

LINGUISTIC AND FIGURATIVE PATTERNS IN NATURAL LANGUAGE DATA

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Abstract :

The analysis of corpus data can reveal features of language use not available to unaided intuition. At the detailed level of collocation and lexical grammar, corpus data show features that are apparently specific to literal uses of words and to different types of non-literal uses, such as metaphor and metonymy. These patterns are mainly consistent with categories developed by cognitive linguists. However, there are some more detailed features that are not explained by cognitive theory. These include the proliferation of semi-fixed collocations, speakers' apparent acceptance of ambiguity, and the very specific evaluative meanings associated with many non-literal uses.

Keywords: metaphor, corpus, fixed expressions

Introduction

This paper argues that using the basic corpus linguistic technique of concordancing, evidence can be found for the cognitive theory of

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metaphor. When concordances are examined in detail, distinctions between different kinds of mapping can be detected in language patterns. However, a further, frequent pattern is found: a large number of fixed expressions with figurative meaning. The existence of such expressions is not explained by cognitive theory, though it does not run counter to its predictions. Corpus methodology was chosen because of the observations of Sinclair (1991, 2004) and others, that the patterns found through corpus searches are often not predicted using intuition. This has been particularly relevant to the study of metaphor, where intuitively derived and experimental data predominated until relatively recently.

In recent years, there have been some metaphor important studies using corpus data, including those of Charteris-Black (2004), who analyses the metaphors of different genres from a critical perspective, and that of Koller (2004), who takes a critical discourse analysis perspective on the metaphors of business. The work described here differs in that its focus is on linguistic patterns and what these may suggest about theory, rather than on a specific genre.

In the next section, I illustrate patterns that are specific to either metaphorical or metonymic mappings, and support the distinction made in the literature between these two types of trope. I then discuss fixed figurative expressions, which are less easy to describe within existing categories. The corpus used is a 59 million word section of the Bank of English, available online through WordBanks (HarperCollins Publishers).

Lexical patterns found in metaphorical mapping

I have argued (Deignan, 2005a) that metaphors tend to form coherent semantic relations in the target domain, which are consistent with source domain relations. For instance, verbal *attack* and *defend* share a relationship of antonymy in the source and target domains. The following citations are typical:

Ministers were *attacked* for withholding the truth.
The teenager was *defended* by his mum Sue on the doorstep
of their family home yesterday.

I searched for a number of realizations of the conceptual metaphor ARGUMENT IS WAR, using the linguistic examples from the literature as a starting point, and extending the search to other words from the domain of WAR that were found as collocates of the original search words. The semantic relations of synonymy, antonymy and hyponymy holding in the source domain WAR were found to hold when these words were used in the in the target domain of ARGUMENT. The same pattern is found for plant metaphors (Deignan, 2005a). For instance, we can see that the semantic relations that we find between source domain meanings of PLANT lexis are recreated in the target domains of BUSINESS, DEVELOPMENT and EMOTIONS:

... creating a more favourable and positive environment in
which business can *flourish*.
Though Ashoka's empire fragmented politically after his
death, the great *flowering* of Indian culture begun in his reign
continued.
...Lincoln's view that slavery would *wither* and die.
Wild generosity often *shrivels* up in the cold wind of reality.
The market *wilted* in line with softer overseas bonds.

Lexical patterns found in metonymical mapping

Corpus data show that this semantic coherence does not hold where there is a stronger element of metonymy in the mapping. For instance, Deignan (2005b) shows that figurative expressions that include the words *light* and *dark* show far weaker semantic patterning. The grounds of the mapping are physical: Barcelona argues that light is associated with optimism, and being able to see and therefore know, and dark is

associated with the opposite (Barcelona, 2000), and the extension is therefore metonymic. Instances of the figurative use of *dark* in the corpus are:

...but there is a *dark side* to him as well.

Denise, 31, explores the *dark* worlds of mental illness, drugs, alcoholism and child abuse.

...visiting the patients in the same hospitals where I had spent endless *dark days*.

[His] joy at sharing so much with [her] will help him through the *dark years* without her.

There is no corresponding use of *light* for any of these expressions (*light years* exists but has a completely different meaning). The notion of light is used to talk about happiness, in words such as *bright* and *glowing*, and in the verb *lighten up*, but the main metaphorical use of *light* is in expressions such as *bring to light*, *come to light* and *shed light on*, which are used to talk about knowledge, as realisations of a different mapping, UNDERSTANDING IS SEEING. Further, these uses are nouns, and there is relatively little metaphorical use of adjectival *light*. Similarly incomplete mappings were found for the four main temperature terms *hot*, *cold*, *warm* and *cool* (Deignan, 2005b).

It seems possible that the very patchy mappings found for *light* and *dark* and the temperature terms are an indication that the mappings are metonymical. Because it involves a mapping within a domain, a relationship of continuity, metonymical mapping seems to apply to individual entities rather than groups of entities. Linguistically, this would imply that it may operate at the individual level of each word, in contrast to the systematic mapping claimed to be associated with metaphor in the cognitive theory. This would mean that corpus data could be used to establish the nature of mapping for other domains. Where a coherent network of lexical relations is found, it could be inferred that the mapping is metaphorical, where it is unsystematic, this would suggest it is metonymic.

To a large extent, the semantic patterns described here are consistent with categories developed by cognitive linguists, and even reinforce them. However, corpus data also reveal a set of expressions that have features that are not explained by cognitive theory. These features are both linguistic and pragmatic, and are now described.

Fixed figurative expressions

The easiest way to extract data from a corpus is via concordancing programs, which produce data in a now familiar form. Berber Sardinha (2007) has worked on other ways of approaching a corpus, which are in some ways closer to the principles currently at the heart of corpus linguistics. However, using concordances is still the most widely used technique for examining corpora, and this has shown a suggestive pattern, now discussed. This is a type of linguistic expression with figurative meaning, termed here “fixed figurative expression”.

My first encounter with concordance data was as a novice lexicographer, when I was trained to analyse the different senses of a word using clues such as collocations. Concordances are obviously excellent sources of data for lexicographers, but one problem with translating findings into dictionary format is that the standard dictionary format much prefers free-standing, freely combining senses of words over fuzzy categories and multi-word items. This is partly for practical reasons, in particular the space limitations of paper dictionaries, and because most dictionaries are designed for language learners who require straightforward descriptions. The preference is also a reflection of the traditional division of the language for pedagogic and analytical purposes into words and grammar. For practical reasons therefore, and following established tradition in lexical analysis, there are pressures on the analyst, especially one who has worked with dictionaries and with learners of English, to fit concordance data into discrete categories of meaning. The allowed exception is the small group of expressions known as “idioms”, which are generally regarded as non-decomposable in terms of semantics or form, and are generally treated as single units

that happen to be composed of more than one orthographic word. These tend to be marginalized in most dictionaries, being dealt with after the other senses of a word, which may create the impressions that they are anomalous and not central to language. Work on lexical grammar, such as Hunston and Francis (2000) is challenging this view of word meaning, and there is a huge literature on formulaic expressions. This has had little impact on dictionary design and most other forms of language description as yet however, and metaphor research still tends to take this approach to analysis.

The problem with treating a word as being single unit of meaning, to be considered as literal or metaphorical in itself, is found almost every time a concordance is examined. Once clear-cut examples of literal and metaphorical uses are accounted for, there is often a fairly substantial proportion of the data unaccounted for. To give a numerical illustration of this, I give a detailed breakdown of the word *heel*, from the 1361 corpus citations of *heel*, *heeled*, *heels*, *heeling*. This word was chosen at random as the first figurative use that found in a text that was being analyzed for other purposes. *Heel* occurred in the title, which read:

The Achilles heel of quality: the assessment of student learning

Table 1 gives a breakdown of the found in the concordance.

Table 1: Senses of *heel*/ *heels*/*heeled*/ *heeling* in the online section of the Bank of English corpus

Meaning	Number of citations
Literal	885
Referring to part of foot, hand or shoe; something shaped like a heel	876

To move sideways, usually of boats	5
Sporting	4
Metaphorical 'unpleasant person'	3
Fixed expressions with potentially non-literal meaning	473
Follow on the heels of/ hard on the heels of	84 (but up to 10 literal)
Well heeled	62
Head over heels (usually 'in love with')	56 (but up to 3 literal)
Hot on the heels of something/ someone	47 (4 but up to literal)
Achilles heel	41 (2 but up to literal)
Turn/ spin on one's heel	31 (but many with literal meaning)
Dig in one's heels	29
(bring someone) to heel	28 (2 possibly literal)
Kick one's heels	23
Snap at someone's heels	18
Down at heel	17
Drag one's heels	15
Push somebody back on their heels	7
Cool one's heels	6
Kick up one's heels	5
Be under the heel of	3
Dog someone's heels	1

885 citations show clear-cut literal uses: straightforward references to shoes, feet or objects of similar shape. 3 citations are possibly metaphorical; *heel* is used in rather old-fashioned English to describe a man who has behaved badly, usually towards a woman. The remaining 473 of the citations, that is, over a third, are found in fixed expressions which require further analysis to determine whether or not they are metaphorical. Some examples of these are:

Head over heels

Finnegan becomes Estella's playmate and falls *head over heels* in love with the young heiress.

hot on the heels

With violent debt collectors *hot on her heels* she sets off in search of her errant old man and, in a desperate bid to make ends meet, starts holding up bookies, banks and jewellers.
... when he left in 1968, with drug demons *hot on his heels*, he took with him the band's interest in brief, structured songs. The Grand Theatre is pleased to welcome Northern Ballet Theatre back this Autumn, *hot on the heels* of their wonderfully successful visit in May with 'Romeo and Juliet'.

Achilles heel

If he does have an *Achilles heel* then it has to be his temperament when the pressure is on

Down-at-heel

...wearing her creased alpaca apron, her fat insteps leaning over her *down-at-heel* shoes.
But remember that many thefts occur in cheap hotels where the perpetrators are often other travellers. Watch out for *down-at-heel* strangers who want to share a room.
...a tale of love, laziness, lies and lobelia amongst the staff of a *down-at-heel* gardening magazine.

to heel

.. no amount of tugging on a lead's going to keep that dog *to heel* is it?

The disciplined atmosphere at Nottingham Forest brought Walker *to heel* and the debt he owes to Clough is enormous.

Moon (1998) gives a list of expressions related to bodily processes which share these characteristics. There are many such expressions, and include

take one's breath away; take a deep breath; get back on one's feet; look over one's shoulder; cry on someone's shoulder

Characteristics of fixed figurative expressions

The fixed figurative expressions containing *heel*, and Moon's expressions seem to share the following characteristics:

1. They are too fixed to be described purely in terms of their component word forms
2. They are not fixed enough, or opaque enough to be described as idioms
3. There is a cline between literal and figurative meaning
4. They have elements of both metaphor and metonymy
5. They have specific evaluative and pragmatic orientations

The first two characteristics of fixed figurative expressions relate to their awkward place between words and idioms. Idioms are at the opposite end of the scale from freely combining words, and it is accepted

that many if not all idioms are metaphorical in origin. Fixed figurative expressions do not have all the characteristics generally agreed to pertain to idioms. Idioms such as *kick the bucket*, *bite the dust* or *hit the roof* are lexically and grammatically fixed to some extent, and have a degree of opacity. These fixed figurative expressions show these characteristics to a small degree but would probably be rejected as examples of classical idioms by most analysts. However, they are not freely combining words either: in terms of form they fall somewhere in between. There is a large and growing research literature on this middle ground, formulaic phrases (for example, (Wray, 2002; Moon, 1998)), increasingly recognizing that collocational forces result in large numbers of semi-fixed expressions. However the importance of metaphor and metonymy to this category has not been fully explored.

Most, if not all fixed figurative expressions show the third characteristic, a cline between literal and figurative meaning. This has also been noted by Moon (1998) and Charteris-Black (2003). An example can be found in the three corpus citations for *down-at-heel*, above. The first is very clearly literal, though certainly with connotations of poverty or laziness. The third is not literal; magazines do not have feet or heels, and here *down-at-heel* denotes something that is worn out or shabby. The middle citation has elements of both literal and figurative, and it is not completely clear, or important, whether the citation is intended as literally true. The citation is acceptable even if we were to know that the strangers referred to do not wear shoes with heels.

The *down-at-heel* citations also illustrate fourth characteristic of fixed figurative expressions, an interaction between metaphor and metonymy. The figurative meaning of the expression is derived through metonymy: in the second citation, the stranger's worn out shoes are one aspect of his being shabby and untrustworthy. Because there is no literal possibility in the third citation, the expression is metaphorical rather than metonymic. Goossens describes expressions such as these as "metaphor from metonymy" (1990), but does not give examples of this cline from literal through metonymy to metaphor, possibly because

he took his data from dictionary entries which of necessity avoid showing ambiguity between different meanings (Deignan, 2005a).

The fifth characteristic of fixed figurative expressions is that they tend to have an evaluative orientation: that is, their meaning is not denotatively neutral. This evaluative property can sometimes be explained in terms of a positive or negative orientation. For instance, *down at heel* is almost always strongly negative. In other citations, the pragmatic orientation is more subtle; citations of *well-heeled* usually suggest irony, of *dig one's heels in*, a grudging respect for behaviour that is inconvenient. Moon (1998) writes that idioms often encapsulate a schema, a culturally-shared notion of a sequence of events, along with the evaluation that often accompanies such events. Her description of idiom schemata fits well with the impression made by fixed figurative expressions. It is often noted in the Conceptual Metaphor literature that metaphor evaluates, but what is usually referred to are the metaphorical entailments of conceptual metaphors. The specific, schematic evaluative role of these fixed figurative expressions seems at least as important, especially given their frequency.

Conclusion

The cognitive metaphor theory does not offer an account for fixed figurative expressions, although Goossens' (1990) category of "metaphor from metonymy" offers a partial explanation for their interaction between metaphor and metonymy. Their linguistic features are partly described in current work in applied linguistics on pattern grammar, but this has not been linked to their semantic properties. In all the work that potentially touches on them, fixed figurative expressions are hybrids, not members of central categories. Borderline cases have to be allowed in order to fit them in; they sit on the borders between central notions such as word and idiom, literal and figurative, or metaphor and metonymy. However, these corpus data suggest that numerically at least, this apparently problematic group of expressions should be regarded as central.

Kövecses (2005) writes in his recent book:

Cognitive linguists who are primarily interested in patterns and regularities of thought typically use elicited data, whereas researchers who focus on detailed language description typically use naturally occurring data, as found in large corpora. This gap in methodology between more cognitively oriented and more language-in-use-oriented researchers is now narrowing. There seem to be two reasons for this. One is that apparently irregular usages may eventually turn out to be systematic when found in large numbers in large corpora; the second is that elicited data may be biased as a result of the disparity between what people think they write and say and what they actually write and say. (p. 32).

I argue that the nature of fixed figurative expressions, and their role in discourse and thought, is an instance of Kövecses' first reason, "apparently irregular usages" which "may eventually turn out to be systematic". The corpus evidence is that these are frequent. Once they are viewed as the heart of the investigation, rather than noise, they could give us important information about the properties of metaphor in language and thought.

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