Nine issues in metaphor theory and analysis[1]

Deignan, Alice. 2005. *Metaphor and Corpus Linguistics.* John Benjamins Publishing Company.

1. Background: a paradigm shift in linguistics

With the benefit of hindsight, it is now possible to see that one of the most important themes in the study of language to emerge in the 20th century was developed, not by linguists, but primarily by philosophers of language such as Wittgenstein and Grice and anthropologists such as Malinowski and Rosch. This theme involves, among other things, rejection of sharply defined category boundaries and adoption instead of systems of categories built by analogy around prototypes. Central and typical examples of linguistic categories are usually easy to identify, but boundaries between categories are fuzzy grey areas on a cline, rather than sharp divisions. Metaphor is the most prototypical example of linguistic analogy, so a corpus-based study of metaphor will be a theme of central interest.

In the linguistic paradigm shift just mentioned, Aristotelian-Leibnizian theories of meaning requiring the satisfaction of necessary and sufficient conditions were rejected. Instead, meaning in natural language is seen as an analogical system—or rather, as a puzzling mixture of logic and analogy. Seminal moments in this theoretical development have included:

- Wittgenstein's (1953) observation that the meaning of a lexical item or concept such as 'game' must be analysed in terms of a chain of features ("family resemblances"), which are not be present in all cases, rather than in terms of a single unifying condition (which in many cases does not exist at all) .

- Grice's (1957) observation that linguistic communication depends on conversational cooperation, which in turn depends on recognition by the participants on each other's intention to communicate and their reliance for this purpose on some set of shared conventions, and his further observation (1957, 1975) that languages users not only speak and write in accordance with conventions but also, paradoxically, exploit them.

- Rosch's (1973) observation that concepts are built around prototypes and 'best examples' of categories, rather than by the definition of boundaries.

- The observation by Lakoff and Johnson (1980; hereafter "L&J") that much of our ordinary conceptual system is metaphorical in nature.

The conceptual metaphor theory of L&J has excited tremendous interest. It is not surprising, therefore, that in addressing the subject of "metaphor and corpus linguistics", Alice Deignan, in the book under review, gives it centre stage.

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In the best tradition of American speculative linguistics, L&J invented their evidence. By consulting their intuitions and making up linguistic examples, they postulated several dozen 'conceptual metaphors' such as ARGUMENT IS WAR, TIME IS MONEY, and HAPPY IS UP, which are seen as basic organizing principles of human thought. In other words, conceptual metaphors are not merely headings under which linguistic metaphors can be grouped and classified, but general principles governing human conceptualization.

In the light of corpus evidence, some of L&J's invented linguistic metaphors can be shown to be unidiomatic or unnatural, for a variety of reasons. Does this matter? If some of their examples are not very idiomatic, is this a mere quibble, or does it affect the general theory of conceptual metaphor in any way? One way of addressing this question is to examine a large number of actual linguistic metaphors (after first defining some criteria for what is to count as a metaphor) and compare these with the conceptual headings concocted by L&J. How good is the fit? How well does conceptual metaphor theory stand up? Is anything else - going on?

For these and other reasons, a careful evaluation of conceptual metaphor theory and other speculative approaches in the light of corpus evidence is an essential step in getting linguistics back onto a sound basis as an empirical science. The book under review here (Deignan 2005) offers such an evaluation. It was published four years ago, but has not so far been reviewed in IJCL.

In section 2 of this review, I will summarize the contents of the book. In section 3, I will discuss some of the issues raised. In section 4, I will offer a very brief overview and evaluation.

2. Contents

Deignan's book is written at a level suitable for undergraduates with no previous exposure to metaphor theory or corpus linguistics. At the same time it discusses a number of hot topics in both disciplines. Following a short introduction, it is divided into 3 sections: 1) Current models of metaphor and metonymy; 2) Current research into metaphor; 3) The examination of corpus data.

The introduction starts with the contrast between L&J's conceptual metaphor theory and the so-called "decorative" view of metaphor. It gives a brief summary of what a corpus is and closes with an example of a sample concordance from the Bank of English (20 occurrences of the lemma **hunt**), on the basis of which some interesting questions are raised, for example, "Should the researcher be guided by etymology in trying to discern literal meanings?"

Chapter 1 explains the distinction between conceptual metaphors and linguistic metaphors. L&J claim that many abstract concepts are 'grounded' in experiences of the physical world. The evidence for the existence of conceptual metaphors consists of large numbers of linguistic metaphors having an identifiably similar theme. Kövecses (2002) is one of many researchers who, accepting this general schema, have gone on to examine linguistic metaphors in order to detect underlying conceptual

metaphors. Conceptual metaphors are 'umbrella' concepts such as HAPPY IS UP, which may never actually be uttered by anyone, but nevertheless form a systematic framework for conceptualization and reasoning by every member of the speech community. Linguistic metaphors, on the other hand, are fragments of language that are or might be in actual use, for example *'I'm feeling on top of the world'*. (Note that phrase, "or might be": as we shall see later in this review, a host of problems in metaphor theory and indeed many other areas of linguistic inquiry flow from the equation of what might be with what is.)

Some conceptual metaphors are very culture-specific. For example, Table 1.1 shows a number of linguistic metaphors (*in the running, neck and neck, an also-ran, the favourite, an outsider, impossible odds*) used in political contexts. These are grouped together by Deignan under the general heading of the conceptual metaphor AN ELECTION IS A HORSE RACE. This particular conceptual metaphor is more prevalent in English than in German, for horse-racing plays a less salient part in German culture. For a similar reason, linguistic metaphors based on the sea are less common in Czech, a land-locked language, than in English, which owes its current status as a world language to having been spread by sea voyages—often difficult, confusing, and dangerous, and for that very reason a rich source domain for metaphors.

Chapter 2, entitled 'Defining metaphor', is concerned mainly with the typology of linguistic metaphors. Deignan's definition of (linguistic) metaphor (p. 34) is as follows:

> A metaphor is a word or expression that is used to talk about an entity or quality other than that referred to by its core, or most basic meaning. This non-core use expresses a perceived relationship with the core meaning of the word, and in many cases between two semantic fields.

This is fine as far as it goes, but it could go farther, as discussed in section 3.1 below. For one thing, there are metaphorical ways of talking about events as well as entities and qualities. Deignan herself shows this in many places. For another, the notion of 'core meaning' or 'most basic meaning' is vague and needs to be probed. Metaphorical meaning and literal meaning are complementary, so they need to be defined contrastively.

Chapter 3 is a discussion of metonymy and metaphor. The prevalence of metonymy is made clear by use of corpus evidence. For example, in Deignan's sample from the Bank of English, one fifth of all uses of the word **palace** are metonymic for 'the official staff of the British royal family'. A glance at the BNC (British National Corpus) confirms this. The Sketch Engine shows this noun as a significant collocate (or rather, **colligate**, in subject position) of speech-act verbs such as *say, confirm, deny,* and *announce*, as well as *refuse* and *dismiss*. In these contexts it is normally metonymic in the sense identified by Deignan. A large central section of the chapter is concerned with the relationship between metonymy and metaphor, and in particular the work of Goossens (1995). Deignan comments (p. 62), "Goossen's work is … hugely important for language description and the analysis of figurative language in texts". This may seem to be a bit of an overstatement, for Goossens' paper, though undoubtedly insightful, is concerned only with fine-grained classification of the interaction between metaphor and metonymy—but Deignan is laying a foundation for

a reintroduction of Goossens' work in Chapter 8. More apposite is Deignan's comment near the end of the chapter (p. 71): "Metonymy … seems to be so closely intertwined with metaphor that is a difficult and probably unnecessary exercise to try to disentangle the two in every analysis."

Part II outlines current research into metaphor by corpus linguists, cognitive linguists, and discourse analysts. Chapter 4 starts with an introduction to corpus linguistics, at a very basic level, suitable for undergraduates who have never seen a corpus before. The discussion of linguistic realizations of conceptual metaphors such as ANGER IS HEAT or ANGER IS FIRE (pp. 94-96) is full of insight. Deignan cites a number of phrases invented by metaphor theorists to illustrate this conceptual metaphor and uses corpus evidence to show that, while some of them are OK, others are rare or implausible or have nothing to do with anger. Throughout part II, Deignan mounts a convincing attack on invented evidence. She shows, using numerous examples from the Bank of English, that invented evidence is often misleading and results in quite false statements by speculative linguists.

Chapters 5 and 6 discuss psycholinguistic and discourse-analytic approaches to the subject. I am neither a psycholinguist nor a discourse analyst; I found these two chapters helpful and informative. After summarizing the central themes of metaphor research in each discipline and explaining some currently fashionable research methodologies, Deignan continues the assault on invented evidence. I will cite just one case, which is both typical and instructive. On p.121 she cites a sentence (1) invented by the leading metaphor theorist Zoltan Kövecses (1991) as a supposed realization of the conceptual metaphor HAPPINESS IS LIGHT.

1. *Amusement gleamed in his eyes.*[2]

There is no evidence in the Bank of English (BofE) that the verb ***gleam*** is conventionally used in this way. The nearest match that Deignan found is 2.

2. Her tiny eyes spotted him and gleamed with malicious glee.

She comments that this is "the only instance of verbal ***gleam*** collocating with *eye/eyes* and connoting an emotion like happiness". More typical citations for this collocation, she says, are 3 and 4.

3. his crazily gleaming eyes.

4. a snarling bat creature with brightly gleaming eyes.

I checked *eyes* near ***gleam*** in the BNC and found ample confirmation of Deignan's point. ***Eyes*** near ***gleam*** is a significant collocation, and it does indicate emotion of some kind—but not happiness or amusement. 5, 6, and 7 are examples from BNC.

5. His eyes **gleamed** malevolently.

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[2]   In this review, the convention is followed of printing real citations in roman and invented examples in italics.

6. Doyle's pale eyes **gleamed**, a touch of triumph, a touch of hostility.

7. He saw Simon 's eyes **gleam** with hatred at him.

The bottom line is that Kövecses's example is perfectly possible, but not normal—certainly not normal enough to support the idea that the verb *gleam* is a conventional linguistic realization of the conceptual metaphor HAPPINESS IS LIGHT. It is an armchair speculation and, like innumerable similar armchair speculations, it is disconfirmed by corpus evidence. It would be hard to underestimate the importance of this finding for the scientific study of language.

A similar objection applies to some of the linguistic experiments based on invented examples carried out in laboratories by psycholinguists. All too often, these seem to be designed to measure how human beings might process language in phraseology that might possibly occur but normally does not, often presented to subjects for evaluation in contexts of linguistic isolation that are unnatural.

Chapter 6 is a useful discussion of discourse approaches to metaphor research. Here, previous research is on safer ground. Discourse analysts tend to accept conceptual metaphor theory as a given and explore how it can be used to interpret meaning in texts. They analyse texts—and examine examples that are natural and real. The chapter contains fascinating summaries of studies of the use of metaphor in feminist, racist, and political rhetoric. One such is by Semino and Maschi (1996), a study of Berlusconi's use of the football metaphor, as relevant today as when it was written. Of course, the aim of a football team is simply and solely to win—not to create conditions for economic prosperity or social justice or anything else that one might identify as a political goal. Deignan explains some ways in which a corpus-based approach can enrich, supplement, or provide a framework for "CDA" (critical discourse analysis). She warns against overinterpretation of data, both by overrating dead metaphors and by imaginative proposals for new conceptual metaphors on the basis of only one or two striking linguistic metaphors.

Chapter 7 discusses the grammar of metaphor, making a number of important points, including (p. 147) that the focus on noun examples in "X=Y contexts" in much of the literature on metaphor is not representative of what goes on in naturally occurring data. The section on "metaphor and parts of speech" (pp. 147-157) foreshadows Deignan's 2006 paper, dealing with the phenomenon of grammatical metaphor, notably the tendency of certain nouns such as terms denoting animals, to develop metaphorical verb meanings: *to pig out, to wolf down one's food, to monkey about with something, to weasel out of a commitment*, and so on. Moreover, different forms of a lemma can belong to quite different conceptual metaphors: for example, *rock* (singular) tends to have positive polarity ("the sanctity of human life, the rock on which our society is built"), whereas *rocks* (plural) is generally negative ("The marriage has been on the rocks for a while").

Towards the end of Chapter 7, Deignan introduces Lakoff's (1993) Invariance Principle:

>   Metaphorical mappings preserve the cognitive topology (that is, the image-

schema structure) of the source domain, in a way consistent with the target domain.

This is important because it allows for the generation of metaphorical entailments. Lakoff's associate Mark Turner commented (1990) that "metaphorical mappings import only the elements of the source domain that are consistent with the structure of the target domain, and import them in a way that is consistent with the structure of the source domain."

Deignan questions this strong form of the Invariance Principle on the basis of her corpus-driven study of animal metaphors. She says (p. 164) that "the nature of the target domain does not just constrain the extent of the mapping, as argued by the Invariance Principle; it also shapes it." She suggests (p. 173) that the complexity may be due to the complex relations between metaphor and metonymy, as studied by Goossens (1995).

In a series of corpus-driven studies reported in chapter 8, which deals with semantic relations between source domain and target domain, this theme is pursued. Delicately but relentlessly, Deignan builds up a case showing that mapping between source domain and target is indeed patterned, but the patterns are more complex than the Invariance Principle would have us believe. The target domain is in many cases the dominant shaping factor. Tables 8.1 to 8.7 (page ref?) show the detailed findings of these studies with convincing, well-chosen examples.

Chapter 9 is on metaphor and collocation. Deignan observes two opposing forces in language: one is the need to express innovative ideas, in which metaphor sometimes plays an interesting role; the other is the need to speak and write unambiguously, and therefore to use words in conventional ways. On page 194, she gives a summary of the phenomenon of collocation and makes the essential point that "Collocations exist when one word occurs in the environment of another word significantly more frequently than would be expected by chance." This is right: the word 'significantly' is all-important. Unfortunately, however, she does not practise what she preaches: throughout the book, her account of collocation is marred by a systematic failure to distinguish between **raw frequency** and **statistically significant frequency**, and she does not say anything about how significance is to be measured. This deficiency, sadly and surprisingly, can be observed in the work of many other corpus linguists. At the risk of oversimplification, therefore, I will give an example, which may help to clarify this essential point. Consider the idiomatic expression ***blow the gaff***[3]. The verb ***blow*** has two collocates here: *the* and *gaff*. Now, *blow + the* is a frequent collocation, but it is not significant. *Blow + gaff*, on the other hand, constitutes a statistically significant collocation, even though it is quite rare. See the fuller discussion of collocation and ways of measuring it in section 3.6 below.

Chapter 10 brings the book to a conclusion. In my opinion, the three most important points are:

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[3]   ***To blow the gaff*** is a slang idiom meaning 'to give away a secret'. Its origin is uncertain. According to Green (2005) it is most probably derived from ***gaff*** in the sense 'cheap theatre or music hall', hence 'to give away the plot of a show'.

- Corpus studies are consistent with Lakoff's observations about the central role of metaphor in language and the limited nature of metaphorical mapping, but they call into question some of the details. For one thing, many domain preferences cannot be explained by the Invariance Principle—the verb *blossom*, for example, is often used to talk about relationships, whereas *flower* is more often used to talk about creative projects. Nothing in conceptual metaphor theory explains these preferences.

- Prior context creates a strong expectation about the sense in which a term will be used, and this often determines that a metaphorical sense must be activated.

- Syntagmatic as well as semantic relations are of the greatest importance in the study of metaphor.

The book also has an index, which, it must be said, is not of a high professional standard. There are many major omissions and errors. To mention just three: there is no entry for **collocation,** a topic discussed at several points in the book as well as in Chapter 9, where it is the main topic. 'Vehicle' is given a reference to page 14, where there is a perfunctory mention, but no reference to the much more illuminating discussion later on in the book. D. A. Cruse (Alan Cruse) has been re-christened Andrew Cruse.

3. Nine issues in metaphor theory and analysis

3.1 Criteria for metaphorical and literal meaning

What, then, are the criteria for metaphoricity? The following criteria have been discussed in the literature. Some but not all of them are mentioned in various forms and from different perspectives in Deignan's book. It seems useful to bring them together here, before going on to discuss other issues.

- **Etymology or historical priority.** This is the defining criterion favoured by many traditional dictionaries but, as will be shown in the next section, it is unsatisfactory.

- **Concrete vs. abstract.** If a linguistic expression has both a concrete meaning and an abstract one, the abstract one is normally a metaphorical exploitation of the concrete one. This seems satisfactory as far as it goes, but not all abstract senses of words are metaphorical.

- **Frequency.** Some people have proposed that the most frequent sense of a term must be its literal meaning. This is untenable. By any other definition of metaphor, it often happens that, in non-specialist documents, the conventional metaphorical sense of a word (e.g. *launch*) is much more frequent than the comparable literal sense: Thus, *launching a product* and *launching a campaign* are more common than *launching a missile* or *launching a boat*, but still it seems reasonable to regard the former pair as metaphorical and the

latter as literal.

- **Syntagmatics**. Deignan discusses this topic in Chapter 7, but she does not mention it in Chapter 2 as a possible defining criterion. The syntagmatics of metaphorical uses of a word are typically much more constrained than the literal sense(s) of the same word. More extensive corpus-driven studies of the syntagmatics of metaphor are needed.

- **Resonance.** This is close to Deignan's definition, namely that a metaphor is a "non-core use" of a word expressing "a perceived relationship with the core meaning of the word." In my view, resonance is the most reliable criterion for metaphoricity. The claim is that if one sense of an expression resonates semantically with another sense, then it is metaphorical, and if there is no such resonance, it is literal. Not all metaphors resonate equally for every user of a language—what one regards as metaphorical, another may regard as literal—so, strictly speaking, it make senses for metaphor analysts to think in terms of 'resonance potential' rather than resonance *tout simple*.

3.2 Metaphor, etymology, and meaning change

Pages 25-26 contain a useful discussion by Deignan of the creation of new word meanings by means of metaphorical exploitation of existing senses. She rightly says that etymology or historical priority cannot be taken as the main criterion for literalness. If it were, there would be surprising consequences. For example, the 'literal' meaning of a word would have to be 'the meanings of the letters of which it is composed', for the etymon is Latin *literalis* 'of or pertaining to letters'. This is clearly nonsense. By the same criterion, the literal meaning of *subject* would be 'something thrown under' and of *object* 'something thrown in the way'. Facts such as these are of interest to historians of meaning change, but should not concern metaphor theorists. Because the conventionalization of metaphors over time plays such a large part in meaning change, etymology is a difficult issue in metaphor theory. For example, Gibbs (1994), in a justification of the conceptual metaphor ANGER IS HEATED FLUID IN A CONTAINER, offers "I was *fuming*" as one of its linguistic realizations. It is doubtful whether modern users of English (other than a few highly sophisticated ones perhaps) think of *fuming* as having anything to do with heated fluids. In other words, it is a dead metaphor. It seems more satisfactory to insist, as Deignan does, on perceived and perceptible resemblance between two current denotations.

3.3 Precision and conceptual metaphors

Reflected at one or two points in the book (e.g. p. 16) are more or less desperate attempts by metaphor theorists, including Lakoff himself, to improve precision. Deignan seems to go along with this, but if language is an analogical system in which vagueness is an essential property, then the need is for minimal statements of the conceptual prototype, not a lot of fuss about boundaries. Here are some example of the unfortunate effects of this spurious quest for precision: COMPUTERS ARE NODES IN A WEB has been 'improved' to CONNECTED COMPUTERS ARE NODES IN A WEB. LIFE IS A JOURNEY has been 'improved' to A PURPOSEFUL LIFE IS A JOURNEY. ANGER IS HEAT has been 'improved' to ANGER IS HEATED FLUID IN A CONTAINER. It seems to

me that re-phrasings such as these represents a failure by metaphor theorists to appreciate the implications of their own work, in particular regarding the nature of vagueness in meaningful metaphorical language. Be that as it may, it also represents a confusion between definiendum and definiens. The broader versions of these statements of conceptual metaphors work better. For example, if it is a criterial feature of computers that they have the potential to function as nodes in a network, then a disconnected computer is a disconnected node. If life is a journey, then a purposeless life is a purposeless journey.

3.4 Typology of metaphor and figurative language

The most important typological distinction is between conceptual metaphors and linguistic metaphors.

Deignan has a useful discussion of the classification of metaphor by L&J (1980) and by Goatly (1997). She rightly observes the status of etymology in Goatly's discussion is "uncertain" and she proffers her own corpus-based classification of linguistic metaphors, which can be summarized here:

- **Innovative metaphors**, e.g. the *lollipop* trees; He held five *icicles* in each hand (*icicles* = fingers)

- **Conventionalized metaphors**, e.g. the wind was *whispering* through the trees; *grasp* an idea; spending *cuts*; no *barrier* to our understanding.

- **Dead metaphors**, e.g. *deep* blue; *crane*[4].

- **Historical metaphors**, e.g. *pedigree, comprehend, ardent.*

I must confess to a lingering fondness for Goatly's additional category of **tired metaphors**, which lie somewhere between **conventionalized** and **dead**, but sadly, since this category is even more than usually vague and subjective, it cannot be recommended as a basis for serious typological classification.

But then, by the same token, it is hard to see the point of distinguishing the last of Deignan's four categories. A three-way distinction (innovative / conventionalized / dead) seems sufficient. Historical metaphors are dead metaphors, and indeed may never have been alive. As long ago as 1755 Samuel Johnson pointed out that *ardent* has never been used in English to mean literally 'burning', so its metaphoricity is only apparent to sophisticated Latinists.

Deignan considers typological distinctions of metaphors and metonyms in some

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[4] The metaphorical relationship between two senses of the word *crane* may not be obvious. A perceived resemblance between a tall machine for moving heavy objects and a bird with long legs is very old, going back to ancient Greek and possibly Egyptian. The metaphor is conventional (and dead) in most modern European languages, e.g. French *grue*, Czech *jeřáb*.

detail. She does not, however, discuss the typology of other tropes (other kinds of figurative language), e.g. similes, hyperbole, understatement, euphemism, irony, and puns. But then, to include discussion of these linguistic categories would turn it into a very different kind of book, and take it in a direction of linguistic analysis that she would probably not want to pursue, namely away from conceptual metaphor theory and towards an analysis of rhetorical devices.

3.5 Linguistic evidence

A fundamental question concerns the nature of the evidence on which linguistic theories and hypotheses are based. In generative (speculative) linguistics, it is still common practice to invent examples and then submit them to native speakers for acceptability judgements. This habit may be harmless enough when used in the classroom to explain uncontroversial linguistic facts such as the indirect object alternation or the difference between active and passive, but when, as has so often been the case, it is used to illustrate supposed boundaries between different 'meanings' of constructions or to draw a line between 'grammatically well formed' and 'grammatically ill-formed', it can and does lead to systematic distortion of facts. We know this now because we can check the speculations of generative linguists against the evidence for patterns of usage in large corpora and, when we do so, very often the speculations turn out to be incompatible with the evidence. It is a surprising but well-established fact that human beings are unable to recall to the conscious mind the details of their unconscious linguistic behaviour. Invented examples very often fail to represent idiomatic usage accurately. One of the great strengths of Deignan's book is that it demonstrates again and again, in tones of sweet moderation, the dangers of building hypotheses on invented evidence.

Rather surprisingly, then (at least to a skeptical old corpus lexicographer), Deignan's work also shows that a large part at least of L&J's conceptual metaphor theory is well founded in a way that is generally not the case for other branches of linguistic speculation based on invented evidence. Why is this? Maybe because the theoretical postulates of L&J operate at such a fundamental level that the details of idiomatic phraseology don't matter. More to the point, L&J were not talking about language at all, but rather about the way the mind organizes concepts. So, to L&J, the phraseological details really do not matter. However, when we get down to linguistic metaphors such as the metaphorical meaning of *gleaming eyes* or the expression *to bite something* vs. *to bite something off*, the status of the evidence matters very much indeed. However, where L&J really come unstuck is with the Invariance Principle, which Deignan shows is untenable in its strong form.

3.6 Collocation and how to measure it

The most disappointing aspect of Deignan's book is her treatment of collocation. As suggested above, it is disappointing for one fundamental reason: it pays only lip service to the notion of statistical significance. As a result, the tables of frequent collocates that she gives (pages 82, 85, 200, 202, 205) contain more 'noise' than 'signal'. Measuring the statistical significance of the co-occurrence of pairs of content words is one of the most important contributions that corpus linguistics can make to the study of language, including metaphor, but at present this contribution is being

made only sporadically. If, as everyone seems to agree, metaphors express a relationship between two semantic fields, then measuring the statistical significance of collocations of two words from different semantic fields in large corpora will undoubtedly shed light on various aspects of metaphor theory, for example the extent to which particular metaphors are conventional or novel. Tools for measuring the statistical significance of collocates in corpora have existed since Church and Hanks (1990), but corpus linguists, unlike some computational linguists, have been slow to take advantage of them. The general principles were already sketched out in Sinclair (1987). An evaluation of two of the most relevant tools for analysing significant collocations (Mutual Information (MI) and t-score) is summarized in Church et al. (1994), but during the 1990s doubts and disagreements among project computing officers and tool builders, and quasi-theological disputes about "which statistic is best" in the 1990s brought the application of corpus statistics to a standstill among the majority of corpus linguists (including Deignan), who were not well served by their computing colleagues. Different statistical measures give more or less different results, but that is not a reason for not using statistics at all. To take an analogy, different cars give measurably different performances, but if you want to get from Oxford to Nottingham reasonably quickly, any car is better than walking.

The situation was rescued by development of a user-friendly version of collocational analysis in the Sketch Engine (Kilgarriff et al., 2004). This tool was published only a year before Deignan's book, so she can be forgiven for not knowing about it, although a prototype was already available three years before that (Kilgarriff and Tugwell 2001).

You do not need to be a statistician to be able to use the Sketch Engine, but you do need to make a distinction between frequency and statistical significance. Deignan says (p. 79), "When two or more words regularly appear in each others' environment, they are known as *collocates*", and she presents a table (4.1) showing frequent collocates for the lemma *blow*, with no distinction between noun uses and verb uses. An even more serious problem is that Deignan's tables make no use of the concept of statistical significance. In measuring collocations, raw frequency alone is not enough. It is not interesting to be told that function words such as *the, a, be, is, and, of, with* frequently co-occur with *blow*. These function words co-occur with other content words, too. The question is, what are the words that occur significantly more often with *blow* than with any other word? Table 1 shows some of the most significant collocates of *blow* as a verb in the BNC, according to the Sketch Engine. The statistical measure used in the Sketch Engine was originally a modified form of MI, but now it uses the Dice coefficient. Both are statistical measures that tend to favour collocations of content words. They are therefore more suitable for metaphor analysis than, say, t-score, which gives equal weight to common words such as function words and is therefore more useful for identifying phraseology.

Table 1: the most significant collocates of **blow**, v., in BNC

Collocate	Syntagmatic Role	Freq.	Salience score	Comment
wind	SUBJ	392	9.9	
breeze	SUBJ	49	8.77	
gale	SUBJ	20	8.2	

Whistle	SUBJ	22	8.06	inchoative: "the whistle blew"
storm	SUBJ	34	7.75	
Trumpet	SUBJ	9	7.1	
Draught	SUBJ	7	6.71	
Referee	SUBJ	9	6.41	
Whistle	OBJ	93	10.05	causative: "he blew a whistle"
Trumpet	OBJ	38	9.07	
nose	OBJ	131	8.72	
Horn	OBJ	39	8.16	
Smoke	OBJ	50	8.12	
Fuse	OBJ	17	7.98	
Bubble	OBJ	22	7.87	
Gaff	OBJ	11	7.69	Rare word; significant collocate
Kiss	OBJ	25	7.59	
Gasket	OBJ	10	7.51	
Cobweb	OBJ	9	7.28	
Apart	PARTICLE	32	9.03	Much less frequent that "blow away" – but more significant
Away	PARTICLE	163	7.97	
Up	PARTICLE	444	6.49	
Over	PARTICLE	62	6.01	

Some of the statistically significant collocations identified in this table have conventional metaphorical meanings alongside literal ones, for example *blow (the) whistle* (on someone), *blow (one's own) trumpet, blow a fuse, blow up* (with a human subject, both the last two mean 'lose one's temper').

If a metaphor employs two content words that are not statistically significant collocates, then probably either it is a fresh, novel metaphor or it is an obsolescent piece of fossilized phraseology such as *to draw a bow at a venture*. (This speculation deserves more thorough investigation than is possible in a review. In fact, it deserves a monograph.) However, neither frequency nor statistical significance can be regarded as a criterion for metaphoricity. Deignan is wrong to propose frequency as an identifying criterion for innovative metaphors: she proposes (p. 47) "fewer than one use per thousand corpus citations for a word." There are plenty of extremely rare but conventional uses of words and phrases, for example *draw a bow at a venture*. Let us suppose, as seems likely, that this collocation has fewer than one use per thousand corpus citations in any general corpus—however measured: for *bow*? for *draw*? for *venture*? This does not make it an innovative metaphor. It is a conventional expression, even if the convention is only activated very occasionally.

An objective for the future must be to compare statistically significant salience with the notion of cognitive salience as described in Giora (2003).

3.7 Are all linguistic metaphors realizations of underlying conceptual metaphors?

Deignan has shown that the answer to this question must be no. This does not invalidate conceptual metaphor theory, of course, but it does raise questions over the

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attempts, for example by discourse analysts, to fit every linguistic metaphor into a conceptual-metaphor framework. Metaphor in language and cognition is a remarkably wide-ranging phenomenon, of which conceptual metaphors form only a part—although, it must be said, a central part.

3.8 Are metaphors grounded in an experiential gestalt?

On the face of it, the answer to this question too seems to be no. You do not need to have experienced living through a war to be able to understand the conceptual metaphor ARGUMENT IS WAR. However, the key word in the question is 'grounded'. The 'experiential gestalt' must be some sort of Jungian collective experience, embodied in the conventions of language, rather than the particular experience of any one person. For this reason, it would be preferable to talk of a 'linguistic gestalt' rather than an 'experiential gestalt'. But then a linguistic gestalt ranges far beyond metaphor theory. Every content word of our language embodies a greater or smaller set of meaning potentials which, collectively, can be described as a linguistic gestalt.

3.9 The role of figurative language in linguistic creativity

Deignan comments (p. 40), "Individual speakers are likely to disagree about the newness of particular linguistic expressions". Work that she did with Lynne Cameron (Cameron and Deignan 2003) lends support to this observation. Strictly speaking, of course, the remark should be applied to hearers and readers, rather than speakers. Speakers and writers may be presumed to know whether, in their utterances, they are innovating or not, but a metaphor that strikes a reader as particularly fresh and innovative may in fact have been used many times before, for example in some specialist domain with which the reader is not conversant.

The distinction between literal meaning and metaphor blurs into a distinction between primary and secondary word senses, the latter being syntagmatically more tightly constrained that the former. In addition, there is a fuzziness between conventional but still resonant metaphors, on the one hand, and dead or dying metaphors on the other hand, such as *to be fuming* meaning 'to be very angry', where, I guess, for many people there is rarely or never any interaction with the notion of smoke or noxious fumes.

Metaphors play a central role in linguistic creativity but most of the metaphors discussed in the literature are invented and therefore suspect. And of those collected by researchers from texts, most are established conventions of the language, not examples of creativity. We are still a long way from understanding the true nature of linguistic creativity. In Hanks (2004, 2006) I proposed that the distinction between conventional metaphors and literal meanings is less important than the distinction between dynamic (novel) metaphors and conventional metaphors. Deliberate abnormal usage exploits conventional usage in ways that are not yet well understood. The mechanics of metaphor—which enable innovative metaphor—clearly play a central role in linguistic creativity. Many detailed corpus-based studies of anomalous examples of authentic figurative usage will be necessary before we can get a clear understanding of this aspect of linguistic behaviour.

4. Evaluation

Deignan's book is an important contribution both to metaphor theory and corpus linguistics. It is clearly written and well organized. It is essential reading for anyone interested in corpus linguistics or metaphor.

She shows clearly the misleading consequences of inventing evidence and, by contrast, how convincing conclusions can be reached on the basis of empirical analysis of corpus evidence—looking not merely for authentic examples ("Butterfly collecting," in Noam Chomsky's famously dismissive phrase) but for patterns. It shows the benefits of contrastive studies of metaphors in different text types, and questions the "Invariance Principle", as outlined above in the summary of Chapters 7 and 8 above. She comments (p. 166):

> Each linguistic metaphor has a life of its own.

This is an important point, for the tendency to seek broad generalizations on the basis of speculative evidence is widespread and deserves to be questioned.

Deignan's main point may be summarized in this sentence (p. 145):

> A corpus linguistic approach can contribute to our understanding of metaphor.

For corpus linguists, it must be said that the converse is also true. An understanding of metaphor can contribute to approaches to corpus linguistics. Anyone who has done any large-scale corpus-driven lexical analysis cannot help being struck by the frequency and systematicity of metaphor in natural language. Any corpus linguist undertaking an analysis of lexis, collocation, or discourse structure needs to take account of it. Deignan shows how this can be done, and she points to some possible pitfalls in speculation-based metaphor theories.

Since the book was published, she has made several further contributions to the field, including Deignan (2006), which addresses grammatical metaphor, and Deignan (2009), which addresses criteria for identifying metaphor in corpora. A new edition of this book—or perhaps a successor to it by the same author—is therefore much to be desired, one which will reflect recent work and take a more hard-nosed approach to the statistical analysis of evidence, using the tools that are now available.

Acknowledgement

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