), back (yard), top (floor), bottom (shelf)
QUANTITY	several (attempts), numerous (visits), many (letters), few (books)
DEGREE OF FOCUS	major (issues), minor (problem)
DEGREE OF GRANULARITY	general (statement), specific (questions)
EPISTEMIC MODALITY	impossible (scenario), certain (arrival)
DEGREE	complete (idiot), total (mess), heavy (spender), terrible (nuisance)

LM-adjectives could, I suggest, be further subdivided on the basis of (i) the extent to which the structure mapping with the landmark (i.e. the m-structure) is perceived of as constituting an individual participant partaking in a relation of some kind, and (ii) the extent to which the adjective mentions

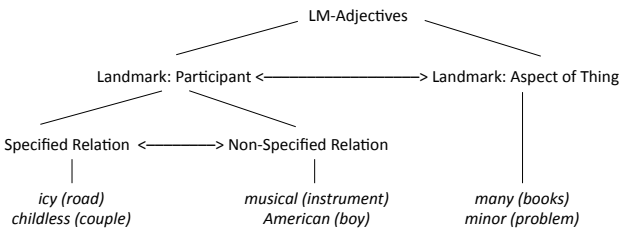

Figure 7: Subclassification of LM-Adjectives[138]

some further structure, which specifies the *relation part* of the adjective Gestalt, in addition to the one specifying the landmark part. The subdivision of LM-adjectives is represented in Figure 7.

The first of the two distinctions made in Figure 7 pertains to whether the m-structure mapping with the landmark is felt to constitute an individual phenomenon of some sort, which enters into a relation with some other individual entity (namely the entity schematically represented by the trajector, subsequently elaborated by a combining noun), or whether it is perceived of as a mere aspect of some entity (namely (again) the trajector/nominal meaning). For instance, in *icy road* or *American boy*, there is a clear sense of two ontologically separate phenomena – on the one hand ICE and AMERICA, and on the other hand ROAD and BOY respectively – that are being related to each other in a specific way in these particular combinations, but that are still perceived of as distinct entities, with individual experiential and ontological status. Or, put another way: ICE and AMERICA are looked upon in these combinations as participants in a relationship with ROAD and BOY respectively, and so, they constitute distinct components of the meanings symbolised by these combinations as wholes.[149] In *many books* and *minor*

148. The double-headed arrows represent the fact that, again, we are confronted with continua rather than with clear-cut breaks between sub categories.

149. I use the term *participant* in a loose, non-technical sense for any element involved in a relation of some sort. Consequently, the way I use the term, a participant could be a location or setting, or even a part of something else, as well as what is 'technically' referred to as *participant* in theories on thematic roles (e.g. Fillmore 1968, Jackendoff 1972, 1990, Gruber 1976, Andrews 1985, Allan 1986, Dowty 1986, 1989, 1991, Radford 1988, and Givón 1990).

problem, on the other hand, it seems that the m-structures of the adjectives do not reflect individual, ontological phenomena that form some kind of definite relation with the respective noun meanings; to say that we conceive in these combinations of some experientially supported entity 'manyness' or 'unfocusedness' that furthermore forms some kind of relation with BOOKS or PROBLEM seems rather forced. In these cases we are instead dealing with assessments of QUANTITY and FOCUS relative to the trajector/nominal meaning as such. Consequently, whereas the m-structures of *many* and *minor* certainly provide salient pieces of information, they are not felt to constitute individual participants in particular relationships. Rather, they are perceived of as aspects of the entity schematically represented by the trajector itself.

Whether or not the landmark m-structure is perceived of as an individual participant correlates closely with degree of

i. 'contentyness'/schematicity, and,
ii. intrinsicness/extrinsicness.

Generally, it seems that the more contentful, and the more extrinsic the landmark m-structure is, the more likely it is to be conceived of as an individual phenomenon, and vice versa. Neither factor is determining on its own, however. There are relatively schematic m-structures that nevertheless clearly constitute individual participants, and there are, furthermore, fully extrinsic structures that are nevertheless perceived of as constituting an aspect of the nominal meaning rather than an individual participant.[150] As regards the former of these observations, structures such as PART OF CENTRE-PERIPHERY and PART OF CONTAINER constitute individual participants despite their relative schematicity; in a combination such as *central shop*, the structure mentioned by the adjective – CENTRE – is clearly a participant in a relationship with SHOP: CENTRE constitutes the location at which SHOP is found.[151] As regards the fact that extrinsic as well as intrinsic structures may

150. That the reverse is not true should go without saying – intrinsic structures are, by definition, always conceived of as aspects of the nominal meaning itself, rather than as individual participants.

151. The reason that CENTRE is perceived of as a participant may, of course, also be that in any default reading of *central shop*, the noun adds contentful information to the mean-

constitute aspects of the nominal meaning rather than individual participants in a relationship with the nominal meaning, this has already been illustrated by the FOCUS adjective *minor* above: a *minor problem* is not a problem that forms some kind of relation with 'unfocusedness', despite the fact that the degree to which a problem may be focused on is not intrinsic to PROBLEM itself. Structures of EPISTEMIC MODALITY constitute another example of structures that are clearly extrinsic to any nominal meaning, but that are still not perceived of as constituting distinct participants in a particular kind of relationship. A combination such as *possible solution* does not denote a relationship of some kind, in which POSSIBILITY and SOLUTION are felt to be participants. Rather, it symbolises an instance of SOLUTION, assessed by the speaker in terms of possibility.

The extent to which the landmark m-structure is felt to constitute an individual participant in a relationship clearly also has consequences for how we look upon the relation part of the adjective Gestalt: if the landmark is perceived of as an individual entity, the relation is focused too, and consequently, we tend to infer some conscious, experientially relevant content for it, derived from relationships that we have noted between entities of various kinds in our everyday interaction with, and observation of, the world around us. If, on the other hand, the landmark m-structure is felt to constitute a mere aspect of the nominal meaning as such, there is no sense of an actual relationship, and hence, the relation part of the Gestalt schema tends to be backgrounded. We have already seen this with adjectives of QUANTITY, PROPERTY and DEGREE, where the relation of inherence is non-salient (cf. Section 3.2.2). With adjectives of FOCUS, GRANULARITY and EPISTEMIC MODALITY, which also seem to be aspect rather than participant-like it is hard to say anything at all about the relation part. Perhaps the relations in these cases are themselves best seen as functions in the *creation* of adjective meaning, rather than as part of meaning itself – a mental

ing of the adjective: the m-structure of the adjective itself – CENTRE – is schematic in that it indicates a point in spatial organisation (more precisely in the CENTRE-PERIPHERY schema), but the meaning of *shop* adds a contenty dimension to the meaning of *central*, in that it maps the CENTRE-PERIPHERY schema (which constitutes the primary domain for CENTRAL) with a content-biased first-order entity such as TOWN, thus specifying CENTRE as a particular *kind* of centre – namely a town centre – which, in turn, is a 'contenty', rich first-order entity.

'instruction' to further map and calibrate the adjective's m-structure with the nominal meaning elaborating the trajector. The difference in nature between, on the one hand, relations found with 'participant adjectives', and, on the other hand, relations found with 'aspect adjectives' is seen clearly when we try to explicitly define the meaning of the two kinds of adjective; whereas adjectives such as *icy* in *icy road* and *American* in *American boy* lend themselves very naturally to paraphrases incorporating a clear formulation of the relevant relation – '*covered with* ice'; '*coming from* America' – this is not so with the adjectives in combinations such as *many books*, *absolute idiot*, *possible solution*, *main reason* etc.

Recapitulating, I have suggested that LM-adjectives range from the kind whose landmark/m-structure is felt to constitute a distinct participant in an equally distinct relationship of some kind, to the kind whose landmark/m-structure is felt to constitute a mere assessment or aspect of the nominal meaning as such. Let me now turn to the next level in Figure 7, at which I distinguish LM-adjectives that do not explicitly mention the kind of relation mapping with the relation part of the adjective Gestalt, from those that do.[152]

Considering what I have said so far about LM-adjectives – namely that they mention non-relational structures that map with the landmark rather than with the Gestalt as a whole – the claim that LM-adjectives may also mention explicitly a structure that specifies the relation part of the adjective Gestalt may seem somewhat odd. The only possible interpretation of this claim would be that such adjectives consist of some additional part, mentioning some additional structure. This is, in fact, exactly what I am suggesting: in the case of denominal and deverbal adjectives it seems that the derivational suffixes – as opposed to the adjective stems – sometimes mention a more or less 'contenty' relation of some sort (in addition to the ATEMPORAL RELATION schema, which is the structure that they primarily 'pick up').[153] The difference between this kind of adjective and REL-

152. This distinction pertains, of course, only to adjectives of the 'participant kind'; as I have shown, adjectives whose landmark structure is *not* felt to constitute an individual participant do not have a clear relation as part of their final meaning – consequently the question of whether or not a relation is explicitly mentioned by the adjective does not apply with this kind of adjective.

153. The ATEMPORAL RELATION schema is, of course, the prime m-structure of derivational

adjectives is thus that whereas both explicitly specify the relation part of the adjective Gestalt, the former does so only by incorporating an extra morpheme, which mentions an additional structure, apart from the structure mentioned by the main part of the adjective (that is the stem). This is what I had in mind when I said above that LM-adjectives are adjectives whose *prime* m-structure maps with the landmark.

That derivational suffixes may carry meaning other than simple information about grammatical category (i.e. the ATEMPORAL RELATION schema) is not a new idea; on the contrary, it seems to be generally agreed in the morphological literature that some suffixes have this characteristic. However, as far as I am aware, this observation has not been distinctly incorporated into any cognitive model of adjective semantics. Despite its seeming non-salience in the cognitive literature, it appears to me that this observation is not only compatible with, but also directly supportive of, the cognitive view of adjective meaning as comprising a landmark, a trajector, and a relation between the two: in, for instance, *childless couple*, the duality of the adjective form (*child* + *-less*) clearly points up, and renders support to, the cognitive assumption that adjective meaning comprises a landmark and a relation as component parts.

Although there is general consensus that adjective suffixes do sometimes mention individual content that specifies relation, there is little agreement as to exactly which suffixes have this characteristic and which do not. According to Warren (1984a:110ff), there are only a handful of suffixes that could be said to actually mention a particular kind of relation, more precisely *-free*, as in *duty-free liquor*, ('liquor *free from* duty') *-less*, as in *childless couple* ('couple *without* a child'), *-like*, as in *childlike trust* ('trust *like* that of a child'), *-type*, as in *Garbo-type hat* ('hat *of the kind* that Garbo wore'), *-worthy*, as in *noteworthy theory* ('theory *worthy of* note'), and *–ed*, as in *roofed pergola* ('pergola *provided with* roof'). This seems to be the minimal set that is generally accepted. Whereas I agree on *-free*, *-less*, *-like*, *-type*, and *-worthy*, it seems to me that the inclusion of *-ed* in this context is mistaken. The suggestion that *-ed* may mention a relation paraphrasable as 'provided with' rests on the assumption that there are two formally identical, but semanti-

suffixes converting nouns and verbs to adjectives; without these suffixes the ATEMPORAL RELATION schema would (obviously) not be called up at all with these words.

cally different *-ed* morphemes: one that derives adjectives from verbs (as in *haunted (house)*) and one that derives adjectives from nouns (as in *roofed (pergola)*), the latter (but not the former) of which has the meaning 'provided with'. However, supported by the fact that this latter kind of *-ed* suffix can be applied only to items that are formally ambiguous between noun and verb, I suggest that a more accurate analysis would be to assume that the *-ed* suffix has one and the same semantic import in all cases (which is in no case the meaning 'provided with', but rather only the ATEMPORAL RELATION schema plus an 'instruction' as to how to map this schema with the relevant m-structure (cf. Footnote 155 below)), and that it applies in all cases to a verb rather than to a noun (or, more accurately: to a second-order event rather than to a first-order entity). According to this analysis, then, adjectives such as *roofed* are deverbal too, just like any other adjective ending with this suffix: the stems in all cases incorporating the *-ed* suffix mention a second-order-, rather than a first-order structure. The reason that *-ed* often seems to mention a relation paraphrasable as 'provided with' in cases where the stem is formally ambiguous between a noun and a verb is that this is, quite simply, how we linguistically encode the event of providing something with something else. Or, in other words: events that involve providing a first-order entity *a* with some other first-order entity *b* seem to be typically encoded linguistically by verbs that are formally identical to the nouns that encode the first-order entity *b*: if we provide a pergola (first-order entity *a*) with a roof (first-order entity *b*), we symbolise this second-order event by means of the verb *roof*, which is formally identical to the noun symbolising the first-order entity *b*. Likewise, if we provide a fence (first-order entity *a*) with paint (first-order entity *b*), we symbolise this second-order event by means of the verb *paint*; if we provide a horse (first-order entity *a*) with shoes (first-order entity *b*), we symbolise this second-order event by means of the verb *shoe*; if we provide hinges (first-order entity *a*) with oil (first-order entity *b*) we symbolise this second-order event by means of the verb *oil*, and so on. Consequently, when we focus on the end state of any event like this (as we do when we add the *–ed* suffix to this kind of EVENT verb), the sense of 'providing with' will be an inevitable component of the state's base, and the resulting relation of containment (or being provided with) will make up the state itself. This, I suggest, is what may lead us to the conclusion that the sense of 'provided with' is given by the *-ed* suffix as such.

Again: with the exception of the suffix *-ed*, I agree that the suffixes brought up above (*-free*, *-less*, *-like*, *-type*, and *-worthy*) do mention a particular kind of relation. Apart from these, I think that at least the suffix *-y* could be included too. This suffix seems to have a very strong tendency to mention either a relation of CONTAINMENT (basically either a SURFACE or a CONTAINER 'version'), roughly paraphrasable as 'covered with' or 'full of', or a relation of MATCHING (more precisely some mid-point of partial match), roughly paraphrasable as 'resembling'. Examples of the former situation include *dusty (table)*, *snowy (field)*, and *rainy (day)*, whereas examples of the latter situation include *icy (response)*, *glassy (look)* and *papery (leaves)*. It should be pointed out, however, that although adjectives ending in *–y* seems always to be LM-adjectives, and although *–y* in itself seems to have indisputable relational meaning, it is far from always clear that these adjectives are of the 'double-structure' kind. For instance, adjectives that mention a first-order structure + PARTIAL MATCH (as in *papery (leaves)*, *mousy (girl)*, *baggy (trousers)* etc.), seem to make us associate to an equal extent to another, *single*, structure, namely a property of some sort. Papery leaves are leaves that are like paper, but this also means that they have a certain physical property; a mousy girl is a girl that resembles a mouse, but the way in which she does this is in way of a property of demeanour and/or appearance; baggy trousers are trousers that are like bags, but this also means that they have a particular property of appearance, and so on. Sometimes, the association with a single property structure is so strong that it is doubtful that the 'literal' double structure interpretation is present at all. This is particularly so with adjectives that mention a second-order structure + CONTAINMENT: *pushy (boy)*, *nosy (woman)*, *jumpy (girl)* etc. These combinations would literally mean 'boy full of pushing', 'woman full of nosing', and 'girl full of jumping', but these meanings are, I think, fully suppressed in any conscious interpretation (cf. my discussion of properties in Section 3.2.1 above). However, having said all this, there are nevertheless clear examples of double-structure LM-adjectives ending in *–y*, adjectives mentioning a first-order structure + CONTAINMENT (*icy (road)*, *snowy (field)* etc.) being a case in point.

Suffixes other than those brought up in the preceding discussion seem to be found between the extremes of the continuum of specified relation, with suffixes such as *-ic*, *-al*, and *–an* falling among those closest to the non-

specified relation end. I will go into no further detail here about exactly which suffixes could and could not be considered to profile relation, since, for the present purposes, this question is of less importance. What is important is the possibility as such: that sometimes LM-adjectives specify relation as well as landmark, and that they do so by means of certain suffixes.[154]

Before I turn to REL-adjectives, there is one more point as regards LM-adjectives that I need to comment on. I have already established that for the vast majority of LM-adjectives (the exception being that of adjectives with certain kinds of suffix), the nature of the relation as such has to be inferred. This may take a greater or lesser amount of cognitive effort. Adjectives mentioning first-order structures and mental objects fall among those that may require a rather intensive use of knowledge and memory, for the simple reason that the phenomena that they mention are known through experience to be capable of forming a vast amount of more or less distinct relationships with other entities (concrete or abstract). For instance, because of the highly versatile nature of the first-order structure SWEDEN, the adjective *Swedish* may imply relations roughly paraphrasable as 'coming from' (*Swedish boy)*, 'situated in' (*Swedish museum*), 'constituting part of' (*Swedish landscape*), 'controlling' (*Swedish government*) and so on; context (and often context larger than simply the head noun) determines exactly what particular kind of relation is inferred (Cf. Murphy 1988, 1990, 2002). On the most fundamental plane, the inference process makes use of basic image schemas (of course, these are the tools by means of which we make sense of most experiences); for instance, the various relations just exemplified – 'coming from', 'situated in', 'constituting part of', and 'controlling' – seem to fall back directly on the image schemas SOURCE, CONTAINMENT, PART-WHOLE and FORCE/COMPULSION respectively.

3.3.2 REL-Adjectives

It is now time to move on now to REL-adjectives. Table 8 surveys kinds of m-structure found with such adjectives.

154. Obviously, this is not to say that the specifics of adjective morphology are irrelevant to adjective semantics – on the contrary: they are, of course, highly relevant. It is just to say that these matters are outside the scope of the present study.

Table 8: M-structures Found with REL-Adjectives

Kind of m-structure	Adjective Exponents
SECOND-ORDER	
STATE	painted (fence), signed (document), leashed (dog), severed (gun)
PROCESS/ACTIVITY	smoking (man), running (water), swimming (boy), bouncing (ball)
DISTANCE	nearby (houses), faraway (countries), close (lampposts), adjoining (rooms)
MATCHING	similar (issues), different (mistake), same (house), another (man)

As can be seen from Table 8, REL-adjectives' m-structures may be second-order structures as well as other, more schematic kinds of ontological relation. Since relations are dependent, relational concepts include in themselves a more or less well-specified participant structure – that is, a set of conceived entities between which the relevant relation holds. This means that since participants are part and parcel of any relational concept as such, a REL-adjective automatically mentions not only the relation itself (this would simply not be possible), but also the conception of entities participating in this relation. In short: the highly schematic ATEMPORAL RELATION schema of the adjective is fully reflected in the more specific relational concept that the adjective mentions. However, depending on the exact nature of the m-structure of any one, particular REL-adjective, the match between, on the one hand, the components of the adjective Gestalt – trajector, landmark and relation –, and, on the other hand, the components of the m-structure, may be more or less straightforward. An adjective such as *signed* illustrates a situation of more or less direct, one-to-one mapping. The m-structure of this adjective comprises the second-order state SIGNED, which in turn comprises two distinct participants: on the one hand, a schematic conception of something that has been signed ('SIGNEE'), and, on the other hand, a conception SIGNATURE.[155] SIGNEE is furthermore the more prominent

155. Strictly speaking, the m-structure of the stem of any STATE adjective is an event rather than a state (cf. Section 3.2 and the discussion of *-ed* in the section on LM-adjectives above). However, as I have already implied, I suggest that the suffix *–ed*, which is the item 'responsible' for adjectival Gestalt assignation, also constitutes an 'instruction' to map the Gestalt schema only with the end state of the mentioned event. Consequently, when we

of the two. There is also the conception of a single, static relation of containment between the two. This corresponds exactly to the ATEMPORAL RELATION schema forming the Gestalt of the adjective *signed*, and consequently the relevant part of the m-structure and the Gestalt schema map in a one-to-one fashion: SIGNEE maps with the trajector (and is subsequently elaborated by any combining noun), SIGNATURE maps with the landmark, and the relation of containment maps with the relation part.

Consider now an adjective such as *crying*. In the m-structure of this adjective, there is an element that stands out as the most prominent by far – namely the schematic participant CRYER. This entity consequently maps in a one-to-one fashion with the trajector of the ATEMPORAL RELATION schema of the adjective. Apart from CRYER there are, however, also other important elements such as TEARS, EYES, CHEEKS, HULKING NOISE, EMOTIONAL UPSET and so on, all of which seem to be more or less equal in prominence. Each of these would seem to qualify as landmark; consequently there is no straightforward, one-to-one match between the landmark component of the adjective Gestalt and a substructure of the m-structure CRYING. Furthermore, not only does the participant structure in this case deviate from the canonical case (one trajector participant, one landmark participant), but the relation as such does too, in that it consists in a highly intricate complex of sub relations that together make up a coherent whole, rather than one single (and simple), atomic relation of the kind prototypically associated with atemporal relations. That is, TEARS forms a particular (and in itself complex) spatial relation with EYES and CHEEKS; HULKING NOISE and TEARS each form a particular source-result relation with CRYER; EMOTIONAL UPSET forms a cause-and-effect relation with TEARS and HULKING NOISE, and so on, all relations of which together constitute the complex relation CRYING. It seems

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'get to' superimposition and alignment of Gestalt relative to m-structure, the relevant structure is the end-state only. Note that this situation is different from that of double-structure LM-adjectives discussed in the previous section. As I showed in that discussion, suffixes such as *-y*, *-less*, *-free* etc. themselves mention an ontological relation, which is added to the (separate) structure mentioned by the adjective stem. With STATE adjectives, on the other hand, we do not have two (separate) ontological structures, mentioned by the stem and the suffix respectively, but rather one only, namely the event mentioned by the stem alone. The suffix *–ed* does not in itself mention a state, it merely guides the alignment of the Gestalt vis-à-vis the m-structure.

reasonable to assume that in this kind of case the relational Gestalt maps with the m-structure only in a rather crude fashion; with *crying* there would be no exact alignment, other than the mapping of the trajector with CRYER. Apart from this, the schematic relation and the equally schematic landmark of the adjective Gestalt would seem to simply reflect, in a highly general manner, the fact that there are other entities with which the trajector forms a complex set of relations, without actually mapping with any one specific individual entity or relation.

There is a number of ways in which REL-adjectives could be sub classified on the basis of how their Gestalt schema maps with the internal structure of their m-structure. However, I am not sure that a detailed sub classification reflecting all the various possibilities is ultimately very productive.[156] From a general, overarching point of view, I think that it is enough to simply establish that there are various kinds and degrees of deviation from the canonical situation of one highly prominent participant, one less prominent, but still distinct, participant, and one single, unitlike relation between the two, all of which maps in a one-to-one fashion with the ATEMPORAL RELATION schema of the adjective. This said, there are, however, two relational features that stand out in this context as being of some relevance, namely (i) the relative asymmetry between participants, and (ii) the individuality of participants. These seem important in that they may both affect the subsequent integration of adjective meaning with nominal meaning. In addition to this, the former feature may furthermore have consequences for one of the fundamental aspects of the atemporal relation schema itself – namely trajector-landmark alignment. Let us consider each of these features in turn, starting with asymmetry between participants.

156. There is a range of different parameters that enter into the equation here: number of participants, salience of participants, individuality of participants, specificity of participants, asymmetry between participants, whether there is one atomic relation or several sub relations, the identity between relations in cases where several participants (and therefore, by necessity, several relations) are involved and so on and so forth. Trying to account for all the various constellations of these numerous parameters would yield a large, unwieldy survey that would be far more confusing than it would be clarifying. Apart from this, it is, furthermore, doubtful that such a classification would be of any substantial use; at least at a quick glance, it is hard to see that a full account like this would reveal and explain any important patterns of linguistic behaviour.

As I have already established (see especially Section 1.3.3.2), a prototypical atemporal relation has one participant that is the most prominent, and one that is less prominent, and that serves more or less as a reference point for the more prominent participant. This is reflected in terms of trajector-landmark alignment with the ATEMPORAL RELATION schema. However, there seem to be certain relations, serving as the m-structure of particular REL-adjectives, that do not exhibit this asymmetry between participants, but that rather portray participants as having equal status in terms of prominence. Examples include the m-structures of adjectives such as *similar* and *adjoining*. There is no one of the participants in these cases – the entities forming a relation of partial match, and the entities forming a relation of minimal distance (contact) respectively – that stands out as more prominent than any of the others. On the contrary, they are all felt to be equal in relation to each other. Consequently, the trajector-landmark construal normally found with the atemporal relation schema is, in these cases suppressed. Another consequence of participant symmetry (as opposed to *a*symmetry) is that both of the schematic participants comprised by the relevant relational concept (and, consequently, both of the schematic participants of the ATEMPORAL RELATION schema) may (and often do) serve as the elaboration site for the meaning of any combining noun. In *similar faces*, the meaning of the noun elaborates each of the schematic participants comprised by the relation SIMILAR, and in *adjoining rooms*, the nominal meaning elaborates each of the participant components comprised by the relation ADJOINING, something that is made explicit by the plural morpheme on the noun. It may, however, also be the case that the nominal meaning elaborates only one participant, and that the other has to be inferred from context. This is so in, for instance, a passage such as the following:

> According to this view, adjectives evoke an ATEMPORAL RELATION schema, comprising a landmark, a trajector and a relation between the two. *A similar view* is expressed by Warren.

In this case, the one participant in the relation mentioned by *similar* is elaborated by the meaning of the noun *view*, whereas the other component is specified by the meaning of the preceding clause: *adjectives evoke an* ATEMPORAL RELATION *schema, comprising a landmark, a trajector and a relation between the two*.

Let me now turn to the second of the two relational features mentioned above, namely the feature of participant individuality. In the prototypical case, the relation found with REL-adjectives holds between participants that are felt to constitute separate individuals, with no other connection to each other than the one afforded by the relation itself. Some kinds of relation do, however, hold between entities that are perceived of as constituting parts of some larger whole. Examples include the relations profiled by adjectives such as *severed* and *closed*. These adjectives mention (in the canonical case) events of altering the spatial relation between component parts of a schematic whole – of increasing and decreasing distance respectively – along with an instruction, encoded by the *-ed* suffix, to focus on the end result of the respective events (more precisely on the resulting spatial relation holding between component parts).[157] In this kind of situation the meaning of any combining noun does not elaborate the individual parts between which the specified relation holds, but rather the schematic whole that these parts together constitute, something that in turn means that the adjective and the noun Gestalts are aligned, or juxtaposed, relative to the full event mentioned by the adjective (in this case the events SEVER and CLOSE respectively) rather than mapped directly in a one-to-one fashion. Consider the combinations *severed gun* and *closed book*. The adjective stems in these cases mention the events SEVER and CLOSE respectively – each of which comprises the conception of a schematic WHOLE, schematic PARTS OF WHOLE, and a dynamic relation of altering spatial distance between parts – whereas the *-ed* suffix constitutes an instruction to focus on the end state of the respective events. Within this end state, the nominal meaning maps with WHOLE, specifying it as GUN and BOOK respectively, whereas the schematic participants comprised by the adjective Gestalt maps with the parts that we know GUN and BOOK to consist of (parts that are also schematically given within the respective event conceptions themselves). This is thus the direct opposite situation compared to the one observed with the relations discussed above (profiled by *similar* and *adjoining*), where any combining noun meaning maps individually with *both* (as opposed to the present case of neither) of the schematic participants comprised by the adjective Gestalt schema.

157. Cf. the discussion of *-ed* in the section on LM-adjectives above, as well as Footnote 155.

Participant symmetry appears with non-deictic distance relations (*adjoining (rooms)*, *close (lampposts)*) as well as with relations of matching (*similar (ideas)*, *identical (pens)*). It also appears with states, but in this case it seems to be limited only to certain cases of relation between parts of whole, as in, for instance, *severed (gun)* and *broken (vase)*. It does not appear to occur with processes – these seem always to be highly asymmetric. Relation between parts of whole seem to be restricted to, on the one hand, states – in which case the relation may be symmetric (as in *severed (gun)* and *broken (vase)*) or asymmetric (as in *opened (window)* or *locked (door)*) – and, on the other hand, non-deictic distance relations of the kind overlapping with property (cf. discussion of distance adjectives above), in which case the relation is always symmetric (as in *compact (bouquet)* or *tight (knot)*).

Before I leave the mapping aspect of adjective FIFs, I need to comment on the special case of QUANTITY, PROPERTY, and DEGREE adjectives, mentioned at the onset of Section 3.3. As I pointed out in that context, adjectives that mention quantity, property, or degree concepts seem to fall somewhere between straightforward LM- and REL-adjectives. In order to show how this is, I will consider again the conceptual make-up of adjectives of this kind, using *several*, *hot*, and *absolute* as examples.

Several, *hot* and *absolute* mention a particular value of QUANTITY, TEMPERATURE and DEGREE respectively. As I have shown (Section 3.2), these domains also comprise, as an intrinsic part, the conception of a relation of inherence between on the one hand the range of possible values, and, on the other hand, some kind of phenomenon manifesting one of these values. Or, put in more precise terms: with QUANTITY, we have the conception of (i) values along a QUANTITY scale, (ii) some kind of discrete or continuous unbounded mass, and (iii) a relation of inherence between the two; with TEMPERATURE, we have the conception of (i) a range of values along the temperature scale, (ii) some kind of (physical) entity, and (iii) a relation of inherence between the two, and with DEGREE we have the conception of (i) values along a scale of DEGREE, (ii) some kind of gradable property or activity, and (iii) a relation of inherence between the two. It seems reasonable to suggest, then, that the Gestalt schema of any QUANTITY, TEMPERATURE, or DEGREE adjective maps in a one-to-one fashion with the three components of the domains that they evoke, so that in the case of *several*, the schematic participant marked as landmark maps with the relevant range of values along the QUANTITY scale

(in this case the counting scale), the participant marked as trajector maps with the conception of a discrete unbounded mass, and the relation part maps with the relation of inherence; in the case of *hot*, the participant marked as landmark maps with the relevant value along the TEMPERATURE scale, the participant marked as trajector maps with the conception of a physical entity, and the relation part maps with the relation of inherence; and in the case of *absolute*, the participant marked as landmark maps with the relevant value along the scale of DEGREE, the participant marked as trajector maps with the conception of a property, and the relation part maps with the relation of inherence. In short: the Gestalt schema of *several*, *hot* and *absolute* respectively maps in its entirety onto something that in itself constitutes one single coherent, unitary conceptual structure (namely QUANTITY, TEMPERATURE and DEGREE respectively). In this, *several*, *hot* and *absolute* appear to be very much like indisputable REL-adjectives, the Gestalt schemas of which also map in their entirety onto single conceptual structures, mentioned as wholes by the adjectives in question. Conversely, they are *un*like indisputable LM-adjectives, such as *pictorial*, *American*, and *front*, the Gestalts of which map in part with one structure, which is explicitly mentioned by the adjective itself (in this case PICTURE, AMERICA and FRONT respectively), in part with another, relational structure that has to be inferred from context, and in part with yet another, non-relational structure, specified by any combining noun. However, QUANTITY, PROPERTY (in this case TEMPERATURE) and DEGREE adjectives are also *un*like indisputable REL-adjectives, and *like* indisputable LM-adjectives, in that they seem to specify a participant (namely the participant marked as landmark) rather than the relation itself; with *several*, *hot* and *absolute* it is the relevant value of QUANTITY, TEMPERATURE and DEGREE respectively that is felt to add meaning to the adjective as a whole, not the relation of inherence. On the contrary, the relation as such seems to feature only subconsciously in the meanings of these adjectives, as a presupposed, but completely unfocused, aspect of QUANTITY, PROPERTY and DEGREE themselves. It is for these reasons – that they add content to the landmark part rather than to the relation part of the adjective Gestalt, and that they even seem to background the relation part – that I regard QUANTITY, PROPERTY and DEGREE adjectives as LM- rather than REL-adjectives, despite the fact that they are similar to both.

3.4 Concluding Remarks

In this chapter I have discussed adjective FIFs, from the point of view of what kinds of material the form of adjectives may evoke, as well as from the point of view of how selected material – on the one hand some content or schematicity-biased pre-meaning, and, on the other hand, the Gestalt schema of ATEMPORAL RELATION – is mapped. It is now time to turn to the issue of *semantic* interpretive functions – or SIFs.

4 Semantic Interpretive Functions of Adjectives in English

4.1 Background

In the previous chapter I dealt with formal interpretive functions (FIFs), from a material as well as a mapping aspect. In the present chapter, I move on to (primary) **semantic interpretive functions** (**SIFs**). As I have already established, such functions are the effects that the semantic pole determined for a particular linguistic item has on the creation of the higher-order meaning resulting from conventional co-interpretation of the relevant item and some other item (cf. Section 2.4). SIFs of adjectives – unlike FIFs of such items – have received a certain amount of attention, at least in the 'non-cognitive' literature. Consequently, I will begin the chapter with a short section on previous work, before I turn to my own elaborations.

4.1.1 Previous Work: The CID Approach

Although there are, as far as I am aware, no studies that deal explicitly with the effects that adjective meaning has on the meaning of other items in interpretation of linguistic input, there are, nevertheless, a small number of studies (notably Teyssier 1968, Bache 1978, and Warren 1984a, b, c, 1989) that discuss functions of (prenominal) adjectives in a way that is largely compatible with my view of SIFs.[158] These works together present an account that has come to be generally accepted, especially in the area of prescriptive grammar. According to this view, henceforth referred to as *the CID Approach*, prenominal adjectives have three main functions: they

158. The following account is based mainly on the model proposed by Warren, since this is the most detailed and comprehensive account so far, meticulously describing grammatical as well as semantic characteristics found with the various functions.

classify, **i**dentify, or **d**escribe the noun that they modify.[159] In classification the adjective is claimed to point to a sub kind of the kind of thing denoted by the noun, in identification it is claimed to point out the intended referent of the noun, and in description it is said to describe the referent of the noun.[160] The following three sentences may serve as an illustration of the main idea:

(19) They use *solar* power (classification)
(20) The *oldest* child was told to go first (identification)
(21) I read an *interesting* article yesterday (description)

In (19), the adjective *solar* indicates a particular sub kind of the kind of thing known as *power*, in (20), the adjective *oldest* points out exactly which child was told to go first, and in (21), the adjective *interesting* describes the article in question.

From a semantic point of view, classifiers and identifiers are claimed to be relatively unrestricted; according to Warren, basically any meaning at all can have these functions.[161] Whether we conceive of a certain meaning as identifying or classifying depends instead on idiosyncratic factors tied to the particular speech situation at hand (e.g. Warren 1984a:95 and102). Descriptors, on the other hand, are said to be restricted in terms of semantic nature, so that there are certain kinds of meaning that cannot be interpreted as descriptors. For instance, adjectives expressing constituent matter (*metallic ball, wooden fence*), proprietor (*presidential home*, *national forest*), position

159. The acronym (*CID*) thus refers to the three functions proposed in the relevant approach.

160. It may be argued that the term *referent* pertains to the noun phrase as a whole, rather than to the head noun itself. This is a thoroughly valid observation, to which I will return in the next section. However, in the works on which the CID Approach is based, functions are generally discussed only in relation to the head noun as such; as Warren once put it, identification, description and classification are "modifiers' ways of relating to the head noun" (Warren, personal communication).

161. In this Warrens account differs from that of, for instance, Teyssier, at least as regards identifiers. According to Teyssier identifiers form a closed class of items which are compatible only with definite determiners (1968:226f), and which are normally "devoid of any descriptive value" (1968:227).

in space or time (*celestial bodies*, *historical period*), origin (*domestic sewage*, *industrial waste*) or causer (*electric shock*, *Roman wall*), are, according to Warren, excluded from the descriptive function and will instead invariably be perceived of as classifiers (see also Ljung 1970 and Levi 1975).

Classifiers, identifiers and descriptors are said to each exhibit a particular kind of morpho-syntactic behaviour, ranging from most restricted to least restricted. Classifiers are non-gradable and non-predicating (**This is very solar power*[162]; **the power is solar*) and identifiers can be put in predicative position only in restrictive relative clauses (*Give me the book that is red - *Give me the book. It is red*), whereas descriptors are both gradable and able to appear in predicative position (*This is a very cute baby*; *This baby is cute*).

4.1.2 The Present Work: Beyond the CID

In the previous section I gave a brief account of earlier work within the area of adjective SIFs, focusing on (Warren's version of) the CID Approach to adjective function. Whereas this approach is in many ways intuitively compelling, it nevertheless has certain shortcomings. In this section I first comment briefly on the main problems with the CID Approach, and then turn to my own intents as regards coming to terms with these problems. I conclude with an introductory account of the present view of adjective SIFs.

There seem to be three main problems with the CID Approach. The first is that it obscures the fact that the functions it suggests – that is classification, identification and description – each pertain to a different sub-process within the over-all process of discourse interpretation, thus affecting essentially different kinds of meaning (for further details, see below, cf. also Footnote 160).

The second problem is that apart from obscuring differences *between* functions, in terms of 'where', and to what, in the interpretive process they

162. Note that non-gradability holds also for classifier meanings that may, under other circumstances well be graded. An adjective such as *soft* for instance, is gradable in an utterance such as *She has (very) soft skin*, but non-gradable in an utterance such as *We bought some (*very) soft cheese* (where *soft cheese* refers to a particular kind of cheese). In cases like this, grading does not render the resulting phrase grammatically unacceptable, but it changes the intended function of the adjective. Consequently, classifiers can be said to be *functionally* non-gradable. I will return to this issue in Section 4.3.2.

apply, the CID furthermore gives a somewhat rudimentary picture of the functions as such. It seems that especially the classifying function is even more diverse, and more complex, than has so far been accounted for; although variations among classifiers – especially in terms of what kinds of meaning items in this function seem to express – has been discussed to some extent (e.g. Warren 1984a, see also Section 4.1.1), a more systematic survey of the various ways in, and means by which classification is realized is yet to be presented.

The third main shortcoming of the CID Approach is that in order to give as clear a picture of the three functions as possible, it focuses on typical, straightforward examples of adjective use, at the expense of less obvious cases. Whereas this approach is clearly necessary at an initial stage of description, a full account must proceed to accommodate all cases of adjective use – less self-evident examples such as *I want a black dress*, *Black dresses are beautiful*, and *A black dress fits all occasions*, as well as straightforward cases such as *I want the black dress* and *I have a black dress*.

In summary, although fully adequate as a first approximation, the CID Approach does not provide a full picture of adjective SIFs. My aim with the present chapter, therefore, is to take the next step towards such an account. More specifically, I intend to:

i. offer a more elaborate account of classification and, to some extent, identification and description, in terms of when in interpretation, and to what aspects of meaning these functions apply, as well as in terms of the nature of the functions themselves;
ii. identify and account for cases of adjective use that cannot be accounted for in terms of the CID Approach, thus suggesting two further functions.

For reasons of coherence and consistency in terms of general theoretical approach, I will furthermore make certain terminological adjustments to the original theory.

Very briefly, my proposal is as follows (cf. also Section 2.3.2): Classification (henceforth **kind identification**), identification (henceforth **element identification**) and description (henceforth **specification**) all constitute primary SIFs of adjectives as encountered in a communicative event. In

addition to these, there are, I suggest, also two further primary SIFs that adjectives may realize in interpretation of discourse, namely what I refer to as **identity provision** and **stipulation** respectively (cf. Section 2.3.2.1). The key to understanding these functions lies in an elementary understanding of the interpretive process as such. I discussed this process in some detail in Section 2.3 above; suffice it at this stage to repeat very briefly some of the main points.

As I suggested in Section 2.3, interpretation in a communicative event could be described in terms of the pre-crystallisation/morphological, the crystallisation/propositional, and the post-crystallisation/discourse level respectively, of which the two former are the ones of relevance to adjective SIFs – at least as far as creation of semantic meaning is concerned. As the terms would suggest, the morphological level comprises creation of morphological (grammatical as well as lexical) meaning, whereas the propositional level comprises creation of propositional meaning, including, among others, the sub-processes of element creation, creation of relations, creation of traits, and integration of elements, relations and traits.

All primary adjective SIFs pertain to nominal meaning, but they apply at different stages of interpretation, and thus to different *kinds* of nominal meaning. The function that I refer to as *kind identification*, first, applies at the morphological level, and thus affects creation of *lexical* nominal meaning. As I have already implied, this function corresponds roughly to the function referred to as *classification* in the CID Approach. Element identification, identity provision, stipulation and specification, on the other hand, all apply at the propositional level – more precisely in element creation and, in the case of specification, in integration of proposition components – somehow affecting nominal meaning in its capacity of an *element*. Again: element identification corresponds to the *identifying*, whereas specification corresponds – at least to a large extent – to the *descriptive* function in the CID Approach. Identity provision and stipulation, on the other hand, are 'new' functions, that have generally been ignored in the literature. However, as I will come back to in Sections 4.3 identity provision and stipulation cannot be considered simply as deviant sub-kinds of any of the traditional functions, but seem to constitute individual functions in their own right. In the following I will elaborate on each function in turn.

4.2 Adjective SIFs Relative to the Morphological Level: The SIF of Kind Identification

There is only one SIF that adjectives may have on the morphological level, namely what I refer to as **kind identification**. As I have already established, this function corresponds roughly to the CID function called *classification*. It pertains to creation of nominal lexical meaning, more precisely to the process of comparison-redirection, triggered by co-interpretation on the morphological level of two lexical meanings (cf. Section 2.3.1). As I mentioned in Section 2.3.1, this process may be carried out in various ways, by various means. Common to all cases is, however, that it exploits one or more lexical meanings for the identification of the kind concept to which redirection is intended. Such meaning is compared against each 'member' of a more or less limited set of kind concepts until some kind of match is found between the exploited meaning itself and some feature or features comprised by the thus identified concept. Once identification is achieved, attention is redirected to the identified concept, which is thus adopted as the ultimate lexical meaning. Any identifying meaning maps and merges with the feature that it mirrored in the identified concept, and thus becomes an inextricable part of this concept itself. Consequently, once it has served its purpose of identification, it has no further SIF of its own – primary or other.[163]

Whereas the present work focuses on interpretive functions of adjectives, the function of kind identification may also be effected by certain items other than adjective meanings. More precisely, I suggest that it may be realized by:

i. the lexical meaning of a prenominal adjective only (as in *circular saw*),
ii. the lexical meaning of a prenominal adjective and the lexical meaning of a noun in parallel[164] (as in *cerebral palsy*), or

163. This does not hold only for the adjective, but also for the noun in combinations involving kind identification; once it has served its purpose as a delimiter of options (or, in cases of exocentric combinations: as a kind identifier), the noun meaning is either quite simply 'left behind' (in endocentric combinations) or subsumed by the aspect that it served to highlight in exocentric combinations of type two.

164. It could, perhaps, be argued that the function of kind identification is, in fact, also triggered by the form of nouns (so that this would be the overarching noun FIF): clearly,

iii. the instantiated meaning of an adjective-noun combination as a whole (as in *redbreast*).

The first of these three types of kind identification – henceforth referred to as **endocentric kind identification** – was briefly introduced in Section 2.3.1, and is exemplified by combinations such as *circular saw* and *brown bread*.[165] Endocentric kind identification will be discussed in detail below. Suffice it for now to repeat that in this kind of situation, the meaning of the

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the FIFs of any prototypical noun include delimitation of conceptual raw material (purport) to material that may give rise to meanings reflecting only a fraction of all the different kinds of thing that we tend to conceive of, and consequently, this initial delimitation could, in a sense, be said to amount to kind identification. However, at the level at which this initial identification of material occurs – namely purport level – we are still far from the level at which we conceive of fundamentally organised and construed kinds of thing. At this latter level, the FIFs of a noun have finished their work and no longer apply – selectively or otherwise. Consequently, I maintain that the FIFs of any prototypical noun include delimitation of meaning potential from which conception of a limited set of particular kinds of thing may arise; they do not amount to identification of one particular kind within our potentially infinite set of conceived kinds of thing.

165. I have borrowed the term *endocentric* from the morphological literature (e.g. Allen 1978, Williams 1981, Kiparsky 1982, Bauer 1983, and Spencer 1991), in which it is used for compounds exhibiting precisely this first type of kind identification, as opposed to *exocentric* (or *bahuvrihi*) *compounds* (e.g. Kiparsky 1982, Spencer 1991), which are compounds exhibiting the second and the third type of kind identification listed above. It must be emphasized, however, that whereas this term (*endocentric*) serves as a convenient alternative to long and unwieldy paraphrases, it should *not* be understood as indicating a modifier-head relationship, the way it is in the morphological literature. Whereas an endocentric compound is traditionally defined as a compound in which the first component modifies the second component, which functions as a head, I take the opposite view, suggesting that compounds of this kind (along with compounds of the sort indicated under 2) above (e.g. *cerebral palsy*)) are *not* modifier-head constructions. Instead, as I touched upon in Section 2.3.1, and as should become clearer in the following, I believe that the adjective and the noun function separately in these kinds of combination, both pertaining to a third construct, namely a kind concept that is either subordinate to, or entirely separate from that profiled by the noun itself. Furthermore, whereas bahuvrihi compounds – that is, compounds of the kind exhibiting the third type of kind-identification listed above – are traditionally defined as compounds that *lack* an explicit head, and which are therefore *not* modifier-head constructions, my view is that these *are*, in fact, modifier-head constructions, albeit modifier-head constructions which, in turn, pick out another, different meaning for the head. I will discuss these matters in more detail in the following.

noun (in this case SAW and BREAD respectively) gives access to a set of subordinate kind concepts, and that the meaning of the adjective (in this case the properties CIRCULAR and BROWN respectively) matches a piece of information that is found with only one of these potential meaning candidates, thus identifying this concept (in this case CIRCULAR SAW and BROWN BREAD respectively) as the intended nominal meaning.

In the second type of kind identification, the respective meanings of the adjective and the noun *both* highlight aspects of a separate kind concept, with no mention of a super ordinate 'reference point' that delimits the set of potential candidates. This kind of situation is found with combinations such as *Caesarian section*, *blackthorn*, and *cerebral palsy*. In none of these combinations does the noun mention a super ordinate kind that defines a set of sub-kinds from which the target kind is identified by the adjective meaning. A Caesarian section is not a kind of section, blackthorn is not a kind of thorn, and cerebral palsy is not a kind of palsy. Instead, in these cases the noun meaning serves the same sort of kind identifying SIF as the adjective does. That is, in *Caesarian section*, *blackthorn*, and *cerebral palsy*, the individual lexical meanings established for the adjective and the noun respectively match one particular piece of information each, in some more or less unrelated kind concept, thereby *both*, in *parallel*, identifying a kind concept that is quite separate from the one mentioned by the noun itself. *Caesarian section*, first, identifies a particular method of delivery of a baby, and it does so by highlighting (i) the knowledge that this kind of delivery was (allegedly) first employed when Julius Caesar was born, and (ii) the fact that this kind of delivery is performed by means of a section.[166] *Blackthorn*, next, picks out a particular kind of bush, and it does so by pointing up (i) the fact that this kind of bush has black bark and (ii) the fact that it is covered with thorns. *Cerebral palsy*, finally, identifies a particular kind of developmental disorder, and it does so by highlighting (i) the information that this kind of developmental disorder is caused by damage to the brain, and (ii) the fact that it results in trembling of the limbs (i.e. palsy).

166. Of course, it is by no means certain that a certain interpreter has this particular knowledge (even if he has the concept as such), in which case the adjective and the noun will fail in their SIFs. The same holds true for many other kind identifier combinations. I will come back to this issue presently.

As should be clear from what has been said so far, the two types of kind identification just described differ in terms of noun SIF – in type 1) (i.e. endocentric identification) the noun meaning could be said to function as a reference point that defines and delimits the set of potential meaning candidates, whereas in type 2) it has the function of kind identification (in parallel with the adjective). As regards the function of the adjective, on the other hand, this is the same in both cases – namely kind identification.

In the third type of kind identification mentioned above – exemplified by combinations such as *redbreast* and *softball* – it is the meaning of the adjective-noun combination as a whole (as opposed to that of the adjective (and sometimes the noun) separately) that serves a kind-identifying function. In this kind of situation, the meanings of the adjective and the noun are, I suggest, initially interpreted as individual lexical meanings, which are both instantiated as individual manifestations of individual lexical meanings, which are subsequently perceived of as being tied to one and the same embodier, whereby there is also a shift in focus from description to embodier, resulting in an ungrounded conception of an 'actual' breast that is red and an 'actual' ball that is soft respectively.[167] However, instead of fitting the embodier conception into the CDS – which would be the regular way to proceed – the interpreter returns, at this point, to the morphological level, where the relevant conception serves instead to identify a new kind concept through the process of kind identification; in the present examples, the conceptualised red breast and the conceptualised soft ball associate to the kind concepts REDBREAST and SOFTBALL respectively, by mirroring the features of having a red breast and of using a soft ball respectively. In short: in combinations such as *redbreast* and *softball*, it is the complex meaning of the adjective-noun combination as a whole – which results from instantiated co-conception of noun and adjective meaning – rather than the meaning of the adjective (and sometimes the noun) separately – that identifies the kind concept ultimately settled for as the intended lexical meaning. Since I focus, in the present work, on interpretive functions of adjectives, I will say no more about kind identification of this third type, since this is not a function of adjectives as such.[168]

167. For further discussion of co-interpretation of noun phrase component meanings on the propositional level, see Section 4.3.4.

168. The SIF of the adjective itself in combinations such as *redbreast* and *softball* is, I

Kind identifier combinations are typically well established, 'frozen' lexical units – that is, they are unit like from a strictly linguistic, formal point of view as well as from a generally conceptual aspect. It may be tempting, therefore, to assume that the delimiting effect that I analyse as a kind identifying SIF of the adjective is, in fact, not a SIF, nor a function of the adjective, nor identification among a set of 'kind candidates', but rather a FIF, which furthermore pertains to the form of the adjective-noun combination *as a whole*, and which consists in delimitation of *purport* rather than of a set of kind concepts. That is, it may be tempting to assume that, for instance, *circular saw* is taken in and interpreted all at once, as a unit, so that the restriction to CIRCULAR SAW is due to a FIF of the combination as a whole – a FIF that already at purport level effectively suppresses all material (i.e. purport) that could potentially give rise to the conception of anything other than CIRCULAR SAW (cf. Footnote 164). The accuracy of this assumption seems particularly convincing with combinations such as, for instance, *Siamese twin* and *direct current*, where the adjectives refer to information about the intended kinds that may not to be known by people in general (even though the kinds as such are generally known); obviously, if the information that the adjective supposedly highlights is not there in the mind of the interpreter to begin with, the adjective will fail as a kind identifier, and any successful interpretation will instead be due to rote learning of the combination as a whole (cf. Footnote 166).[169] In the end, the degree of word independence in interpretation of kind identifier combinations probably varies from one combination to another, from one interpreter to another, and from one occasion to another. Regardless of which, it seems reasonable to assume that the adjective in any given combination of the kind discussed here, has, or has had, a kind identifying effect at *some* point, with *some* group of interpreters. Consequently, I will be concerned in the following with *potential* kind identifier combinations, disregarding the fact that the adjec-

suggest, best analysed as a non-prototypical kind of specification (see Section 4.3.4), where it is an ungrounded embodier conception, rather than a fully-fledged element that is specified. I will return briefly to this particular matter in Section 4.3 (Footnote 189).

169. *Siamese* refers to the fact that the first twins of this kind were born in what was formerly known as *Siam*, and *direct* refers to the fact that this kind of current flows in one, constant direction, instead of going back and forth. I will come back to discussions of these combinations below.

tive may not be kind identifying *in each particular interpretive event*. Among such combinations I will focus on endocentric combinations (that is combinations where the meaning of the noun provides the set of sub kinds among which identification is performed; see above).

Before I turn to matters pertaining more specifically to the process by which adjectives effect kind identification, I would like to comment briefly on the nature of the taxonomic relation found between the respective meanings of the adjective and the noun in endocentric combinations. Although they are all taxonomic in *nature*, combinations of this kind nevertheless differ in terms of taxonomic *immediacy*. On the basis of this, I suggest a distinction between what I refer to as, on the one hand, **immediate combinations** and, on the other hand, **distant combinations**.

Immediate combinations are combinations such as *electric train* and *high chair*, where the noun profiles a kind-of-thing concept that is directly super ordinate to that identified by the adjective. That is, with this kind of combination there seems to be no intermediate taxonomic level between the kind symbolised by the noun on its own (in this case TRAIN and CHAIR respectively), and that identified by the adjective (in this case ELECTRIC TRAIN and HIGH CHAIR respectively). In the typical case, the noun itself profiles a basic level concept with which sub-kinds are only subconsciously present. For instance, when we are confronted with nouns such as *bread*, *cat*, or *breakfast* on their own, we tend to pay little or no attention to our knowledge that there are what we think of as different sub-kinds of BREAD, CAT, and BREAKFAST. Consequently, what an adjective that has a kind identifying SIF in combination with a noun like this does, is to take a more fine-grained view of the noun's meaning, focusing instead on a level of greater detail, at which one specific sub-kind is singled out. This is the case with combinations such as *brown bread*, *Siamese cat*, and *continental breakfast*. That this should be the situation in which kind identifying adjectives are most commonly found is, of course, only natural. This is the kind of situation in which an explicit 'pointer' (supplied by the adjective) is needed in order to make us pay attention to the intended level of specificity.

Some nouns tend to be polysemous between, rather than inclusive of, sub-kind meanings, so that the default level of specificity is that at which the target concept is found even without an identifying adjective. This situation is thus exactly the opposite to that found with nouns such as *bread*,

cat, and *breakfast*; when we are confronted with nouns such as, for instance, *knife*, *card*, and *ball*, the super ordinate concepts (KNIFE, CARD, and BALL) are the ones that are only subconsciously present, and focus lies instead on the level of specificity at which particular sub-kinds are distinguished, so that we envisage a particular kind of knife, card and ball, rather than knife, card and ball in general. Consequently, with nouns like this, no additional 'pointer' is needed in order for focus to fall on the specific rather than the general level of organisation. The tendency among certain nouns to focus on the more specific level as a default is referred to as *default specificity* (e.g. Cruse 2000b, 2001 and Croft and Cruse 2004). In many cases of default specificity, the various 'sister' kinds are often highly context-specific, so that they do not generally occur in the same kind of context. Consequently, an extra 'pointer' is superfluous also from the point of view of identification among 'sister' kinds – context is generally quite sufficient when it comes to 'picking out' the intended concept.[170] In short, with nouns that exhibit default specificity like this, there generally seems to be less need for a kind identifying adjective, and so, it is not surprising that kind identifying adjectives seem to be less common with nouns of this type. This does not mean, however, that they *cannot* appear with nouns like this; *military equipment*, *medical supplies*, and *surgical instrument*, are all examples of combinations of kind identifying adjectives and polysemous, default-specific nouns.

So far I have considered immediate endocentric kind identifier combinations. The other kind of combination mentioned above – that is distant combinations, of which *common room* and *back seat* are examples – is quite the opposite of the immediate kind. Instead of appearing at immediately consecutive levels of conceptual taxonomies, the kind concept profiled by the noun (in this case ROOM and SEAT respectively) and that identified by the adjective (in this case COMMON-ROOM and BACK SEAT respectively) are found at levels that are only indirectly connected to each other, via some intermediate level of taxonomic organisation. With *common-room*, the intermediate level is that at which the type ROOM falls into different kinds on the basis of purpose – that is the level at which we find sub-kinds such

170. For instance, with *knife*, a meal context identifies the cutlery kind, a garden context identifies the kind used for gardening, a fishing context identifies the kind used for scaling and gutting fish, and so on.

as KITCHEN, BEDROOM, BATHROOM, SITTING-ROOM etc. The kind of thing identified by the adjective – i.e. COMMON ROOM – is, in turn, a sub-kind of SITTING-ROOM (namely the kind of sitting-room found in public institutions such as schools and the like, as opposed to those found in private homes). Likewise, with *back seat*, there is an intermediate level at which different kinds of seat are distinguished on the basis of what they are part of – we have FURNITURE SEAT, BIKE SEAT, CAR SEAT etc. – and the kind of thing identified by the adjective – i.e. BACK SEAT – is (in any default interpretation) in turn a sub-kind of the kind CAR SEAT. Other examples include *biological control* (a kind of pest control), *cosmetic surgery* (a kind of plastic surgery[171]), and *intensive care* (a kind of medical care).

Having considered briefly the nature of the taxonomic relation found with endocentric combinations, I will now turn to the identifying process as such. More specifically, I will consider in some detail two important aspects of this process, namely the questions of (i) *what kinds* of information adjectives target in the concept they identify, and (ii) *how* these kinds of information are focused by the adjectives in question.

4.2.1 Kinds of Information Focused by Kind-Identifying Adjectives

As should be clear from previous parts of the present work (see especially Section 1.2.1.1), any particular kind-of-thing concept comes with an immense amount of more or less closely associated, and more or less salient encyclopaedic knowledge. This knowledge is, of course, of an extremely diverse nature. It varies along a number of different, often inextricably interrelated, dimensions. For the present purposes – that is: a discussion of what kinds of information kind identifying adjectives highlight – I suggest a simplified classification based on differences along the following dimensions:

171. *Plastic surgery* refers to the kind of surgery that is used to correct defects in appearance, as opposed to defects in health/bodily function. The type PLASTIC SURGERY in turn divides into COSMETIC SURGERY and RECONSTRUCTIVE SURGERY respectively. The former kind is used to correct cosmetic defects in appearance, whereas the latter kind is used to correct defects in appearance that are caused by some kind of injury. (Terry M. Cullison, RN, MSN Administrator, The American Board of Plastic Surgery, Inc., personal communication).

i. genericness,
ii. distinctiveness, and
iii. categorizing relevance (foundational *vs.* non-foundational information)[172]

In the following, I will first discuss each dimension, along with the resulting kinds of information, in some general terms, independent of linguistic considerations (see also Figure 8). After this, I will turn more specifically to a discussion and exemplification of kind identifying adjectives highlighting the respective kinds of information. It should be pointed out that the three classificatory dimensions used here are more or less continuous in nature, so that any particular piece of information may be more or less generic, more or less distinctive and so on. However, for the sake of clarity and ease of discussion, I generally treat them as though they were dichotomous rather than continuous.

The dimension of genericness, first, concerns the question of whether a certain piece of information applies generally to all instances of the kind in question, or whether it pertains only to some specific instance or set of instances. For example, for a kind concept such as HAMMER, knowledge such as 'is a kind of tool', 'is meant for hammering', 'has an oblong handle and a head that is flat at one end', 'is made of hard material such as wood and/or metal', 'is about 13 inches long', 'can be bought at any hardware store' and so on and so forth is generic information in that it applies generally to most hammers. Knowledge such as 'is featured in a song by Paul McCartney', and 'appears in a famous scene in the film *the Wall*', on the other hand, is non-generic (or specific) knowledge, applying only to the single silver hammer used (rather horribly) in the McCartney song, and the limited set of hammers marching in the film *the Wall* respectively.

Distinctiveness, next, is to do with whether a certain piece of (generic) information is more or less exclusive to the relevant kind, or whether it is shared with other kinds on the same level of specificity, in the relevant ontology. For instance, the knowledge that hammers are meant for hammering and that they have an oblong handle and a head that is flat at one

172. This classification is similar to, but not the same as, that suggested by Langacker (e.g. Langacker 1987:159ff).

end is distinctive knowledge that is not shared with other kinds of tool. The knowledge that hammers can be bought at any hardware store, and that they are about 13 inches long, on the other hand, is non-distinctive knowledge, since it is shared with all or several other kinds of tool.

Categorizing relevance, finally, concerns the question of whether or not a certain piece of information constitutes what I refer to as *the foundation* of the relevant kind-of-thing concept. By foundation I mean that portion of distinctive knowledge that constitutes the classificatory basis for the kind in question. For instance, a concept such as HAMMER is established as an individual kind of TOOL, opposed to 'sister' kinds such as SAW, SPANNER, TONGS etc., on the basis of its purpose/function – that this particular kind of tool is intended for hammering rather than for sawing, tightening screw nuts or grasping/pulling. Consequently, the knowledge that hammers are meant for hammering constitutes the foundation of this concept. Likewise, 'meant for sawing', 'meant for tightening screw nuts' and 'meant for grasping/pulling' constitute the respective foundations of SAW, SPANNER and TONGS.

Foundational knowledge is not to be confused with distinctive knowledge in general. Foundational knowledge is not just any knowledge that helps us distinguish one kind from another, or that helps us determine what kind concept a particular experience manifests. For instance, each of the different kinds of tools brought up above has a distinctive appearance, so that a hammer looks like a hammer, a saw looks like a saw, a spanner looks like a spanner and tongs look like tongs. Knowledge about appearance is thus distinctive information, which can be used to determine whether any one specific tool that we may come across is a hammer, a saw, a spanner or a pair of tongs. It is not, however, foundational information. It is not the fact that a hammer has a head on top of an oblong handle, or the fact that a saw has a serrated edge that has established these kinds as sub-kinds of TOOL. The classification as such, of the kind of thing TOOL into different sub-kinds such as HAMMER, SAW, SPANNER and TONGS, does not rest on appearance, it rests on purpose/function. In order to determine the foundation of a certain kind-of-thing concept, then, we must look to the (conventional) basis for the taxonomy in which the relevant kind appears, and see how this kind distinguishes itself in terms of this basis. Thus: the basis for the classification of TOOL into HAMMER, SAW, SPANNER and TONGS is purpose/function, hence

any particular, distinctive information about purpose/function found with any one of these sub-kinds constitute (as I have already established) the foundation of that kind. Likewise, the basis for the classification of the kind concept BOAT into sub-kinds such as SAILING BOAT, ROWING BOAT, STEAM BOAT, and MOTOR BOAT is source of power, hence, any particular, distinctive information about source of power found with any one of these sub-kinds constitute the foundation of that kind.

Of course, it is far from always possible to determine exactly what the foundation of a certain kind is. This is simply because generally, it takes more than one single feature to trigger the conception of a kind. Or, put differently: in the vast majority of cases, notably in categorization at the basic level, we look upon something as constituting a particular kind on the basis not of one distinct characteristic, but of a whole range of integrated, more or less inextricable and interdependent features.[173] What, for instance, is it that constitutes the basis for our classification of FOOD into sub-kinds such as, for example, SOUP, BREAD, CHEESE, SAUSAGE, BUTTER and so on? An obvious candidate would be constituent matter – that is: what ingredients a particular kind of food is made from. While this certainly does seem to constitute part of the basis for the sub-classification of FOOD (so that the foundation of any given kind-of-food concept is constituted in part by the specific distinctive information that this concept holds about component ingredients), this is not all there is to it. Other factors, such as manner of production and/or eating conventions also play a role. For instance, BUTTER is considered to be a distinct kind of food not only on the basis of its being made from a particular kind of ingredient, but also on the basis of being produced in a particular way – this is how it is that we consider CREAM, BUTTER and CHEESE to constitute different kinds of food, despite the fact that they may have exactly the same constituent matter. Likewise, SOUP is considered to be a distinct kind of food not only on the basis of its being made from certain ingredients, but also on the basis of being eaten in a particular way, in a particular kind of context – this, in turn, is how it is that we consider SOUP to be a different kind of food compared to GRAVY, despite

173. The fact that kind cannot generally be reduced to one specific defining feature or set of features is, of course, exactly what has made scholars question the 'classical view' of meaning (cf. Section 1.3.2).

the fact that they may be made from the same kinds of ingredient. In short, there is no one, single, clearly definable feature upon which the subclassification of food rests. This is, furthermore, probably true for most classifications into ontological kinds; bases of classification may be complex and multifaceted, and – consequently – so may foundations.[174] With certain concepts, however – especially at levels that are subordinate to the basic level – the foundation does seem to be constituted by some specific, delimitable aspect. I have already given HAMMER, SAW etc., and SAILING BOAT, ROWING BOAT etc., as examples – yet another is the division of PARENT into MOTHER and FATHER, where the foundation is information about sex.[175]

The idea of foundation is not to be confused with the question of *why* we perceive of a certain foundation as relevant for kind. The questions of what *constitutes* the actual foundation and what *motivates* it are, of course, very closely interlinked, but they are generally not the same. For instance, an important part of the foundation of different kinds of food is, as I have already established, constituent matter and ways of preparation. The motivation, on the other hand – that is the reason why we find this particular delimitation within the domain of food relevant to kind – is that it has consequences for taste and digestion, things that are of great importance when it comes to what we eat. Likewise, the foundation of the different kinds of TOOL discussed above is information about purpose, whereas the reason that we find this information relevant for kind is that different purposes satisfy different needs. The foundation of SAILING BOAT, ROWING BOAT etc. is information about source of power, whereas the motivation is that the precise kind of power source has consequences for how the respective boats are handled, what they can be used for, how fast they are and so

174. Apart from the fact that many kinds are determined on the basis of a range of different, interrelated features, there is, in fact, also another reason for why we may be unable to determine the exact foundation of a certain kind: we may, quite simply, not have that precise knowledge of the kind in question. For instance, most of us have a well-entrenched kind concept ATOMIC BOMB, which – again, for most of us – is furthermore probably reasonably rich and detailed, at least in terms of specific (as opposed to generic) knowledge. It may, however, well be the case that we do not know its foundation – the fact that an atomic bomb, as opposed to other kinds of bomb, functions by splitting nuclei of atoms.

175. Further examples will be given in the discussion of what I refer to as *foundational adjectives* below.

on. The foundation of MOTHER and FATHER is information about sex, whereas the motivation is that sex has specific consequences for the roles played by the respective parent (despite contemporary attempts to obliterate such roles). I have already discussed the fact that we can make basically any kind of delimitation within a super ordinate thing domain, thereby forming basically any kind of category, but that we have to have some sort of long-standing motivation for such a delimitation in order for it to be felt to be relevant as a kind (cf. Section 2.3.1). I can now add that the foundation is that which defines and determines the delimitation, whereas the motivation is that which justifies it.

As should be clear by now, the notion of foundation is not entirely straightforward. This does not make it any less important to a classification of information highlighted by kind identifying adjectives, however. On the contrary, as I shall illustrate shortly, the distinction between foundational and non-foundational information has interesting repercussions for the behaviour of kind-identifying adjectives.

The various kinds of information emerging from the above discussion are charted in Figure 8.

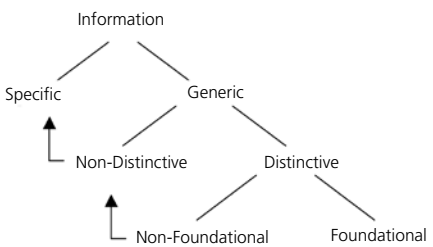

Figure 8: Kinds of Information Mirrored by Kind Identifying Adjectives

The arrows in Figure 8 are intended to point up the fact that the option to the *left* at each level inherits the *left* options at *lower* levels; that is, specific information is also non-distinctive and non-foundational, and non-distinctive information is also non-foundational.[176] Let us now consider the

176. Obviously, specific information is distinctive in the sense that it is exhibited only

different kinds of information from the more specific point of view of being mirrored by prenominal adjectives, as part of the SIF of kind identification.

Kind identifying adjectives may focus any of the various kinds of information surveyed in Figure 8, although some are much more common than others. As regards genericness, first, by far the most common kind of information for kind-identifying adjectives to mirror is generic information. This is the case in combinations such as *pedestrian crossing*, *solar power*, *high chair*, and *brown bread*; the pieces of information highlighted in these combinations – 'is meant for pedestrians', 'is generated by the sun', 'is high' and 'is brown'[177] respectively – apply generally to the respective kinds as wholes, rather than to some isolated instances.

That generic information should be the kind of information most commonly highlighted in kind identifier combinations is, of course, not at all surprising. As coiners of this kind of combination we will obviously want to be as certain as possible that the adjective in question will have the in-

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by the instance or instances to which it pertains, but it is non-distinctive in the sense that, since it does not apply to the kind in general, it does not serve to distinguish the kind from other kinds.

177. It could be argued that the adjective *brown* has come to take on a conventionalised meaning WHOLEMEAL, and that it is this meaning that is expressed in *brown bread* rather than the colour meaning. However, it is doubtful that *brown* would be interpreted in this way in any other combination. Would we readily interpret *brown* in *brown cereal*, *brown formula*, or *brown porridge* as WHOLEMEAL rather than BROWN? My own (non-native speaker) intuition tells me 'no'. A native speaker friend informs me that to his mind, the first combination would refer to the particular kind of cereal (cornflakes) that is covered in chocolate, and the latter two would refer to formula and porridge that has been mixed with something brown such as chocolate or perhaps cinnamon. According to him, *brown cereal*, *brown formula*, and *brown porridge* could not refer to *wholemeal* cereal, formula, and porridge respectively, since *such things are not usually particularly brown*. Apart from my own and my informant's intuitions in this matter, I have been able to find the definition 'wholemeal' for *brown* in one dictionary only (http://www.thefreedictionary.com/brown), in which "of bread" is furthermore added in parentheses. In conclusion, then, I believe that the colour interpretation is the one opted for by people in general (to the extent that the adjective is individually interpreted at all, cf. discussion of frozen combinations above). Obviously, the wholemeal sense *results* from this interpretation, but this, I conclude, is due to the kind identifying function of the adjective – picking out the kind of bread that is made from wholemeal flour – not to the meaning of the adjective as such.

tended effect, and consequently, we tend to choose adjectives that mirror information that is as likely as possible to be present in any interpreter's representation of the relevant kind. Generically applicable information is, of course, far more likely to be present in anyone's concept than is specific information tied only to some particular instance. In short, generic information will generally have a far higher success rate when it comes to kind identification, than specific information will, and so, this is the kind of information most often brought out to this end. Still, kind identifying adjectives that highlight specific rather than generic information do, nevertheless exist. I can think of at least one clear example, namely *Siamese* in *Siamese twin*. Here, the adjective does, in fact, map with information pertaining specifically to one particular instance, rather than generically to the full extension of the kind as whole. The meaning of this adjective matches the information that the first known Siamese twins – Chang and Eng Bunker – were born in Thailand (formerly known as *Siam*).[178] This is specific information, pertaining only to the actual Bunker twins – with the kind concept as such, information about place of birth is kept completely unspecified, since Siamese twins may be born anywhere, not necessarily – or even typically – in Thailand. The reason that this adjective could nevertheless – despite its specificity – be assumed to function as a kind identifier when the phrase (*Siamese twin*) was coined is, of course, that at the time, any knowledge acquired about the kind SIAMESE TWIN most likely came in the form of news about the Bunker boys; consequently, the information targeted by the adjective would be a very salient, and almost completely predictable part of anyone's concept SIAMESE TWIN.

Apart from *Siamese twin*, which is a clear example of a combination where the adjective meaning mirrors specific information, there is a number of other combinations that could be analysed in the same way as *Siamese twin* – both in terms of kind of meaning being expressed by the adjective as such, and in terms of kind of information being mirrored in the relevant kind concept. Examples include *Danish pastry*, *Irish coffee*, *Siamese cat*, *Scotch terrier*, and *Turkish coffee*. The respective adjectives in these combinations could all be interpreted as expressing the same kind of relation as that found with *Siamese twin*, namely something along the lines of 'produced in

178. See e.g. http://www.bartleby.com/61/22/S0382200.html 06/10/08

LOCATION' – 'produced in Denmark', 'produced in Ireland', and so on. In this interpretation the information mirrored by the respective adjectives would, furthermore, (again, in analogy with *Siamese twin*) be specific knowledge about the first instances of each kind rather than generic information; from a generic point of view, place of production is presumably kept completely schematic with most people's concepts of these kinds. We know that, for instance, Danish pastry is produced all over the (western) world – not only, or perhaps even most commonly, in Denmark – and the same holds for the concepts of IRISH COFFEE, SIAMESE CAT, SCOTCH TERRIER and TURKISH COFFEE.[179] Consequently, whereas a concept such as DANISH PASTRY may very well comprise the piece of information '*first instances were* produced in Denmark' it probably does not comprise the information '*is* produced in Denmark'. Again, the same holds for IRISH COFFEE, IRISH SETTER, SCOTCH TERRIER and TURKISH COFFEE respectively.

Apart from the analysis just proposed, there is (at least) one other way in which combinations such as *Danish pastry* etc. may be interpreted: instead of understanding the adjective as 'produced in LOCATION', we may perceive of it as expressing a relation roughly paraphrasable as 'invented by PEOPLE' – 'invented by a Dane/Danes', 'invented by an Irishman', and so on.[180] In this interpretation, the information mirrored by the respective adjectives is generic rather than specific, applying to the kind as a whole, rather than to any one specific instance. However, it is of a rather peculiar kind, in that it seems to pertain to the kind *qua* kind, rather than to the *extension* of the kind. It is the respective kinds as such that have been invented, not the instances of the kinds; we would not say about, for instance, any one,

179. *Coffee* in these combinations has the meaning 'beverage', rather than 'plant' or 'seed'.

180. Note that these two interpretations differ in terms of what structure is mapped with the landmark (some specific version of LOCATION and PEOPLE respectively), as well as in terms of what content is inferred for the relation part of the adjective Gestalt ('produced in' and 'invented by' respectively). From a FIF point of view, then, nationality adjectives are polysemous: not only do they allow for different interpretations of the relational part of the adjective Gestalt, the way most LM-adjectives do – this is not polysemy, but vagueness – but they actually *mention* different structures (some specific geographical location and some specific kind of people respectively) in different contexts. For further discussion of the difference between vagueness and ambiguity (polysemy) with adjectives, see, e.g. Warren (1988).

particular cup of Turkish coffee that it was *itself* invented by the Turks. However, the fact that Turkish coffee (as a kind) was invented by the Turks does, nevertheless, constitute an inevitable part of the origin of any given instance, and so it *is* still generic, albeit in an 'indirect' way.

I believe that both of the interpretations suggested in the preceding discussion are plausible, so that different people may opt for different interpretations of one and the same combination. I also believe that one and the same person may interpret the combinations brought up here in different ways; personally, I seem to automatically opt for the specific 'produced in LOCATION' interpretation with *Siamese cat* and *Scotch terrier*, whereas I find the 'invented by PEOPLE' interpretation to be the most natural with the rest of the combinations. From an original coiner point of view, it may, in fact, well be that the respective adjectives were intended to be interpreted in all these combinations as 'produced in LOCATION', but that this meaning mirrored, at the time, generic rather than specific information.

As regards distinctive vs. non-distinctive information, next, it seems that (generically applicable) kind-identifying adjectives almost always mirror the former kind. Again, this is, of course, not at all surprising: adjectives that highlight distinctive information are clearly much more likely to succeed at identifying the intended kind than are adjectives that highlight non-distinctive information. Consequently, the former kind of adjective tends to be the only kind intentionally used for kind-identifying purposes. Granted, there *are* combinations in which the adjective highlights information that is perceived of as being non-distinctive by modern day interpreters; *black* in *blackbird* would be an example of this. However, I find it reasonable to assume that to the extent that such combinations do exist, they were *originally* distinctive; as regards *blackbird*, for instance, it has been suggested that at the time this phrase was coined, the noun *bird* was used only for small birds – not for birds in the size range of ravens, crows and other modern day candidates for the name *blackbird*. Consequently, *black* did, in fact, originally mirror distinctive information, since the blackbird is the only *small* bird that is conspicuously black.[181]

As for the distinction between non-foundational and foundational information, finally, both of these kinds of information are commonly mirrored

181. See, for instance, the Oxford English Dictionary, *bird* sense 2.

by kind-identifying adjectives. Non-foundational combinations – that is combinations where the adjective focuses some non-foundational aspect of the target concept – are exemplified by *brown bread*, *broad bean* and *blackboard* respectively. Whereas the information mirrored by the adjectives in these combinations is reasonably generic and distinctive, it is not foundational. It is not brownness as such that establishes brown bread as a particular kind of bread, but rather the fact that it is made from wholemeal flour. It is not the fact that they tend to be broader than most beans that underlies the classification of broad beans as manifestations of a particular kind of bean, but rather their specific biogenetic 'background'. It is not their being black that makes us see blackboards as members of a certain kind of board, but rather the fact that they are meant for writing. In short, the foundation of these three kinds of thing is information about constituent matter, biogenetic background and purpose respectively. This is not the information mirrored by the respective adjectives.

Examples of foundational combinations – that is, combinations in which the adjective does mirror foundational information – include *industrial waste*, *solar power* and *electric train*. Industrial waste is waste that comes from the industry, as opposed to waste that has other sources (such as, for instance, household-, commercial- or agricultural waste). The classification into different kinds of waste is based on source, and so, specific information about source constitutes the foundation of any given sub-kind – which is what the adjective in *industrial waste* (and in *commercial waste* and *agricultural waste*) mirrors. Likewise, the basis of classification of POWER into different sub-kinds is generator, and, consequently, specific information about generator constitutes the foundation of any given sub-kind – which, again, is what the adjective in *solar power* mirrors. Different kinds of train, finally, are distinguished on the basis of source of power, and so, the adjective in *electric train* mirrors foundational information.

That foundational and non-foundational information should both be commonly focused by kind-identifying adjectives is not surprising; both kinds have clear advantages as regards efficient kind identification. Foundational information could be said to constitute the ultimate piece of distinctive information, in that it specifies the very basis of classification for the relevant kind concept. Consequently, it would seem that highlighting of this kind of information would be the most efficient way of effecting

successful kind identification. This explains the frequency of kind identifiers focusing foundational information. However, there are also certain problems tied to this kind of information. For instance, as I have already established, the foundation of a kind may be difficult to identify and/or put a word to. Examples of foundations that are reasonably easy both to identify and to put words to, first, are those highlighted by the adjectives in the combinations just discussed: *industrial waste*, *solar power*, and *electric train*. Other examples include the foundations of CHEMICAL WARFARE, MANUAL TRANSMISSION, and WOODEN FENCE, each of which are relatively straightforwardly identifiable as information about means, controller, and constituent matter respectively, and each of which are, furthermore, possible to capture with a single word (namely *chemical*, *manual*, and *wooden* respectively). Examples of foundations that are easily identified, but less easily captured by a single word, next, are those found with biological kinds (animals, plants etc.). The foundation here is quite clearly (our assumptions about) biogenetic origin and make-up, but putting words to this foundation is quite impossible, let alone one single word. Examples of foundations that are both hard to identify and to put words to, finally, are, for instance, those found with many traditional grammatical classes. The foundations in these cases are often a mishmash of various aspects such as function, form, position etc.; as any linguist (not to mention bemused student) would agree, there is nothing straightforward at all about these foundations. Consequently, it is often not possible to capture this kind of foundation with a single word. Another problem with foundational information, apart from the fact that it is not always easy to identify and/or put a word to, is the fact that potent as it is as a distinguisher of kind *if the interpreter knows about it*, it is not very useful in cases where interpreters generally do *not* have any knowledge of it. As I established in Section 4.2 above, an adjective targeting information that is not there in the mind of the interpreter will fail as a kind identifier. Considering the fact that foundational information is problematic with many kind concepts, it is easy to see why not only foundational-, but also *non*-foundational information is frequently drawn upon in kind-identification; it may offer a simple and more 'telling' alternative in cases where the foundation is generally unknown and/or hard to get at, something that is particularly clear from the frequent highlighting of non-foundational information about, for instance, appearance or

habitat with biological kinds: *broad bean*, *brown bear*, *Indian elephant*, *polar bear* etc.[182]

The difference in nature between non-foundational and foundational information manifests itself clearly in the contradictability of kind-identifying adjectives. Warren notes that classifying adjectives – that is basically adjectives whose SIF is kind identification – often can be contradicted in a given context, so that an utterance such as *I saw some very brown white people at the beach today* makes perfect sense, despite its seemingly contradictory nature (Warren 1984a,b).[183] Other examples include utterances such as *We had green blackboards in my old school*, and *They had some slim and puny broad beans at the market today*, both of which are completely coherent. The reason that kind-identifying adjectives may appear in seemingly contradictory contexts such as these is, of course, that these contexts are not, in fact, contradictory at all. This is because the opposing meanings do not pertain to the same entity – consequently, they cannot be said to contradict each other. More precisely, BLACK in *We had green blackboards in my old school* pertains to a lexical meaning determined on the morphological level (i.e. a kind), whereas the opposing meaning, GREEN, applies to the element created on the propositional level for the noun phrase as a whole, and the same holds true for *They had some slim and puny broad beans at the market today*;

182. This has been discussed by Downing (1977). Note, however, that Downing seems to assume that the first element of a compound always points to the basis of categorization (that is, that it is always foundational in nature). Consequently, she draws the conclusion that the frequent occurrence of words denoting habitat or appearance with biological kinds is indicative of classificatory relevance. I believe this conclusion to be mistaken; as I have already established, this kind of information is generally non-foundational (that is, it does *not* constitute the basis of categorization), and consequently it is not, *per se*, relevant for classification. Rather, as I have just pointed out, the high frequency of appearance/habitat adjectives reflects the fact that it is impossible to capture the foundation of biological kinds by means of a simple pre-modifier.

183. In fact, this precise example is not, perhaps, the best example, since it is doubtful that the adjective *white* in this case actually means WHITE (COLOUR); rather, I believe that *white* has come to be polysemous between WHITE (COLOUR) and CAUCASIAN, so that in any particular interpretive event it mentions either WHITE (COLOUR) or CAUCASIAN. Consequently, the report about the brown white (i.e. Caucasian) people is not even seemingly contradictory. Regardless of which, the observation that classifiers/kind identifiers may, at times, be contradicted nevertheless holds true.

BROAD applies to a kind, whereas the opposing meaning, SLIM AND PUNY, applies to an element. Consequently, a logical conclusion would be that kind-identifying adjectives can always be 'contradicted' in the way just illustrated, since they always pertain to the kind concept constituting the lexical meaning of the relevant adjective-noun combination, rather than to the element constituting the propositional-level meaning of the noun phrase as a whole – if they did not, they would not be kind-identifying. However, this conclusion turns out to be wrong. Far from all kind-identifying adjectives can be 'contradicted'. For instance, utterances such as *They use solar power that is generated by the wind*, or *The water was full of industrial waste from the summer houses along the shore* would take quite some contextual justification in order to be acceptable. This is nothing that Warren (or anyone else for that matter) elaborates on; in fact, it is, as far as I am aware, not commented on at all in previous work on adjective functions. Still, I believe that differences in terms of contradictability are in no way random; on the contrary, they seem to be highly predictable – namely on the basis of what kind of information the relevant adjective mirrors in the kind concept that it identifies: non-foundational or foundational information.

In general, it seems that adjectives matching non-foundational information can be contradicted with any one specific instance, whereas adjectives focusing foundational information cannot. In order to see how this is, we need to realise that although the meaning of the adjective itself does not pertain to the element structure constituting the meaning of the noun phrase as a whole, the meaning of the phrasal head – of which the adjective meaning is part – does: In *We had green blackboards…*, the meaning of the phrasal head (that is the kind concept BLACKBOARD) specifies the element symbolised by the phrase as a whole (that is, the conception of the entity that 'we' had) as being of the kind BLACKBOARD, in *They had some slim and puny broad beans…*, the meaning of the phrasal head (the kind conception BROAD BEAN) specifies the conception of the entity that 'they' had as being of the kind BROAD BEAN, in *They use solar power*, the meaning of the phrasal head (the kind conception SOLAR POWER) specifies the conception of the entity that 'they' use as being of the kind SOLAR POWER, and in *The water was full of industrial waste*, the meaning of the phrasal head (the kind conception INDUSTRIAL WASTE) specifies the conception of the thing that the water was full of as being of the kind INDUSTRIAL WASTE. In short: the

element symbolised by a noun phrase is always understood to be of the kind expressed by the phrasal head meaning. Bearing this in mind, it should be obvious why non-foundational adjectives are contradictable, whereas foundational ones are not: The utterances *We had green blackboards…* and *They had some slim and puny broad beans…* entail that the respective elements (or, to be absolutely accurate: that the respective referents of the respective elements) lack a particular non-foundational feature generically associated with the kinds that they are specified as being instances of. This is of no consequence for the coherence of the respective utterances; the respective referents can still be sensibly specified as being of the kind BLACKBOARD and BROAD BEAN respectively. *They use solar power that is generated by the wind*, and *The water was full of industrial waste from the summer houses along the shore*, on the other hand, entail that the relevant referents do not meet the criteria for 'solar power-hood' and 'industrial waste-hood' respectively – power that is generated by something other than the sun simply does not qualify as solar power, nor does waste that comes from some source other than the industry qualify as industrial waste. Consequently, specifying the relevant referents as instances of these kinds makes no sense.

Before I leave the matter of non-foundational *vs.* foundational information, there is one more point that I would like to make: The claim that adjectives mirror either non-foundational or foundational information should not be taken to mean that the former kind of information is always completely separate from, or independent of the latter. On the contrary, there seems to be a continuum here, ranging from information that is not related to the foundation at all, to information that is highly interdependent with it (although still not actually constituting it). For instance, the adjectives in combinations such as *sourdough*, *identical twins* and *darkroom* all mirror non-foundational information, but this information exhibits varying degrees of interdependence with the foundation of each kind. In *sourdough*, first, the adjective mirrors the information that this kind of DOUGH typically has a sour taste to it. This information does not seem to be at all related to the foundation – namely the fact that the purpose of this kind of dough is to act as a leaven in bread-making (as opposed to serving as the actual 'material'). There is nothing to suggest that sour taste should have anything to do with the purpose of acting as a leaven. In *identical twins*, next, the information mirrored by the adjective is the fact that identical twins typically

look very much alike. This information *is* related to the foundation (that this kind of TWINS comes about through fertilisation and splitting of one single egg (as opposed to two)), in that it is a consequence of it: it is *because* identical twins come about the way they do that they look alike. This is, however, as far as the interrelation goes. With *darkroom*, finally, the adjective mirrors the information that darkrooms are dark. As was the case with *identical twins*, this information is a consequence of the foundation (which, in turn, is the fact that this kind of room is used for developing photographic material). However, it is not only a mere consequence, but also a prerequisite for the foundation – in order to be successfully used for the development of film, a darkroom has to be dark.[184]

4.2.2 Ways in which Kind-Identifying Adjectives Focus Information

In the above, I discussed the matter of what kinds of information kind-identifying adjectives seem to target in the concept that they serve to identify. In doing this, I suggested a broad classification on the basis of three dimensions – genericness, distinctiveness and categorizing relevance. It is now time to address the question of *how* adjectives focus the various kinds of information thus classified. In order to be able to do this, I need to take a different approach: rather than considering information in terms of genericness, distinctiveness and categorizing relevance I will look upon it instead in terms of complexity – whether it consists in a simple, atomic attribute, or whether it constitutes an 'explanation'-like complex of information. Following, for instance, Murphy and Medin (1985), I assume that we organise our concepts around both these kinds of information – whereas simple attribute lists have long since been discarded as *the* mode of structuring concepts (cf. Section 1.3.2), it nevertheless seems clear that they serve a

184. Note that this is not to say that it has to be dark in order to be *classified* as a darkroom – only in order to be successfully used as one. That is, although it forms an essential relationship with the foundation, this information does not, as I have already established, *constitute* the foundation. It is not on the basis of being dark that we consider a particular room to be a darkroom, but rather on the basis of its being intended for the development of photographic material.

complementary function in concept representation, alongside larger, more comprehensive knowledge structures.[185] The 'attribute-*vs.*-explanation' approach to information cuts across the three-dimensional classification put forth above; specific as well as generic, non-distinctive as well as distinctive, and non-foundational as well as foundational information may, at least in principle, be of either kind – attribute-like or explanation-like. Examples of attribute-like information that could be assumed to be entrenched with, for instance, a concept such as HOOVER include information such as 'contains dust bag', 'has a hose', 'is made in factories', 'buzzes', and 'creates suction', and an example of explanation-like information (still using HOOVER as an example) is 'it is handled in a way such that the tube is held with the end against the thing to be cleaned, and pushed and pulled back and forth across this thing'.[186]

It is now time to turn more specifically to how information is focused by kind-identifying adjectives. So far, I have discussed the identifying process as though it were a relatively straightforward matter of mirroring information in a one-to-one fashion, so that the adjective meaning itself simply reflects the intended information in the concept to be identified – no more, and no less. However, if this was the only way that kind-identifying adjectives picked up on information, the only kind of information that they *could* pick up on would be information of the attribute-like kind, since although the semantic pole of an adjective may well be part of, and/or be associated with, more comprehensive structures, the structure that the adjective *profiles* is nevertheless simplex, typically consisting in a simple relation between two entities. That kind-identifying adjectives should only target information of the attribute-like kind does not hold true. Rather, it seems that they occur with both kinds of information – explanation-like as well as attribute-like.

185. In these larger knowledge structures I include domains and domain matrices in general, as well as more specific 'explanations' pertaining to some particular aspect of the relevant concept. In the following I will focus on the latter kind of structure.

186. Obviously, the paraphrases used in these examples and in the following are merely rough 'translations' of corresponding conceptual structures. I do not mean to imply that we have actual, symbolic descriptions like this stored with our various concepts, nor that it is possible to give symbolic 'translations' that capture in any accurate way the detail and richness of the conceptual complexes as such. Having said this, I do believe that these paraphrases serve their illustrative purpose.

Let us look at some examples of adjectives focusing information of the former kind, before we go on to the more complex case of adjectives targeting explanation-like information. Consider the combinations *broad bean*, *red pepper*, *chemical warfare*, and *public transport*. With *broad bean* the target information is attribute-like information about dimension (more specifically the fact that this kind of bean is broad), with *red pepper* it is attribute-like information about colour (more precisely our knowledge that this kind of pepper is red), with *chemical warfare* it is attribute-like information about means (namely the fact that this kind of warfare uses chemicals), and with *public transport* it is attribute-like information about beneficiary (more specifically the information that this kind of transport is intended for the public). These attributes are all mirrored in a one-to-one fashion by the meanings profiled by the respective adjectives: 'is broad', 'is red', 'uses chemicals', and 'is for the public'.

Now consider the following combinations: *atomic bomb*, *digital recording*, *concrete poetry*, and *direct current*. The information that the adjectives in these combinations target is, I suggest, in each case of the explanation-like, rather than the attribute-like kind. In *atomic bomb*, first, we are dealing with information about function – more precisely a complex of information roughly paraphrasable as 'it functions by splitting the nuclei of atoms so that a large amount of energy is released'. In *digital recording*, next, the target is information about way of creation – more precisely a complex structure that could be paraphrased as 'it is created by converting analogue data, such as changes in air pressure or in colour and light into digits that are stored on some kind of recording media'. Moving on to *concrete poetry*, the information targeted by the adjective in this case is information about means – more precisely a structure roughly paraphrasable as 'it uses the physical arrangement of words on paper'. In *direct current*, finally, we are dealing with information about nature of manifestation – more precisely a complex of knowledge that could be paraphrased as 'it is manifested through having electric charges flow in one direction only'.

I suggest that there are two main ways in which explanation-like knowledge may be picked up on by kind-identifying adjectives, both of which are illustrated by the combinations just given. On the one hand, the adjective meaning may mirror directly a *component part* of the intended information complex as a whole. This is the case in *atomic bomb* and *digital recording*. In

the former of these two, the structure mentioned by the adjective *atomic* – namely ATOM – mirrors directly the component structure ATOM found in the knowledge structure 'it functions by splitting the nuclei of atoms so that a large amount of energy is released'. Likewise, the structure mentioned by the adjective *digital* – namely DIGIT – mirrors the component structure DIGIT found in the complex piece of information 'it is created by converting analogue data, such as changes in air pressure or in colour and light into digits that are stored on some kind of recording media'.[187] The other main way in which kind-identifying adjectives may focus an explanation-like piece of information, is by profiling a structure that constitutes a less specific 'summary' of the information complex as a whole. This is the case in *concrete poetry* and *direct current*. In the former of these two combinations, the meaning of the adjective provides a summary version of the information about means, by 'saying' that the means are concrete; using the physical arrangement of words on paper is a concrete means, in contrast to the more abstract means of figurative language, meter etc., primarily used by the opposing kind of poetry. Likewise, the meaning of *direct* summarises the information about the manner in which direct current is manifested, by 'saying' that it is direct; flowing in one direction only is a direct way of flowing, as opposed to the 'indirect' way of having charges go back and forth, which is the case with the contrasting kind of current.

Recapitulating, I have suggested that the various kinds of information found with a certain kind concept – specific as well as generic, distinctive as well as non-distinctive and foundational as well as non-foundational – may 'come' in two forms: on the one hand, they may take the form of simple attributes, and, on the other hand, they may take the form of more or less elaborate, explanation-like complexes of information. Of course, neither of these exists in a vacuum, separate from encyclopaedic knowledge as a whole. Still, both nevertheless constitute what we perceive of as *distinct* pieces of information, somehow forming coherent wholes that can be distinguished from other, equally distinct pieces of information: for instance, information about dimension (e.g. 'is broad'), information about colour

187. Note that in cases like these, the relation part of the adjective seems to be backgrounded, so that what is of importance is mainly the structure explicitly *mentioned* by the adjective (cf. Section 3.3).

(e.g. 'is red'), information about means (e.g. 'uses chemicals'; 'uses physical arrangement of words on paper'), and so on.[188] The meaning of a kind-identifying adjective targets such pieces of information *as wholes*, regardless of their size and complexity, and it does so by means of complete one-to-one mirroring (*broad bean*, *red pepper*, *chemical warfare*, *public transport*), by mirroring a distinct part (*atomic bomb*, *digital recording*), or by providing a general 'summary' (*concrete poetry*, *direct current*) of the information in question.

In this section I have discussed adjective SIFs relative to the morphological level and creation of nominal lexical meaning. It is now time to turn to SIFs relative to the propositional level and creation of propositional meaning.

4.3 Adjective SIFs Relative to the Propositional Level

As I have already mentioned, I suggest that adjectives may have no less than four different functions on the propositional level, namely what I refer to as **element identification**, **identity provision**, **stipulation** and **specification** respectively. The former three of these all appear as part of element creation – more precisely of the fourth process of grounding (i.e. fitting the meaning under construction into the CDS, cf. Section 2.3.2.1). The latter function, on the other hand – that is the function of specification – is slightly harder to locate. In Section 2.3.2 I referred it (mostly for reasons of convenience and clarity) to two different processes, more precisely to element creation and integration of proposition components respectively, but at least the former of these positions seems slightly misguided. Although the kind of meaning that specification pertains to is generally the same as with any other adjective SIF found at the propositional level – namely a nominal

188. As I established in Section 1.3.3.1, such 'kinds' of information – variously referred to as *zones* (e.g. Langacker 1987:271ff, Croft and Cruse 2004:138ff, Paradis 2004 [2010]), *dimensions* (e.g. Murphy 1988, 1990, 2002), Wisniewski 1997), *roles* (e.g. Warren 1984a,b, and *attributes* (e.g. Smith and Medin 1981, Smith and Osherson 1984, Smith *et al.* 1988) – constitute 'sub-sections' within the more general, overarching qualia of nominal concepts.

meaning in its capacity of element[189] – specification, unlike the other SIFs, does not quite seem to function in *creation* of such meaning. Rather, this function seems to apply to elements *once they have been created*. I will return to this issue in Section 4.3.4 below.

In the following I will discuss each of the four functions in turn, starting with element identification. Although my main concern is with adjectives, I will discuss other kinds of items too (mainly nouns), so as to give as clear a picture as possible of the functions as such.

4.3.1 Element Identification

As I have already established, what I refer to as element identification is roughly the same as the CID function called *identification*. It constitutes the route taken in cases where the intended element has been determined (in the first of the four grounding processes, cf. Section 2.3.2.1) as having been conceived, or as being conceivable, on the basis of noun phrase-independent stimuli. There are three main kinds of situation here: the interpreter may have formed, or may be able to form, an independent element conception in response to (i) preceding linguistic input, (ii) immediate physical context, or (iii) prior experiences of some kind. Consider the following examples:

(22) There were two girls at the party that he really enjoyed talking to – one, a skinny redhead with freckles all over her face, and the other, a chubby, sweet-looking blonde. *The skinny girl* asked for his phone number.

189. There are exceptions to this; as I mentioned in Chapter 4, Footnote 168, specifiers sometimes pertain to ungrounded embodier conceptions rather than to fully-fledged elements. Apart from the kind of case mentioned in Chapter 4, where the relevant embodier conception is only 'there' as an intermediate construct that is subsequently lost, there are also cases where interpretation does not seem to loop back to the morphological level, but where the embodier conception is kept as a reasonably salient construct within the ultimate proposition, without, for this reason, being promoted to the status of a fully-fledged proposition component in its own right. For instance, the meaning established for *hordes* in an utterance such as *Elephants live in hordes*, is neither an element nor a trait, but rather an ungrounded embodier conception constituting a component part of the propositional *relation*, which, as a whole, indicates a particular way of living. In this case, an added meaning such as that established for, say, *medium-sized – elephants live in medium-sized hordes* – will, I suggest, have the function of specifying this embodier conception.

(23) See those girls? *The blonde one* is Hilding's girlfriend Anna.
(24) Which of the stories that I read to you did you like best? *The scary one*?

In (22), the intended element has been individually conceived (made mental contact with) in response to intake of the preceding clause, in (23), it may be individually conceived on the basis of visual input, and in (24), it has been made mental contact with in response to a previous experience of having listened to some stories. In each case there is noun phrase-independent information available, upon which an independent element conception has been, or may be based. Note that it need not be the case that the relevant conception has already been formed prior to the intake of the noun phrase in question. On the contrary, as is most probably the case in a situation such as the one exemplified in (23), for example, it may well be that the interpreter has *not* formed an independent conception at an earlier stage, but that (s)he forms one only when the entity that it represents is explicitly *drawn attention to* by means of the relevant noun phrase (cf. Footnote 104).[190] The point is, however, that the interpreter has access to information other than that given by the relevant noun phrase itself, upon which a richer (or at least an equally rich) element conception can be based.

Once the intended element has been determined as being available to the mind of the interpreter on noun phrase-independent grounds, the interpreter starts 'looking for' a conception that seems to fit. I established in Section 2.3.2.1 that it is generally the meaning established for the determiner that 'tells' the interpreter that the relevant element has already been (or may easily be) independently conceived. In addition to this, a definite determiner also indicates that the noun phrase currently being processed holds all the information needed for unique identification of the independent element conception, and so, the interpreter knows that once (s)he finds

190. Note that this may hold also for situations where the information upon which the independent conceptualisation is based is (indirectly) provided by *linguistic* (as opposed to physical) context. This is so in an example such as *We couldn't watch the DVD. The TV didn't work*, where it is preceding linguistic input, in the form of *watch the DVD* that (indirectly) provides the information necessary for independent conceptualisation of the entity represented by the meaning of *the TV*; the meaning established for *watch the DVD* incorporates (as part of its base) knowledge about what entities and actions this kind of process involves, and so, the conception of, among other things, a TV is close at hand.

a conception that is mirrored by the information symbolised by the relevant noun phrase, this will (presumably) be the element intended.

Virtually any kind of noun phrase component can be element identifying – not only adjectives, but also nouns (*the dress is nice, but I don't like the skirt*), numerals (*the three following days were a nightmare* and even certain determiners (*this dress is nice, but I don't like that one*).[191] As far as adjectives are concerned, however, such items seem to function as element identifiers only, or at least mainly, in noun phrases the definiteness of which is effected by the definite article (*the*) or by a genitive construction or possessive pronoun.[192] Some kinds of meaning are, furthermore, less successful at identification than others; for instance, meanings reflecting information that is highly subjective, or information that is not well-known among interlocutors, are not very likely to succeed at identifying the intended element. Conversely, there are meanings that are especially well suited for an element identifying function, for instance meanings indicating some kind of relative position (*the left drawer*, *his first film*, *the following year*, *the best day* and so on).

Recapitulating, element identifiers function by reflecting some kind of information that is unique to, or at least most conspicuous with, the intended element. In this, element identification is, of course, exactly parallel to the function of kind identification (apart from the obvious difference in terms of target). Moreover, just like kind identifiers, element identifiers may reflect complex chunks of information, in a partial or summarizing fashion, as well as simplex attributes in a one-to-one fashion, although the former situation seems to be most common by far with element identifying *nouns*; off hand, I can think of no examples of adjectives that are element identifying in other ways than through straightforward one-to-one reflection. Finally, element and kind identification are also alike in that both may be realised in an endocentric as well as in an exocentric fashion (cf. Section

191. Note that in *the three following days* it is not only the meaning of the numeral, but also that of the adjective (*following*), and quite possibly also that of the noun (*days*) that is identifying.

192. In noun phrases grounded by one of the demonstrative determiners, on the other hand, adjectives seem to generally be interpreted as element specifiers instead, albeit often with a somewhat peculiar status relative to previous interpreter knowledge. I will come back to this matter in my discussion of specification below.

4.2). That is, the meaning of the 'head' noun may either serve as a reference point that gives access to a limited set of potential element candidates, from which the intended one is picked out by means of an element identifier, or the head noun may itself serve an element identifying function in parallel with any other element identifier. The former situation is illustrated by (25), and the latter by (26):

(25) I'd like *the black dress*, please (said in a context where there are several dresses to chose from, each of a different colour).
(26) I'd like *the black dress*, please (said in a context where there are two-dresses and two skirts to choose from, where one of each is black, and the others are red).[193]

As an inevitable consequence of how they function, element identifiers do not themselves add anything to meaning. Quite the opposite: they pick up on information that is already conspicuously there with one particular conception. Consequently, a logical conclusion would seem to be that element identifiers have no informative value at all; as long as they serve the function of identifying the intended element to the exclusion to all others, it would seem to be of little or no relevance exactly what information they comprise. However, since any (contentful) element identifier will inevitably frame the intended element in a particular way, the speaker's choice of one specific description over any other may nevertheless convey *pragmatic* information about what makes the intended element relevant to the proposition as a whole. For instance, imagine a situation where someone is choosing between two dresses – on the one hand, a long, black velvet evening gown, and, on the other hand, a short, puffy, red silk cocktail dress. Here there are several options available as regards choice of identifier, each of which will pick out one or the other dress with equal success. However, each different

193. In speech, the difference in noun function is indicated by means of intonation: in 25, the adjective alone is stressed, whereas in 26, the adjective and the noun both receive full stress. When the set of potentially intended candidates has already been explicitly mentioned, the reference-point function of the noun is generally not only phonologically, but also *morpho*logically marked, by means of 'dummy' *one*: *What lovely dresses! I'd like the black* <u>*one*</u>*, please*.

choice signals a difference in what it is that the speaker finds important. Consider the following alternatives:

(27) I prefer the *long* one.
(28) I prefer the *black* one.
(29) I prefer the *velvet* one.
(30) I prefer the *evening gown*.

Example (27) indicates that it is a long dress that that the speaker wants, (28) implies that what is important is that the dress is black, (29) signals that velvet material is what makes the dress desirable, and (30), finally, indicates that it is the characteristic of being an evening gown rather than a cocktail dress that is of relevance. In summary, then, although it may be of little or no relevance to the identifying function *per se*, what exact content is chosen for element identification may be of importance from a pragmatic communicative point of view.

Again, element identifiers do not themselves add anything to the (semantic) meaning ultimately established for the relevant noun phrase. However, since they have the effect of identifying another, independent conception, which is thereby substituted for the identifier meanings themselves as the ultimate meaning of the relevant noun phrase, they nevertheless often end up *indirectly* providing a meaning that is richer, and more specific than their own conventional, default meaning. As a simple example, consider again examples (27)–(30). The meanings arrived at in instantiation of component word meanings – that is, the ungrounded descriptions LONG, BLACK, VELVET and EVENING GOWN respectively – are each, in themselves, much less informative than the full conception of the intended dress itself, which is the conception adopted as the ultimate meaning of each of the italicised phrases. In short: although element identifiers do not themselves add to meaning, the meaning ultimately adopted for a noun phrase of the relevant kind is nevertheless at least as rich as the default meanings comprised by the identifiers themselves, and often richer. The exact degree to which this richness exceeds that of default component meanings may vary quite considerably from one case to another, depending on how much, and what kind of, information is previously stored with the identified conception. For instance, the meaning ultimately established for the noun phrase *my eldest son*,

as uttered by me in a particular communicative event, will be immensely complex if my addressee knows my eldest son well, whereas if (s)he was only just made aware of him – as in a situation where I say: *I have four boys. My eldest son…* – the meaning will be considerably less elaborate, basically equalling the meaning created for the component words themselves, in the particular situation.

So far, I have discussed typical element identification, in which there is a specific, independently conceived element conception in the mind of the interpreter, which constitutes the ultimate meaning of the relevant noun phrase, and which is identified by means of this noun phrase's component meanings. There is, however another kind of situation, in which component meanings are still identifying, but where the noun phrase in question does not profile the identified conception as such. Consider (31):

(31) Did you hear? The old bookshop was burnt to the ground! *Some books* were saved, but *most* were completely destroyed. *No people* were hurt though.

In line with Langacker (e.g. 1991a:107ff), I suggest that in cases like this, where the relevant noun phrase contains a so-called relative quantifier (e.g. *all*, *most*, stressed *some*), the meaning ultimately determined for this noun phrase consists of two salient conceptions in one. On the one hand, there is the conception of a set of entities that is understood to have been (or to be able to be) independently conceived of in the given context, and, on the other hand, there is the profiled conception of a *portion* of this set, which is understood *not* to have been (or to be able to be) independently conceived. In (31), the interpreter presumably knows, on the one hand, that the old bookshop housed a large amount of books, and, on the other hand, that, at the given time, there was probably a number of people in the shop. Consequently, there is, in the mind of the speaker, a conception of the relevant set of books, and a conception of the relevant set of staff and customers, both of which are independently formed from background knowledge about the specific shop itself, as well as from knowledge about bookshops in general.[194]

194. Note that it does not matter that the interpreter most likely has no individual knowledge of each of the component entities making up these sets; what is important in

These conceptions are, I suggest, identified by the nouns *books* and *people* respectively. In specific response to *some*, *most* and *no* the interpreter subsequently construes the conceptions of the set of books and the set of people respectively as 'reference masses' (cf. e.g. Langacker 1991a:107ff), with which the conception of a *portion* – a portion of relatively small extent in the case of *some*, a portion of almost exhaustive extent in the case of *most*, and a portion of zero extent in the case of *no* – is juxtaposed, so that what the noun phrases as wholes ultimately come to symbolise is an independently formed conception of a set of books within which a small portion is profiled, an independently formed conception of a set of books within which an almost exhaustive portion is profiled, and an independently formed conception of a set of people within which a zero-sized portion is profiled respectively.

Apart from the fact that identifiers of the kind just discussed are non-prototypical in that they identify a crucial part of the base of an element, rather than the element itself (the latter of which consists in the portion profiled by the relevant quantifier), they are also deviant in that they cannot readily be substituted by other meanings. That is, whereas 'normal' element identifiers generally can be altered quite radically (cf. examples (27)–(30) above) and still fulfil their intended purpose, identifiers of reference mass usually cannot. This is, of course, because reference masses represent sets of individuals – substances that probably vary quite extensively among themselves, *except* in terms of the features that bring them together as a set.

Identification of reference mass seems to be most commonly realized by nouns, at least in specific utterances such as the ones exemplified in (31) above. To the extent that adjectives identity reference masses, they seem to be most naturally found in general statements such as *all blind cats fail to chase mice*, *most spoilt children scream until they get what they want*, and *any reasonably bright person would be able to pass this test*.[195] It is important to

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this case is that (s)he has a definite understanding of a particular set of books, and a particular set of people as such.

195. Note, however, that adjectives may well *feature* in identification of specific (as opposed to general) reference masses, without themselves *functioning* as identifiers of reference mass. Using, again, the burnt down bookshop as an example, it would, for instance, be possible to say *most medical books were saved, but all chemical and physics books were destroyed*. Here, the adjectives identify the unitary lexical meanings MEDICAL BOOK, CHEMICAL

realize that the general utterances just exemplified are just that: *general*. They are *not* generic. Or, put another way: BLIND CATS, SPOILT CHILDREN and REASONABLY BRIGHT PERSON are all – in the present examples – *referential* elements, representative of *the full set of real-world substances* that manifest the given description. They are *not* non-referential elements reflecting part of the world's general structure – that is, they are not structural elements. This is important, since it has consequences for the function of noun phrase component meanings, more precisely for whether their function is to identify a reference mass (as is the case in general statements such as those given above), or whether it is to provide identity for a structural element. I will return briefly to this matter in the following Section.

Having commented on element identification, I will now turn to the function that I refer to as *identity provision*.

4.3.2 Identity Provision

Identity provision applies in the route taken when the intended element has been determined to be unknown to the interpreter and to belong to a structural space.[196] Examples (32)–(34) are all examples in which the respective noun phrase component meanings function as providers of identity:

(32) *Newborn babies* are adorable.
(33) A *tame elephant* is generally not dangerous.
(34) I like *black dresses*.

In each of these examples, a structural space is set up, and a specific element (ultimately symbolised by the italicised noun phrase) is created and introduced into this space. In this introduction process, the meaning of the

BOOK and PHYSICS BOOK respectively, and it is these respective meanings that in turn identify the relevant reference masses.

196. I hesitate to use the word *unknown* in this context, since it implies that we are dealing with something that has its own independent existence (something that is not the case here); for something to be unknown, it must exist, and, conversely: something that does not exist cannot be unknown. However, in order to avoid long wieldy paraphrases reflecting the fact that the kind of element that we are dealing with here has not been, and cannot be, independently conceived by the interpreter, I nevertheless use *unknown*.

adjective and the noun respectively serves to provide identity – the description that they constitute is what defines the existential identity of the relevant element and sets it apart from any other element that may be introduced into the same space. Consequently, once the element has been established, there can be no further elements introduced that are described in the same way. That is, whereas it is perfectly possible to say *I like a black dress and she likes another black dress*, where the elements in question are representative of *substances*, an utterance such as *I like black dresses and she likes other black dresses* comes out nonsensical – at least in the generic reading.[197]

Identity provision does not correspond to any of the functions suggested in the CID Approach, but constitutes, I suggest, an entirely 'new' function. To the extent that examples of identity provision have been brought up at all in previous studies, they have been implicitly assumed to constitute (non-prototypical) manifestations of classification. To me, this seems to be a mistake.[198] For one thing, identity providers exhibit a different morpho-syntactic behaviour compared to that of classifiers (or, in my terms, kind identifiers). Whereas the latter kind is generally non-gradable and non-predicating (cf. Section 4.1.1), the former kind may well be graded (examples (35a)–(37a)),[199] and is furthermore perfectly acceptable in predicative position, as long as the clause in which it appears is a restrictive relative clause (as in (35b)–(37b)):[200]

197. Remember that substances are entities whose identity cannot be defined by a description; consequently, unlike structural elements, elements that are representative of substances (i.e. referential substances) may well comprise the exact same *description* and still be representative of *different* substances co-existing in the same space.

198. Although adjectives are not the only items that may have identity provision as a SIF, the following discussion applies to adjectives only.

199. Of course, grading obviously has *restrictive* consequences, so that identity providers are non-gradable from a communicative point of view. That is, since an identity provider itself sets the precise limits for what constitutes and what does not constitute the identity that it provides, any changes to it – including changes in degree – will also change the existential scope that it provides. From a functional point of view, however, grading is fine: the adjectives in 25a-37a still function as identity providers, even though they are graded. It is in this way they differ from kind identifiers, which are functionally non-gradable (cf. Section 4.1.1 especially Footnote 162).

200. The reason that identity providers can appear in predicative position in restrictive

(35a) *Completely newborn* babies are adorable.
(36a) A *completely tame* elephant is generally not dangerous.
(37a) I like *very black* dresses.[201]

(35b) Babies that are *newborn* are adorable.
(36b) An elephant that is *tame* is generally not dangerous.
(37b) I like dresses that are *black*.

Another thing (apart from differences in morpho-syntactic behaviour) that supports the view that kind identification and identity provision are different functions is the fact that identity provision, unlike kind identification, is completely dependent on the kind of reference expressed: in order for an adjective meaning to be interpreted as an identity provider, the element-to-be must be a non-referring element, i.e. an element that does not represent anything outside its own discourse-dependent structural space (cf. Sections 2.2 and 2.3.2). If the referential frame is changed, so is the SIF of the adjective:

(35c) The *newborn* babies are adorable (either element identification or specification, depending on larger context).
(36c) The *tame* elephant is not dangerous (most likely element identification).
(37c) I like some *black* dresses (either identification of reference mass, or specification, depending on whether *some* is used as a relative quantifier or as unstressed *some*).

Kind identifiers, on the other hand, retain their function regardless of the kind of reference:

(38) An *atomic* bomb was dropped on Hiroshima on 6th August, 1945.

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clauses only is, of course, again that they are themselves existentially restrictive (cf. Footnote 199).

201. It may be argued that it is, in fact, not possible to grade *black*. However, the possible restriction in this case is not due to the *function* of the adjective meaning, but rather to its typically non-gradable semantic *nature*.

(39) The *atomic* bomb that was dropped on Hiroshima was called 'Little Boy'.
(40) They claim that they need an *atomic* bomb.
(41) An *atomic* bomb is made from uranium and plutonium.

In short, if we maintain that identity provision is the same function as kind identification, we are hard pressed to explain the various deviations demonstrated above. If, on the other hand, we accept that kind identification and identity provision are two different SIFs, pertaining to two different levels of interpretation (namely the morphological and the propositional level respectively), these deviations are no longer deviations at all, but perfectly natural consequences of the nature of identity provision as compared to kind identification. The reason that a kind identifier is non-gradable and non-predicating is, I suggest, on the one hand that it mirrors a specific characteristic of a *kind*, and therefore remains 'static' in terms of degree, and, on the other hand, that it is subsumed at the morphological level by the meaning that it serves to identify, so that, on the propositional level, it is an inextricable part of the nominal 'head' meaning, incapable of having any individual function of its own.[202] This latter reason is also the reason why a kind identifier is unaffected by changes in reference; since reference is a feature of the *propositional* level, whereas kind identification pertains to the *morphological* level, changes in reference cannot affect the functional status of a kind identifier. Conversely, the reason that an identity provider may be graded and still retain its function (cf. Footnote 199) is, I suggest, that it *provides* a feature – which it is thus itself 'free' to determine – rather than reflects a pre-determined feature, and the reason that it may appear in predicative position is that, unlike a kind identifier, it constitutes an individual meaning, capable of having its own individual function, even on the

202. At a quick glance, it may, perhaps, seem tempting to suggest that the non-gradability of kind identifying adjectives is not due to function at all, but rather to *semantic* incompatibility with scales of any kind; it is simply not possible to be more or less atomic, polar, domestic, circular, electric or industrial (at least not in the respective senses that these adjectives take on as kind identifiers). The point is, however, that there are, of course, also many kind identifying adjectives that are *not* of the semantically non-gradable kind (e.g. *red (pepper)*, *soft (cheese)*, *long (bow)*, *elastic (band)* etc.), but that are nevertheless non-gradable when they function as kind identifiers, cf. Footnote 162.

propositional level. Again, this latter reason is also the reason that the functional status of an identity provider is affected by changes in reference; precisely because it functions on the propositional level – more specifically in the process of element creation, which is very much about reference – a certain meaning is completely dependent on the kind of reference expressed for its status as an identity provider. It is only with non-referential, structural elements that a description can constitute identity. In conclusion, there seems to be strong support for considering identity provision an individual function in its own right.

As I have already touched upon (e.g. Footnote 199), an identity provider is *restrictive* in nature, in that it determines the limits for the existential scope of the element that it helps create. Put another way, an identity provider could be said to signal exactly what is talked about. In this it is similar to identifiers (kind as well as element identifiers). There is, however, a clear difference between the two even in this sense: whereas both kinds of functional item (that is identity providers as well as kind/element identifiers) tell the interpreter exactly what the speaker has in mind (be it a particular kind or a particular element) it is only identity providers that are *existentially* restrictive. That is, whereas identifiers restrict *choice* within a more or less well delimited set of *independently conceived structures* (kinds or elements), so that one particular structure is picked out to the exclusion of all others, identity providers restrict *existential scope*, in that they function in the process of actually bringing the relevant structure into *being*. The difference in terms of kind of restrictiveness between, on the one hand, identity providers, and, on the other hand, kind/element identifiers is seen clearly from the fact that whereas the former cannot be altered in any way if the relevant element is to stay the same in terms of existential identity, the latter can be substituted by (sometimes quite radically) different meanings and still indicate the same kind or element, so long as they mirror a feature that sets the intended structure apart from any other potentially intended structure. Thus, whereas the italicised phrases in 42a and 42b symbolise two different elements, those in 43a and 43b (both of which are intended to refer to the long black velvet evening gown discussed in Section 4.3.1), as well as those in 44a and 44b symbolise the same element and kind respectively:

(42a) *Tame* elephants are friendly.
(42b) *Small* elephants are friendly.

(43a) I prefer the *black* dress.
(43b) I prefer the *long* dress.

(44a) Valdemar refuses to eat *brown* bread.
(44b) Valdemar refuses to eat *wholemeal* bread.

In the discussion so far I have focused on identity providing adjectives. As I have already implied, however, identity provision is not restricted to such items, but may also be realized by other items, notably nouns. For obvious reasons, there are certain meanings that are excluded from the identity providing function. For instance, meanings that indicate extrinsic features dependent on some specific constellation in a specific situation, such as number or some kind of relative position, are incompatible with the nature of structural spaces in general, and so, they generally fail as identity providers; utterances such as *previous days are boring*, *a third book is interesting*, and *five babies are cute* either turn out nonsensical (as in the first two examples) or non-generic (as in the third example). To the extent that meanings of this kind nevertheless do occur with non-referring structural elements, they tend to be interpreted, instead, as kind identifiers, as would be the case in utterances such as *best friends are hard to come by*, *third prizes are for losers* and *four-eyes are swots*, where it is instead the respective meanings BEST FRIEND, THIRD PRIZE, and FOUR-EYES as *units* that serve an identity providing function.

Having accounted for identity provision, I can now conclude the comment that I made in the previous section about general *vs.* generic utterances. I suggested in that context that relative quantifiers trigger the conception of a reference mass (in addition to a profiled conception of a portion aligned with this reference mass), which represents the full set of substances that are found in the relevant context, and that manifest the given description. As a consequence of this, utterances featuring relative quantifiers are often *general* in nature. As I pointed out in the previous section, a general statement is, however, not the same as a *generic* statement. In general utterances such as *all black dresses are beautiful* and *most newborn babies sleep between 20 and*

22 hours a day, the reference masses symbolised by *black dresses* and *newborn babies* are representative of the full set of actual, specific substances describable as 'black dress' and 'newborn baby' respectively. In generic utterances such as *black dresses are beautiful* and *newborn babies sleep between 20 and 22 hours a day*, on the other hand, the elements symbolised by *black dresses* and *newborn babies* are *structural* elements that are generalised reflections of stable phenomena found in the world, rather than representations of actual substances instantiating such phenomena.

The difference between general and generic utterances is seen clearly from the fact that generic statements often are easier to accept, or agree with, than are the closest *general* equivalent (i.e. statements featuring the relative quantifier *all*). For instance, whereas I personally happen to be very fond of black clothes, and thus readily agree with the utterance *black dresses are beautiful*, I am nevertheless hesitant to accept an utterance such as *all black dresses are beautiful*. This is precisely because in the former case the meaning BLACK DRESSES reflects the general *phenomenon* – the *'idea'* – of black dress, the identity of which is 'black dressness' – nothing more, nothing less –, whereas in the latter case it represents the full set of actual, individual black dresses found in the world, each of which I know has its own individual characteristics – characteristics that I may not find beautiful at all.

It is now time to leave the matter of identity provision and move on to the function of stipulation.

4.3.3 Stipulation

Stipulation, just like identity provision, is a 'new' function, which has not been discussed in previous works. It could be defined as the function of stipulating what something should be like in order to qualify as the referent of the relevant element, in the relevant proposition. It applies in the route taken in cases where the intended element has been determined to be non-specific – that is in cases where the element is representative of a substance, but where the *identity* of this substance is yet to be determined.

Basically any noun phrase component meaning (apart from determiner meanings) seems to be able to function as a stipulator. Examples of adjective and noun stipulators are provided in (45)–(47):

(45) I'm looking for a *black pen*, but I can't find one.
(46) You need a *big bowl* for this.
(47) We should use a *large glass tank* for the experiment.

As I established in Section 2.3.2.1, non-specific elements are peculiar in that the main point of concern in all other cases is the *identity* of the relevant element (or, ultimately, of the substance that an element may represent) that is at issue. It is a particular identity (either a substance or a structural entity) that we say something about, and it is in its capacity of constituting this particular identity that it is featured in the proposition at hand. With non-specific elements, on the other hand, it is, as I have already established, not a specific identity *as such* that is of importance, but rather a random identity *in its capacity of embodier of a particular description*.

I suggested in Section 2.3.2.1 that a non-specific element structure is not ultimately fitted in with the CDS, but that it could be thought of as 'hanging around' the space determined as its native space, waiting to be ultimately settled in by a unique connection to a specific substance. I also suggested that the final settling process is thought of as falling outside the speech event as such, so that in the (unspecified) mean time, all that we have to go on is the description provided by the element structure itself – the stipulator(s).

As should be clear from what has just been said, stipulators are restrictive, in that they affect determination of what 'their' element ultimately represents. This restrictiveness is, however, different from that of both identifiers and identity providers. Unlike identifiers, stipulators do not serve to identify a specific substance, but rather to pick out any random substance that fits the description that they provide. Consequently, unlike an identifier, which can be substituted by any other meaning (as long as a distinguishing feature of the intended kind or element is still highlighted), a stipulating meaning cannot be changed without the communicative intent being compromised; for instance, whereas *black* in an utterance such as *I'm looking for the black pen* can be substituted by any number of words – *cheap*, *expensive*, *small* and so on – as long as they highlight a distinguishing feature of the intended pen, *black* in an utterance such as that given in (45) cannot. Of course, this is similar to the situation found with identifiers of reference mass; as I established in Section 4.3.1, such identifiers are not easily substituted either. Consequently, it may be tempting to analyse examples featuring

non-specific elements in the same way as reference mass constructions. Non-specific *a* would then have the same SIF as a relative quantifier, setting up a reference mass within which a portion of the specific size 'one' would be profiled, and any meaning claimed to be a stipulator would, in fact, be an identifier of reference mass. At first sight, this analysis is intuitively attractive. There are, however, certain problems with it, Firstly, although the exact 'identity link' between the portion profiled by a relative quantifier, and the reference mass profiled by any identifier is not explicitly specified in a reference mass construction, this link is nevertheless understood to *be* specific. That is, in an utterance such as *some books were saved, but most were destroyed* (cf. example 31), it is not specified exactly which of the books were saved and which were destroyed, but it is nevertheless implicitly assumed that they are non-random – SOME refers to those *specific* books that were saved, and MOST refers to those *specific* books that were destroyed. With non-specific constructions such as those exemplified in 45-47, however, this is, as I have already established, not the case. Consequently, if non-specific *a* were to be analysed as a relative quantifier, profiling a portion of the reference mass identified by any subsequent meaning, it would be deviant, in that it would have no specific identity link to any particular substance within the reference mass. Secondly, another problem that arises with the present analysis is that there are plenty of non-specific examples that do *not* feature non-specific *a* – *I'm looking for some black pens* (with unstressed *some*), *you need two big bowls for this*, and *we should use several large glass tanks for the experiment* are just a few. In summary, then, I suggest that non-specific constructions cannot be analysed as reference mass constructions, and, consequently, that stipulators cannot be analysed as identifiers of reference mass.

Recapitulating, a stipulator is restrictive in a different way compared to an identifier, in that its actual *meaning* is of importance to the restriction made. In this, a stipulator is a little like an identity provider. However, whereas an identity provider is restrictive in the sense that it delimits the *existential scope* of the element of which it is part, a stipulator has no such consequences. As I established in Section 2.3.2.1, a non-specific element (of which stipulators are part) is *referential*, ultimately representative of a *substance* (albeit a random substance). Consequently, a stipulator is incapable of affecting the existential scope of 'its' element (and, ultimately, of the

element's referent): whatever actual substance it may end up picking out would have retained the same existential scope even if it had failed to fit the stipulating description.

In summary of the 'restrictiveness discussion', we could say that:

- an identifier restricts *the number of potentially intended entities*,
- an identity provider restricts *the existential scope of the element at hand*, and
- a stipulator restricts *any random substance's potential as a referent of the relevant element*.

Having accounted for the function of stipulation, I will now turn to the last of the SIFs that adjectives may have on the propositional level, namely specification.

4.3.4 Specification

Specification could be defined as the function of specifying some more or less intrinsic, and more or less complex aspect of a THING conception of some kind – typically an element.[203] Consider (48)–(50):

(48) I bought a *lovely dress* yesterday.
(49) It is *black*.
(50) It is a *long, soft velvet evening gown*.

In each of these examples the interpreter has the sense of a thing that he understands to have existed even prior to, and independently of, the intake of the relevant noun phrase, but that is only now brought to his attention, and distinguished from all other possible things through its representative element's particular, individual appearance in the specific context at hand. In each case the meaning of the adjective (and of the head noun) serves to add information about this thing, thereby making the interpreter's repre-

203. As I have already mentioned, adjectives in prenominal position sometimes specify an ungrounded embodier conception rather than a fully-fledged element. I will return to this matter below.

sentation of it more specific and detailed: in (48), the thing that 'I' bought is specified as being of the kind DRESS, and as being lovely, in (49) it is specified as being black, and in (50) it is specified as being of the kind EVENING GOWN, as being made out of velvet, and as being long and soft.

As can be seen from the examples just given, two main situations can be distinguished with specifiers: On the one hand, a specifier may function *within* the element structure that it serves to specify (48), and, on the other hand, it may function from an external, predicative position, either on its own (49), or together with other specifiers making up an indefinite predicate nominative (50).

Predicated specifiers clearly function in integration of proposition components (cf. Section 2.3.2); it is when the trait in predicative position is connected to the element in subject position that specification occurs. Specifiers that appear as an integral part of the element structure itself, on the other hand, are less straightforward in terms of exactly 'where' in the interpretive process they apply (cf. beginning of Section 4.3). From a strictly theoretical point of view, the most logical assumption seems to be that the specifying function in this kind of case constitutes an individual process found between, on the one hand, *creation* of proposition components (elements, relations and traits) and, on the other hand, *integration* of such components. In the end, exactly where this kind of specification applies is of little relevance for the present purposes, what is important is, instead, the different communicative nuances achieved by external and internal specification respectively: whereas *ex*ternal specification puts the specification as such in focus, *in*ternal specification could be said to take a step back, allowing, instead, for the conception of some contentful scenario or situation to take the position in the spotlight – as I established in Section 2.3.2, a proposition that reflects a relation between an element and a trait (external specification) could be said to be primarily about the relevant element and its predicated information, whereas one that reflects a relation between specified elements only (internal specification) could be said to be about the relation as much as about the relevant elements participating in this relation. Consequently, external specification is the preferred choice when the main point of the relevant proposition is the specification as such. Another motive for external specification is that *in*ternal specification is sometimes not an option; in cases of non-referring elements, for instance,

any internal contentful meaning will inevitably be interpreted as an identity provider. Consequently, if such an element is to be specified, external specification is the only option available (e.g. *A hungry tiger is dangerous* ≠ *A dangerous hungry tiger*...).

The fact that specifiers may apply from an external, as well as an internal position makes them different from all the other functional elements; kind identifiers, element identifiers, identity providers and stipulators are all restricted to the relevant element structure itself.[204] This is of course not surprising, seeing that these items all function in *creation* of elements, whereas specifiers apply more freely to elements once they have been established.

As I have already established, the SIF of specification includes the function referred to in the CID Approach as *description*. There are, however, certain differences between my view of specification and the CID view of description. Consider the following examples, all of which contains specifiers:

(51) I found a *dusty book* behind the sofa.
(52) She had a *sleeping baby* in her arms.
(53) They have a *beautiful house*.
(54) The door opened and a *third man* entered the room.
(55) They went to a *close-by playground*.

Firstly, as should be clear from the examples just given, I hold that the information added in specification may be of any kind; it may be schematicity-biased (THIRD, CLOSE-BY) as well as content-biased, and content-biased information may, furthermore, be first-order (DUSTY, BOOK, BABY, HOUSE, MAN, PLAYGROUND) and second-order (SLEEPING), as well as third-order (BEAUTIFUL). In short: my view of specification is broader than the CID view of description, the latter generally being restricted to the addition of content-biased information only.[205]

204. Although element identifiers, identity providers, and stipulators may appear in predicative position, this does not mean that they can function from outside the relevant element structure; on the contrary, the only situation in which they can occur predicatively is in restrictive relative clauses, which are themselves part of the element structure as such.

205. Two points should be made in this context. Firstly, I would like to emphasise that

Secondly, I hold that specification may be carried out not only by adjectives (which is the position taken within the CID Approach), but also by other noun phrase components, notably by the head noun. In (51)–(55), I think that it is quite clear that not only the meaning of the respective adjectives, but also that established for the phrasal head in each case serves to make the element in question more specific: in (51), the thing that was found is specified as being a book, in (52) the entity that 'she' had in her arms is specified as being a baby, and so on (cf. also (48)–(50) above). In other words: the difference between the adjective and the noun in these cases lies not in their respective SIFs (they both specify), but rather in their respective Gestalts, which have been assigned at the morphological level, as part of the respective words' FIFs: as I have already established (e.g. Section 3.2), part of adjectives' FIFs is to evoke the ATEMPORAL RELATION schema, whereas the equivalent effect of noun input is to evoke the THING schema. Consequently, whereas the SIF (that is the effect of the semantic pole) of an adjective and a noun alike may be to specify, the construal of the information thus added is different in either case. With adjectives we are dealing with information that is made out to be simplex and attribute-like: it is looked upon as one piece of information among many others, which is added as 'an extra' to the element as such. With head nouns, on the other hand, the information supplied is felt to be of a more fundamental nature – it describes the very essence of the thing in question, namely what *kind* of thing it is. Or, put another way: whereas adjective meanings may specify almost any kind of 'simplex' aspect of the subject element, head meanings seem to invariably specify only one type of aspect: namely that of kind.[206]

I generally agree with Warren's claim that adjectives expressing certain kinds of meaning tend to be kind identifying (classifying) rather than specifying (descriptive) – for instance, meanings such as those expressed by *solar* (as in *solar power*) and *pedestrian* (as in *pedestrian crossing*) – but unlike Warren I do not believe that this is due to the kind of meaning expressed, but rather to the fact that a certain item cannot in itself both identify kind and specify an element. Secondly, it should be noted that there are degrees also within the CID Approach itself; whereas e.g. Warren generally includes the addition of any kind of content-biased information, e.g. Teyssier considers only the addition of subjective, idiosyncratic information as description (1968).

206. Adjective meanings may, for instance, specify properties (*a heavy suitcase*, *a smooth surface*), actions (*a sleeping baby*, *a whistling boy*), external attributes (*an icy road*, *a dusty book*), relative position (*a third chocolate*, *a central shop*) and so on and so forth.

The point is that regardless of which, the respective 'chunks' of information – that is the semantic poles of the adjective and the head noun respectively – both serve to make the representation forming in the interpreter's mind more specific and detailed, thereby specifying the entity that the speaker is talking about.[207]

Whereas my view of specification is broader than the CID view of description, in that it includes the addition of *any* kind of information, the fundamental nature of the function as such is the same in both models. In the CID Approach and my view alike, specification amounts to *non-restrictive addition* of information – a specification of some aspect of something that is felt to have its own existential identity, and to be uniquely identifiable, independently of the specific information supplied by the noun phrase at hand.[208] Or, in other words: for instance the thing that 'I' found behind the sofa in (51) above, is understood to be the same specific, individual substance regardless of how it is described – whether it is referred to as *a dusty book* (as in (51)), as *a grimy paperback*, as *a filthy object* or as something completely different, it is still felt to be the same individual substance, namely the particular substance that 'I' found behind the sofa.

Because of their non-restrictive nature, adjectives whose SIF is to specify are often claimed to be 'optional'. However, I find this claim to be somewhat misleading. Whereas it is true that specifiers do not play a role in determination of what 'their' element ultimately represents, this does not make them any less important from a general communicative point of view. That is, although they are not needed for the purpose of determining referential

207. Note that the argument just made obviously applies in all cases described in the present work, not only in specification. That is, element identification, identity provision and stipulation alike exhibit the same difference in construal between adjective and noun. The only reason that I discuss this matter in detail only now is that it is in the context of specification/description it is clearly brought out, by the CID view of description as being realized by adjectives only.

208. Note that there is a difference between, on the one hand, being uniquely identifiable in a certain realm of existence, and, on the other hand, being uniquely identified by means of some specific information. The intended referent of an indefinite specific referential element, and a definite element alike is understood to be uniquely *identifiable*, but it is only the intended referent of the definite element that is also explicitly *identified*, by means of element identifiers.

scope, they are nevertheless needed for another, equally important purpose: namely to portray the intended thing in a particular way. Consequently, specifiers are no more optional than any other item: they are there for a specific communicative purpose, and if they are deleted, this purpose is lost.

So far, I have discussed specification of indefinite elements only. Specification may, however, be realized also with definite elements – that is elements that have already been, or that may be, conceived on the basis of noun phrase-independent stimuli. Examples include the following, where *shivering* and *bargains* respectively function as specifiers:

(56) A woman and a little boy were huddling under a huge umbrella. The woman had her free arm round the *shivering* boy.

(57) The day had been a success; she had found a new tablecloth, a huge fruit bowl and a pair of black candlesticks, and as she put her *bargains* on the kitchen table she felt a jolt of joy inside.

In fact, as I mentioned in Section 4.3.1 above, adjectives appearing in definite noun phrases grounded by a demonstrative (*this*, *that*, *these*, *those*) seem to always be specifying. In such cases the specifying function is, however, somewhat altered. Typically, specification means adding information that the interpreter has no previous or independent knowledge of; the fact that the boy in (56) was shivering, as well as the fact that the things that the girl in (57) had bought were bargains, both constitute new information, obtainable only from the respective specifier as such. In cases where grounding is carried out by a demonstrative, on the other hand, the information provided by any specifier is generally either independently obtainable – as in *Look at that black dress! It's gorgeous!* (uttered in a situation where there is only one dress present) – or already part and parcel of a pre-conceived representation of the relevant element – as in *Do you remember that rainy day when we had the new heating system installed?*. In cases like these, then, the reaction on part of the interpreter could be encoded as 'Ah, yes, that's right: it is black / it was raining that day', rather than as 'Oh, is it black / was it raining? I'd better add that to my representation then' (the latter reaction of which would encode the (obviously completely sub-conscious) reaction found in prototypical specification). In this kind of specification, the specifier serves

to reintroduce and/or highlight information that the addressee might otherwise not pay attention to, thus framing the relevant element in a particular way.

Before I leave the matter of specification, I would like to comment some more on the situation found with predication – more precisely on the functional status of component meanings within multi word predicate nominatives (henceforth MPNs). This may, I suggest, vary on the one hand between pre-head meanings and head meaning, and, on the other hand, between head meanings in different contexts; whereas pre-head meanings in MPNs seem to always specify, head meanings sometimes have other functions. Before I can elaborate on this, however, I need to make a slight detour, and consider the matter of multi word noun phrase interpretation in general – first from the point of view of element phrases, and then from the point of view of trait noun phrases (i.e. predicate nominatives).

So far, I have been deliberately vague as regards the question of how exactly component meanings within multi word noun phrases are combined on the propositional level. It is now time to consider this matter in more detail. As regards co-interpretation of *lexical* meanings on the *morphological* level, I established already in Chapter 2 that such interpretation seems to happen in an 'indirect' fashion, via a more or less separate third concept (an idea developed in Section 4.2). Co-interpretation on the propositional level is, I suggest, either directly parallel to this (namely in cases of element identification), or similar, but not identical (namely in cases of element introduction). In kind identification (morphological level) and element identification (propositional level) alike, any identifier meaning 'recognises', maps and merges with the feature that it highlights, without in any way altering either this feature itself, or any other part of the information comprised by the identified kind or element. In cases of element introduction, on the other hand, the situation is both similar and different. It is similar in that the profiled lexical meanings themselves are not mapped: they are *distinct* pieces of information that simply cannot be merged into one single unit of information. The common denominator here is instead the embodier found in the meanings' respective bases as a result of instantiation; it is the respective embodier conceptions that are conceived of as one and the same. As features of one single embodier – which is capable of simultaneously *manifesting* any number of descriptions – the meanings are able to

co-exist, although they are themselves still distinct descriptions that do not merge into one. Just as in kind and element identification, there is, at this point, also a shift in focus, from the descriptions themselves, to the conception that unites them. This, however, is where co-interpretation as manifested in element introduction starts to differ from co-interpretation as manifested in identification. Whereas identifiers shift focus to a separate, independently conceived conception, meanings functioning in element introduction – that is identity providers, specifiers and stipulators – shift focus to the merged embodier conception to which they are already connected. Because this conception is in itself completely schematic, the respective descriptions are felt to *add* content rather than merely highlight content that is already there, and in this, they also interact with *each other*. That is, the respective descriptions could be said to be blended within the embodier, to the extent that the interpreter knows (or figures out) what it means to simultaneously *manifest* these particular descriptions. In this sense, meanings that are co-interpreted in element introduction could thus be said to affect each other to a greater extent than co-interpreted identifiers do (the latter of which do not affect each other at all). More specifically, I suggest that the head meaning (which always indicates kind, see above) maps with the schematic formal quale presumably found with the skeletal embodier conception, thereby automatically introducing and specifying a range of further substructures with the three remaining qualia (cf. Section 1.3.3.1). Any pre-head meaning then, in turn, maps onto some more or less salient aspect of one of the substructures thus specified. This, I suggest, is the sense in which component meanings map, interact and blend in indefinite referring elements.

So far I have considered co-interpretation of noun phrase component meanings as manifested in kind/element identification and in element introduction respectively (the latter of which comprises identity provision, stipulation and internal specification). Let me now turn to the situation found with external specification realized by specifiers comprised by a multi word predicate nominative (MPN). Traditionally, an MPN is assumed to be fully interpreted in itself, before it is predicated – as a unit – of the subject element. That is, what the interpreter does according to this analysis is to (i) create, in response to the MPN, a conception of an ungrounded, yet individual embodier that manifests the descriptions provided by component

lexical words,[209] and (ii) map the thus created embodier conception with the (individually created) subject element conception.

I find the traditional analysis hard to accept, for two main reasons. Firstly, it implies that predication (that is: integration of elements and traits) consists in *equation* of two things, rather than in *addition of information* to *one* thing[210] – an implication that I think is simply wrong. I think that it is quite clear that what we are dealing with in predication is not the equation of two individual things, but rather the addition of information regarding certain aspects of *one* thing. Secondly, even if this were *not* clear, the equation analysis is still not an option, simply because equation in this kind of case is infeasible. Let me elaborate.

In order for (what is initially conceived of as) two individual things to be able to be equated (and thus become one and the same), their respective identities have to be compatible (since it is identities that are equated). This is the case in interpretation of, for instance, statements such as *that boy is Hilding's friend Nicholas*, and *Can't you see that your nerdy colleague Clark is your beloved Superman!* In these examples, the identity assigned to the interpreter's conception of, on the one hand, the relevant boy and the nerdy colleague, and, on the other hand, Nicholas and Superman respectively is in both cases the non-definable, underlying *je ne sais quoi* that constitutes the identity of substances (cf. Section 2.3.2.1). Consequently, since the conceptions of these identities are of the same kind, and since they are not (and cannot be) defined in any way, they are perfectly compatible. That is, even if I did not previously know that the boy that I am looking at in the particular speech event shares identity with Nicholas, whom I have heard so much about, I have no problem accepting that this may nevertheless well be the case. Likewise, any reader of *Superman* magazines readily accepts that the nerdy Clark Kent and the fantastic Superman are one and the same person.[211]

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209. I have already demonstrated that co-conception of several contentful instantiated meanings automatically brings with it a shift in focus, so that it is, instead, the embodier conception itself that is profiled.

210. When two conceptions profiling a THING perceived of as an individual entity with its own existential identity – in this case the subject element and the predicate embodier respectively – are linked by the copula, the only kind of relation available is that of equation, since one identity cannot be *added* to another.

211. Especially the latter of these examples clearly points up on the one hand the non-

Let me now consider the situation found in predication. Again, in the traditional analysis we have two individual thing conceptions – the subject element and the predicate embodier – that are equated by the copula. If this analysis is to work, the identity of the subject element must be compatible with that of the (supposed) predicate embodier. However, this, I maintain, is simply not the case. Consider the following examples.

(58) Grisebjörnen is a white teddy bear.
(59) Elephants are clever animals.

If the predicate nominative in (58) and (59) respectively were an ungrounded embodier conception – which it would have to be if we stuck to the traditional analysis of MPNs as being fully interpreted within themselves before they are predicated of the subject element[212] – its identity would consist in the descriptions given by component meanings, since it would only be as a fancied embodier of these descriptions that it would 'exist' in the first place. Consequently, with the former of these examples, the traditional analysis does not even make it to the starting line, since the relevant identities – the subject element's non-definable substance identity, and the predicate embodier's description identity respectively – are not even of the same kind. With the latter example, on the other hand, the odds are slightly better since in this case the relevant identities *are* of the same kind – both being description identities – but the analysis fails nevertheless, simply because what we are dealing with here are two different descriptions and hence *two different identities*, something that, in turn, makes identity equation impossible.

definable nature of substance identity, and, on the other hand, the fact that it is identities rather than descriptions that are equated in identity statements: It clearly shows how two entities that differ in terms of most any description we could think of, can nevertheless constitute one and the same identity.

212. I have already established that if we claim that an MPN is individually interpreted within itself, and only subsequently predicated as a single unitary meaning, we have to conceive of it as an embodier manifesting meanings, rather than as a merge of meanings as such, since several individual meanings cannot themselves be co-conceived as one – they have to be co-conceived *via* something that is able to carry their simultaneous manifestation.

Recapitulating, the traditional analysis of MPNs as being fully interpreted within themselves before they are predicated – as units – of the relevant subject element, seems to be generally untenable. A more reasonable analysis is, I think, to assume that component meanings are mapped individually and directly with their 'true' embodier – that is with the subject element as such – and that it is only as traits of this same element that they are co-interpreted. This analysis is supported by the fact that it is often (although by no means always, see below) possible to take MPNs apart and predicate one feature at a time:

(60a) Grisebjörnen is a white teddy bear.
(60b) Grisebjörnen is white. He is a teddy bear.

(61a) Their house is a beautiful cottage.
(61b) Their house is beautiful. It is a cottage.

Let me now turn back to the matter of functional status of component meanings in MPNs. In the preceding discussion I established that component meanings seem to be best considered as having individual functional status relative to the element to which they apply, each mapping onto a different aspect of this element. With pre-head meanings, such function seems to always be that of specification. With head meanings, on the other hand, the situation is less straightforward. There seem to be at least three main functional possibilities with heads of MPNs:

i. the head meaning is essentially specifying,
ii. the head meaning is specifying and/or serves as a kind shifter (relative to the element), or
iii. the head meaning is not specifying at all, but serves instead as an aspect shifter (relative to pre-head specification).

The first situation is found with examples such as (60) and (61) above. In these examples it is, I think, quite clear that head meanings as well as pre-head meanings are specifying – the meanings of *teddy bear* and *cottage* specify the kind aspect, and the meanings of *white* and *beautiful* specify a property aspect, of their respective elements.

The second situation is found with examples such as (62) and (63), where the head meanings may well be specifying,[213] adding information about kind,[214] but where they also have a prominent function of shifting focus from the default kind specification initially made in interpretation of the subject noun phrase, to a different type of kind.

(62) Lars is a dedicated teacher.
(63) Torvald is an excellent psychiatrist.

I suggested above that whereas pre-head meanings may specify a wide range of aspects (cf. Footnote 206), head meanings seem to invariably specify that of kind. With certain kinds of element – notably animate beings – there are, however, two types of kind aspect available: on the one hand what could, perhaps, be referred to as the aspect of *ontological* kind, which is there with any type of element, and, on the other hand, the additional aspect of *role*. By 'ontological kind' I have in mind fundamental, 'substantial' kind specifications, indicating what something really *is* – its 'true essence' as it were. Meanings specifying ontological kind include meanings such as HORSE, CHAIR, WOMAN and FLOWER. 'Role kinds', on the other hand, are less complex kinds, based on some sort of uni-dimensional role or relation, for instance TEACHER, DOCTOR, BROTHER, STUDENT and AUTHOR. Whereas I may be considered to be, for instance, of the kinds TEACHER and STUDENT, as well as of the kind WOMAN, I am still most fundamentally and truly a woman – this is my ontological kind.[215] Ontological kind constitutes the

213. It may, of course, also very well be the case that the interpreter already knows (and, crucially, that the speaker knows that the interpreter knows) that Lars is a teacher and that Torvald is a psychiatrist, in which case the specifying effect is backgrounded, so that the sole (or at least main) SIF of the head is that of kind shifting (this is also what I had in mind by stating above that head meanings in the second kind of situation are specifying and/***or*** serve as an aspect guide). In this situation – where the interpreter already has the relevant information about kind – it may even be that the utterances in question will be interpreted instead in the third way, where the head meaning acts as an aspect shifter (see below).

214. Note, however, that kind in this case is of a rather special type. I will come back to this matter presently.

215. Note that there are degrees of specificity here, which may be linguistically encoded by different words. For instance, my ontological kind is WOMAN at a level of relatively high

default in any kind of element conception. That is, unless a role kind is strongly implied, either by explicit mention, or by context, ontological kind will, I suggest, be the (most salient) specification made in the formal quale of the conception in question, and any specifications in the other qualia will most saliently be specifications following from this particular kind. Consequently, in cases where the head meaning of a predicate nominative specifies a *role* kind, it will cause a sometimes rather dramatic shift in construal of the relevant element; not only will it add information about role, thus highlighting this particular aspect, but it will also bring with it a general rearrangement of qualia structure as a whole, highlighting aspects in the qualia template that are connected with the relevant role kind, and back grounding those connected with the default ontological kind (cf. the above discussion of co-interpretation of component meanings in element introduction). This has obvious consequences for any pre-head meanings, whose ability to map onto a certain element structure is entirely determined by the particular qualia structure found with this element. In short, without the predicate nominative heads in examples (62) and (63) the interpreter would most probably retain the default ontological kind inferred or recalled in creation of the respective subject elements (more precisely: the kind MAN), and thus interpret (62) and (63) as 'Lars is dedicated/Torvald is excellent *as a man*'. When the specific role kind is added, on the other hand, pre-head meanings are understood to apply to the relevant aspects of Lars and Torvald in their capacity of teacher and psychiatrist respectively.

The third kind of situation listed above is illustrated by (64) and (65).

(64) Mr Mallard is an angry man.
(65) Valdemar is a happy boy.

Whereas the pre-head meanings in these examples are still clearly specifying, we cannot say the same of the head meanings. That Mr Mallard is a man, and that Valdemar is a boy is (presumably) not new information – on the contrary, these are the default ontological kind specifications made already

specificity. It is, however, also HUMAN BEING, MAMMAL and ANIMATE BEING at levels of decreasing specificity, each of which may be linguistically encoded in various ways (*woman, lady, mrs*; *person, human*; *mammal*; *creature, being*).

in creation/recollection of the subject elements themselves. Consequently, these meanings do not specify anything – nor are they intended to. In these cases, the head meanings are there, I suggest, for construal reasons only – more precisely for the purpose of shifting focus from the property aspect normally specified by meanings such as ANGRY and HAPPY – namely the aspect of (transient) states of MOOD – to the more permanent and defining aspect of DISPOSITION. That is, whereas utterances such as *Mr Mallard is angry* and *Valdemar is happy* are interpreted as predicating transient states of mood of the respective subject elements, (64) and (65) are understood to predicate particular kinds of disposition. This is not an original claim; on the contrary, observations like this have long been made in the linguistic literature. As far as I am aware, however, such observations have amounted only to the formulation of the rather general claim that the use of predicate nominatives instead of predicate adjectives tends to render any predicated information more permanent and defining in nature. I would like to modify this claim by suggesting that this is only so in cases where (i) the predicate nominative head meaning reflects information about kind that is already readily available with the subject element conception itself, and (ii) the specifying meaning can be interpreted as applying to the disposition aspect. If only one or neither of these criteria are fulfilled, the claim that the use of a predicate nominative instead of a predicate adjective will render the predicated information more permanent and defining in nature does not hold true; the whiteness of Grisebjörnen, and the beauty of 'their' house is neither more, nor less defining or permanent in either of the following examples, simply because (i) neither whiteness, nor beauty can be interpreted as being indicative of disposition,[216] and (ii) the specific information about kind provided by the respective heads is (presumably) not previously present in the subject element structures themselves:

(66a) Grisebjörnen is white.
(66b) Grisebjörnen is a white teddy bear.

216. In the second of these examples there is, furthermore, another factor that prevents the present interpretation, namely the fact that the subject element conception has no aspect of DISPOSITION to begin with.

(67a) Their house is beautiful.
(67b) Their house is a beautiful cottage.

I now return briefly to the claim that component meanings of MPNs often can be predicated one at a time (cf. examples (60)–(61) above). I can now state more clearly why this is not always the case: in situations of type (ii) (kind shifting) and (iii) (aspect shifting) the respective pre-head and head meanings obviously can*not* be individually predicated of the subject element at hand, simply because in these cases the function of the head meaning is not (primarily) that of specification; instead, the head meaning is there (again: primarily) in order to somehow 'guide' the specification made by any pre-head meaning. If we split an MPN of this kind into its component meanings, and predicate each meaning at a time, this purpose is lost. From this follows, in turn, that my claim that MPN component meanings are best considered as having their own individual functions relative to the subject element, is not intended as a claim that these meanings do not interact *within* the element. On the contrary, since any predicated trait maps onto an aspect that is more or less clearly given in the current qualia structure of the subject element conception, and since the nature of this qualia structure may, in turn, well be affected by a predicated head meaning, such head meaning clearly interacts with any predicated pre-head meaning, as applied to the subject element. All that the 'individual function claim' is intended to point up is that pre-head meanings (just like the relevant head meaning) of MPNs are applied directly to aspects of the subject element conception rather than to aspects of a predicate embodier conception, which is only subsequently predicated, as a whole, of the subject element.

4.4 Concluding Remarks

In this chapter I have discussed the various SIFs that adjectives seem to have in discourse interpretation, from the point of view of where in the interpretive process they apply, and to what, as well as from the point of view of conceptual nature of the functions themselves.

5 Conclusion

5.1 Summary

In this study I have presented, on the one hand, a suggestive framework for hypotheses on interpretation in general, and, on the other hand, a theoretical discussion of interpretive functions of adjectives in particular. As regards the former of these issues I have suggested that interpretation is dynamic and creative, consisting in the *making* of meaning (which, in turn, is influenced by a range of linguistic and extra-linguistic factors), rather than in the re-assembling of ready-made units of meaning.[217] I have, furthermore, suggested that the effects that specifically linguistic factors have on meaning creation constitute *interpretive functions*. Such functions (or effects) in turn fall into two main kinds on the basis of whether they are triggered by the formal or the semantic side of the item in question: effects triggered by the formal side constitute *formal interpretive functions* (FIFs), whereas effects achieved by the semantic side (i.e. the meaning) constitute *semantic interpretive functions* (SIFs).

As regards FIFs I have established that such functions concern the creation of meaning for the relevant item itself, and that they include the conventionally determined (albeit always contextually constrained) activation, delimitation, mapping and transformation of underlying 'raw material' – purport and schemas – into a consciously accessible lexical meaning. I have also suggested that these functions are the same for all lexical items, so that the study of the FIFs of any *particular* kind of item therefore must involve the further mapping out of the specific kinds of material that it exploits, and the specific ways in which it organises this material into a coherent lexical meaning.

As regards SIFs I have established that such functions are the effects that the meaning established for a certain item itself has on creation of any

217. For more detailed summary of this, see Section 2.3.3.

other kind of meaning, on any level of conceptual organisation. In my discussion I have focused on what I refer to as primary SIFs, that is SIFs that a certain adjective has relative to an immediately super-ordinate structure of which it is somehow felt to be part.

Turning to the latter of the two main issues – that is: interpretive functions of adjectives – I have discussed each of the two main kinds of function in turn. Concerning adjective FIFs, first, I have proposed preliminary surveys of kinds of material evoked by adjective forms, as well as of the ways in which such material is conventionally organised by such forms. I have focused here on a main division between, on the one hand, the Gestalt schema triggered by adjectives (namely the ATEMPORAL RELATION schema) and, on the other hand, the ontologically coherent, partially construed pre-meanings that could be assumed to emerge at some point between the initial activation of underlying conceptual material (purport and schemas) and the appearance of a fully-fledged lexical meaning ultimately construed in terms of Gestalt. The survey of kinds of material evoked has thus concerned itself with a classification of kinds of ontologically supported pre-meanings, whereas the mapping out of ways in which adjectives organise the material evoked has dealt with ways in which ontological material is organised relative to the ATEMPORAL RELATION schema.

In the survey of pre-meanings emerging in creation of lexical adjective meaning I have suggested in line with Paradis (e.g. 2005) a main division into, on the one hand, content-biased, and, on the other hand, schematicity-biased structures, each kind of which divides further into a number of sub-kinds. On the content side, structures form three main sub-kinds – namely first-order (concrete phenomena), second-order (ontological relations in time), and third-order (properties and mental objects) –, which may be classified into increasingly specific sub-kinds (cf. Section 3.2.1). Structures on the schematic side, on the other hand, tend to divide more directly into specific kinds, constituting points or values within one out of a range of specific schemas (or schematic domains) such as, for instance, ORDER, DISTANCE, QUANTITY, FOCUS, and DEGREE, to mention but a few (cf. Section 3.2.2, especially Table 6). Table 9 lists a sample of content and schematicity-biased structures along with adjective exponents.

In the survey of ways in which ontological material is organised relative to the ATEMPORAL RELATION schema, I have suggested that adjectives can be

Table 9: Examples of Adjective Exponents of some Content and Schematicity-Biased Structures

Content-Biased Structures	**Adjective Exponents**
First-order	*grassy, canine, personal, oily*
Second-order	*crying, swimming, signed, painted*
Third-order	*short, brave, social, autumnal*
Schematicity-Biased Structures	
Point along scale of ORDER	*second, initial, previous, subsequent*
Point along scale of DISTANCE	*distant, adjoining, close, faraway*
Point along scale of QUANTITY	*numerous, few, many, little*
Point along scale of FOCUS	*minor, main, prime, secondary*
Point along scale of DEGREE	*total, absolute, complete, terrible*

divided roughly into two main kinds – LM-adjectives and REL-adjectives – depending on whether the ontological material evoked maps with, and thus specifies, the landmark part of the relational schema (LM-adjectives), or whether it maps with the relational schema as a whole, specifying mainly the relation part (REL-adjectives). As for LM-adjectives, I have shown that these range from adjectives where the ontological pre-meaning (referred to as the *m-structure*) is perceived of as an individual, self-sufficient participant, partaking in some kind of relation with the (schematic) trajector (e.g. *American, musical, icy, childless*), to those where the m-structure is perceived of as forming a completely dependent aspect of the (schematic) trajector itself, rather than an individual participant (e.g. *many, minor, possible, total*). I have also shown that there is a small sub-set among LM-adjectives at the former end of the continuum that deviates from all other kinds of adjective, in that members of this set seem to map the Gestalt schema with *two different* ontological structures – one that is triggered by the adjective stem, and one that is triggered by the adjective suffix – so that the landmark and the relation part of the adjective Gestalt are both specified, each by a separate structure. Examples include *icy* ('covered with' + 'ice'), *childless* ('without' + 'child'), and *duty-free* ('without' + 'duty').

As regards REL-adjectives (which include adjectives such as *crying*, *painted*, *close*, *adjoining*, *similar*, and *same*), I have established that the ontological structure mentioned by such adjectives (i.e. the m-structure) primarily specifies the nature of the relation part of the adjective Gestalt. However, because it is of a kind that specifies a relation, such a structure inevitably

also comprises, in itself, the more or less schematic conception of participants – a relation simply cannot be conceived without the simultaneous conception of entities between which it holds. Consequently, with REL-adjectives, the relational schema is mapped as a whole with the relevant m-structure. However, the degree of correspondence between parts of the adjective Gestalt, and parts of the m-structure differs quite radically from one REL-adjective to another: I have pointed out that there are various kinds and degrees of deviation from the prototypical situation in which the m-structure itself comprises one highly prominent participant, one less prominent, but still distinct participant, and one single, unitlike relation between the two, all of which maps in a one-to-one fashion with the corresponding components of the ATEMPORAL RELATION schema. I have also pointed out that it is difficult – and probably not ultimately very productive – to devise a classification that takes all the different aspects of deviation into account, but that there are, nevertheless, two aspects that stand out as being of relevance: on the one hand differences in the relative asymmetry between participants, and, on the other hand, differences in the individuality of participants. I have shown that although most adjectives exhibit a clear asymmetry between participants, there are some REL-adjectives whose m-structure suppresses this asymmetry, so that all participants are portrayed as being of equal prominence. This, in turn, means that any combining nominal may be (and often is) felt to elaborate all rather than only one of the participants. Examples of adjectives of this kind include *similar* and *adjoining*, where neither of the entities said to be similar and adjoining respectively is more prominent than the other. As for differences in the individuality of participants, I have shown that there are certain REL-adjectives whose m-structure deviates from the norm of two entirely separate participants; such structures constitute instead a relation between entities that are felt to be parts of the same over-arching whole. Examples of this kind of adjective include *severed* and *closed*. In cases like these, a combining nominal elaborates the schematic whole of which the relational participants are felt to be parts, rather than any participant as such; for instance, in an adjective-noun combination such as *closed door*, the adjective profiles a relation between two component entities of a larger whole (namely the blade and the frame of a door), whereas the noun profiles the whole as such (that is the door).

As regards adjective SIFs, next – that is the effects that the meaning established for a certain adjective has on the creation of meaning for surrounding and/or super ordinate constructs – I have proposed a five-fold division of (primary) SIFs into kind identification, element identification, identity provision, stipulation and specification respectively. Kind identification applies at the morphological level, in creation of nominal lexical meaning, and amounts to the identification of, and consequent redirection to, a kind concept that is not itself profiled by the encoding words as such. I have suggested that kind identification may be realized in three main ways, of which endocentric kind identification is the most common. In this type of kind identification, the meaning of the nominal 'head' serves as a reference point, which gives access to a limited set of potential meaning candidates from which the identifying pre-head meaning selects the intended meaning by mirroring some unique piece of information that this meaning comprises. I have posited that the reflected feature typically consists in some kind of generic information – either the very foundation, or some non-foundational but distinctive characteristic comprised by the concept in question. I have also shown that the mirrored information may be simplex and attribute-like, in which case it is generally reflected by the identifier in a one-to-one fashion, or complex and explanation-like, in which case it is reflected in a partial or summarising fashion. Kind identifying adjectives are generally restricted to pre-nominal position only.

As regards element identification, identity provision, stipulation and specification, I have suggested that these all apply at the propositional level, either in element creation – identifying an element, providing the identity for an element, or stipulating criteria for the acknowledgement of an element – or as a relatively independent process of specifying an element that has already been established on some kind of independent grounds. Element identifying, identity providing and stipulating adjectives may appear in predicative position in restrictive relative clauses, whereas specifying adjectives may appear in predicative position only in non-restrictive contexts.

Finally, I have established that whereas kind identification, element identification and specification correspond roughly to functions already suggested in the literature for pre-nominal adjectives (e.g. Warren 1984a), identity provision and stipulation are 'new' functions that have not received any independent attention in previous work.

5.2 Final Comment

The present work started out as an investigation into the interpretive functions of adjectives, prompted by the observation that this issue has received far less attention than it seems to deserve. In my efforts to model adjective functions in a theoretically relevant and empirically useful way, I realized that the very foundation of my quest was missing: there was no adequately formulated framework within which a model of adjective function could be properly set up. Consequently, the outlining of a general theory of interpretation came to be a parallel, and, in a sense, more fundamental concern of my research. As a result, the aim of the book has been two-fold: on the one hand to outline a suggestive theory of meaning creation and interpretive function in general, and, on the other hand, to present a theoretical discussion of adjective functions in particular, from either of which more specific models for in-depth empirical research can be obtained. I believe that the book serves these purposes well. Not only does it outline a fundamental theoretical framework for the development of concrete, testable models, but it also provides a source of inspiration for the formulation of more specific hypotheses and research questions, concerning a wide range of issues to do with interpretation and meaning creation in general, and with interpretive functions of adjectives in particular. The relatively detailed surveys of the material and the mapping aspect of adjective FIFs, presented in Chapter 3, should, furthermore, constitute a useful platform for more in-depth study not only of adjective function, but of adjective semantics as a whole.

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