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ARTICLE

Metaphorical propositions: a rationale

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Abstract

This article is an overview of the approach to metaphor analysis expounded in the following three articles. Until now the study of conceptual metaphor has been based mainly on the evidence of invented linguistic examples. Although the great value of the work done within this framework is clear, a more empirically oriented approach will need to engage with metaphorical language in naturally occurring discourse. To study this an explicit analytic procedure is required. Although such a procedure should ultimately provide a new source of evidence for underlying cognitive processes, it will not provide a direct path from linguistic to cognitive reality. When our group classifies an instance of language as metaphorical we thus do not claim that it realizes a psychologically real conceptual metaphor, but only that it provides the linguistic basis for such a realization. In specifying the conceptual metaphorical potential of this linguistic basis, we have found the tools of propositional analysis, as developed by discourse psychology, as well as the concept of cross-domain mapping familiar in cognitive semantics, to be extremely useful. Our approach to metaphor analysis thus has three levels: that of metaphorical language; that of the metaphorical proposition; and that of the cross-domain mapping.

Keywords: *cognitive semantics*; *conceptual metaphor*; *discourse analysis*; *linguistic metaphor*; *propositional analysis*

1 Introduction

This article is the first of a series of four in this special issue and aims simply to present the basic rationale behind our group's procedure for identifying metaphor in naturally occurring discourse. This procedure has so far been applied to two texts, an excerpt from *Three Times Table* by Sara Maitland (1990), a piece of 'popular' fiction, and an excerpt from *The Moor's Last Sigh* by Salman Rushdie (1995), a piece of 'serious' fiction, which were both taken from the Lancaster University Speech and Thought Presentation Corpus (for further information, see Heywood et al., 2002). The approach to metaphor identification that we are putting forward is not a process approach. That is to say, we are not claiming for any linguistic metaphor that we identify in any given text that it has necessarily been processed by its producer or by any of its receivers as a metaphor. It may or it may not have been so processed. We do, however, claim for each linguistic metaphor that we identify that it provides the basis in principle for the construction of a conceptual metaphor. Such a conceptual metaphor is understood in the standard way as a conceptual mapping from a source to a target domain (Lakoff and Johnson, 1980; Lakoff, 1987; Lakoff, 1993; Gibbs and Steen, 1999).

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If readers of a given text do construct such a mapping then the linguistic metaphor has been metaphorically processed. If they do not, then the linguistic metaphor has been processed but not metaphorically. (For the distinction between the processing of metaphor and metaphorical processing proper, see Steen, 1994.)

Let us consider an example to help make clear the distinction that has just been made, from Sara Maitland's *Three Times Table*:

(1) It had not, as it turned out, been Jim that had made the happiness for her, but the house itself.

It is possible in principle to imagine a cross-domain mapping being activated by each of the two underlined forms. The form *turned* could activate a mapping from the domain of people moving out into an open area onto that of people coming to know facts. The fact expressed by the sentence's main clause could be conceived metaphorically as emerging from hiddenness in the same way that people turn out of a building.[1] The form *made* could activate a mapping from the domain of the making of artefacts onto that of causing emotional states in people: Jim's making *her* happy could be conceived metaphorically, for example, as being like making a cake. Yet no such metaphorical mappings may actually have been constructed in the mind of the text's producer of her receivers. The producer and some or all of her receivers may have accessed the novel's text world literally and directly without any metaphorical processing at all, passing as it were straight through the metaphorical foci *turned* and *made* to the text world.[2] This is possible, for instance, if these lexical items have polysemous representations for literal and metaphorical meanings in the mind of an individual language user. More generally, our approach thus constitutes what Cameron (1999) would classify as a Level 1 as opposed to a Level 2 Theory. It attempts, that is, to set up an analytic framework for metaphorical language and conceptualization without directly making hypotheses about the metaphorical processing that may or may not be going on in the minds of text producers and receivers.

2 Metaphorical propositions: the rationale and basic principles

Our approach does not attempt to access directly what may be going on in relation to metaphor in the minds of the producers and receivers of texts. Yet if we do not engage directly with cognitive reality, cognitive reality is still what we are ultimately interested in. The problem is that cognitive reality is not so easy to get at. It is one thing to invent sentences for the purpose of illustrating hypothesized conceptual metaphors such as ARGUMENT IS WAR or LIFE IS A JOURNEY. It is quite another thing to decide what exactly may be going on in the mind of the producer or receiver of a spontaneously occurring text containing one or more linguistic metaphors. Yet any attempt to construct hypotheses about both the processing of metaphors and metaphorical processing must be able to insightfully

analyse and categorize the stimulus material, the textual language, to which a processor is exposed.

When psychologists construct textual material for experimental purposes or elicit it in certain systematically constrained ways, the required analysis of the metaphorical language is of course built into the experimental design, or should be. With naturally occurring discourse, however, it is in the nature of the case that no such analysis is built into the text. It has to be created by the analyst in a post hoc fashion and created in such a way that it can be applied to at least a broad range of text types. However deep an insight into the nature of textual and metaphorical processing the artificially constructed experiments of psychologists may give, a point comes in our view when one has to be able to work on naturally occurring text too.

This is most obviously the case if one is concerned with the processing of metaphor in literature. Here one has to engage with actual literary texts and their processing. So any attempt to get at the cognitive reality of the processing of metaphor with literary, as well as other types of, text must have at its disposal a means of analysing linguistic metaphor in a way that is cognitively sensitive, even though it does not itself deal directly with cognitive reality.

Our procedure for the analysis of metaphor in naturally occurring discourse is constructed so as to reveal textual patterns of metaphor that psychologists, stylisticians and others will need to explain and in such a way as to facilitate those attempted explanations. The most obvious way to facilitate such explanations, given the widespread current assumption that metaphor as a psychological reality consists of a source to target domain mapping, would seem to be to specify the potential mapping for each identified linguistic metaphor. Having identified the linguistic metaphors and their related potential mappings in a text, our model could then leave it to psychologists and others to determine what proportion of the potential mappings is likely to be realized psychologically and what relations there may be between such realizations and the surface form of the linguistic metaphors themselves. Put in very general terms like this it all sounds easy and straightforward. Unfortunately, however, although it is easy enough to construct linguistic examples to illustrate hypothesized conceptual metaphors such as LIFE IS A JOURNEY, it is not always so easy to determine precisely what mapping might be associated with any given naturally occurring linguistic metaphor (cf. Steen, 1999b).

Take for instance sentences (2) and (3), which have been selected virtually at random, (2) from Sarah Maitland's *Three Times Table* and (3) from Salman Rushdie's *The Moor's Last Sigh*:

(2) Then she laughed at herself, with an edge of mocking irony
(3) Abraham in a feverish rage spent hours crawling across the floor in search of magic.

No-one is likely to have any difficulty associating the verbal metaphor focus *spent* in (3) with the well-recognized conceptual metaphor TIME IS MONEY.

Exactly what conceptual metaphors, however, are to be associated with *edge* in (2) or *feverish* and *magic* in (3) is not so easy to say. No obvious answers seem available here. One could of course sit down and work out a mapping for each linguistic metaphor. In the present state of our knowledge, however, many such proposed mappings are likely to be highly arbitrary and ad hoc. Even if they were not, working them out would take an immense amount of time. Time, however, is something that a procedure for dealing with extended texts does not have plenty of. Our treatment of the two already mentioned texts constitutes the first tentative application of our procedure. In the future we will want to apply it to a much larger number of texts. Yet even this first tentative application requires the analysis of a large number of metaphors. The first of our texts, the excerpt from Maitland's *Three Times Table*, contains 2420 words and, according to our analysis, 181 metaphors; the second, the excerpt from Rushdie's *The Moor's Last Sigh*, contains 2156 words and 144 metaphors.[3] A procedure for dealing with this amount of material must be reasonably speedy to apply.

It is not surprising that bridging the analytic gap between linguistic text and the hypothesized cognitive reality of cross-domain mappings should not be easy. We should not be misled by the standard form of notation in cognitive semantics into thinking that conceptual metaphors are much simpler things than they really are. A formula such as TIME IS MONEY is, as cognitive semanticists have emphasized, only a mnemonic for something that has a highly complex structure. Such a structure involves a source domain, a target domain and a mapping relationship between the two based upon a set of more or less conventionalized correspondences involving not only entities but also properties and relations. (I will leave aside here the contemporary development of blending theory, which represents conceptual metaphor as something more complicated still, for it postulates four mental spaces, and not just two conceptual domains, as underlying each conceptual metaphor. See Turner and Fauconnier, 1995; cf. Grady et al., 1999.) When one adds in the problem that there is no clear agreement as to exactly at what level of generality mappings should be defined, the analytic complexities become even greater. Lakoff (1993) has argued forcefully that LIFE IS A JOURNEY, for example, is not a basic conceptual metaphor but is rather derived from something much more basic and general, CHANGE OF STATE IS CHANGE OF PLACE. This more basic and general level is referred to as 'primary metaphor' by Grady (1999).

It was observed in the last paragraph that it is easy to relate the verbal metaphor focus *spent* from the Rushdie excerpt to the conceptual metaphor TIME IS MONEY. However, given the question as to what exactly is the level of generality at which metaphorical mappings should be defined, perhaps not even this is as straightforward as it at first appears. In our current state of knowledge at least, it does not seem possible to fully specify the precise metaphorical mapping which each and every identified, naturally occurring, linguistic metaphor makes possible. It is one thing to say that the sentence *Then she laughed at herself, with an edge of mocking irony* makes a cross-domain mapping potentially

available. It is quite another thing to precisely specify and characterize that mapping.

What is needed is some means of characterizing the potential cognitive reality of metaphor that is less 'filled out', less ambitious, than that of fully specifying a potential cross-domain mapping. It is at this point that the kind of propositional analysis that has been used by psychologists in exploring the psychology of textual processing naturally offers itself. We have adopted one of the most well-established and straightforward versions of this kind of propositional analysis, that described in Bovair and Kieras (1985).[4] This employs basic predicate and argument structure, although its structures are considerably simpler than those of first-order predicate logic. Its aim is to give an analysis of the conceptual content of a text which will allow psychologists to put aside its surface linguistic detail while formulating and testing hypotheses about such things as text-reading times and text recalls. The empirical successes of this kind of analysis have been, to quote Perfetti and Britt (1995:16), 'dramatic'. It works. It captures, however indirectly, some aspects of cognitive reality. It offers our approach to metaphor analysis a form of conceptual analysis that is both practical and not too time-consuming and has also proved to be cognitively sensitive to at least some degree.

Bovair and Kieras-style analyses work in the sense that they enable empirically confirmable or disconfirmable hypotheses about the psychology of textual processing to be formulated and tested. Yet a little more in the way of analysis of exactly what metaphorical propositions, as one particular kind of proposition, might be cognitively, when and if they are realized psychologically, seems needed. A simple 'It works' rarely gives sufficient information about anything, though it does give some very important information.

The first crucial thing to say is that our analysis in terms of metaphorical propositions does not carry any commitment to the idea that all human cognition is fundamentally propositional in nature. Many people involved in the study of metaphor are, like the present writer, committed to the framework of cognitive semantics. One of the most distinctive commitments of this framework is its denial that human cognition is fundamentally propositional in nature. Its central contention is that human cognition is embodied and that this is expressed cognitively by the central role of image schemas. In contrast to propositions, which have a discrete finitary structure, image schemas have a continuous analogous structure. This view of the mind, classically expounded in Lakoff (1987) and Johnson (1987), sees it not as a computer working with discrete finitary processes whose 'software' just happens to be realized by the 'hardware' of the human brain in the human body, but as something which is essentially embodied. In computational terms this view is sympathetic to connectionist models, but even these should not be given too magical a status (Cameron, 1999: 10–11). Cognitive semantics sees image schemas, such as CONTAINER, BALANCE and SOURCE–PATH–GOAL, as the expression of the human mind's embodiment (see Gibbs and Colston, 1995 for support from empirical psychology for the idea of image schemas and their importance in human cognition). For

cognitive semantics conceptual metaphor is held to be crucial in that it allows for the mapping of image schematic structure onto more abstract, less bodily related, conceptual domains to which, it is hypothesized, our embodied understanding cannot gain full access directly. Nothing in our analysis conflicts with this picture. We classify a proposition as metaphorical because it provides the basis for constructing a cross-domain mapping of precisely the kind that cognitive semantics hypothesizes. For the reasons explained we do not, at least as yet, go on and attempt to detail the exact nature of that mapping.

There are two basic approaches that could be taken to the status of the textual propositions in our framework, given that we are definitely not ruling out the validity of the cognitive semantic approach to metaphor. The first would be to regard the postulation of propositions as nothing more than a heuristic convenience. It just so happens, this position would hold, that the construction of a hierarchical series of propositions in the form of a text base (Kintsch and van Dijk, 1978; Kintsch, 1998) both is practicable and enables the formulation of a series of testable psychological hypotheses. The actual propositional analysis itself, this position might hold, is a rough and ready affair and may not give any direct insight into what is going on in the minds of text processors, though it certainly does provide evidence for various important patterns of text-reading time.

The second approach would be to hold that propositions do have some kind of cognitive reality, though they are not the basis or medium of all cognition. This approach would hold that on many occasions we do think in propositions, and that the basic image schematic structure of our understanding crystallizes out into discrete finitary propositional structures for a number of important purposes.

Either of the above two approaches will serve as a rationale for our group's procedure, a procedure that is after all a first attempt to analyse metaphor in naturally occurring discourse in a way that may be of use to psychologists, stylisticians and others. The present writer, however, finds the second approach, which grants some kind of cognitive reality to propositions, the more plausible and would like briefly to indicate two issues raised by the assumption that propositions in general and metaphorical propositions in particular have, on at least some occasions, cognitive reality.

The first issue has to do with justifying the rough and ready nature of Bovair and Kieras-style propositional analysis. There is no doubt that the first major reason for this roughness and readiness is simply the desire for a form of analysis that is as simple as possible. The propositional analysis will have to deal with relatively large amounts of text and so, given the constraints on researchers' time and energy, will have to be reasonably simple. Imagine having to analyse the quantificational structure of every sentence in a short story. Yet it is important to note that, if one does consider it likely that propositions do have some kind of psychological reality, then the rough and ready nature of Bovair and Kieras-style propositional analysis can be given a principled as well as a practical justification. Kintsch and van Dijk (1978: 377–8) point out that it is likely that text processing,

starting as it must from the surface features of text, builds up a maximally elaborated semantic representation of text on a progressive basis. The semantic representation in the early stages of this process is likely to have a structure fairly close to the surface structure of the text itself. Logical depth will only be created at a later stage (cf. Kintsch, 1998). Bovair and Kieras-style propositional analysis is relatively simple precisely because it uses a very 'surfacy' semantics. This semantics can thus receive some principled justification in that it is more likely than a logically rigorous semantics to approximate the propositional structures in our minds in at least the initial stages of textual processing.

The second important issue raised for our group's procedure by attributing some sort of cognitive reality to propositions in general and, on at least some occasions, to metaphorical propositions in particular has to do with the limitations of such an attribution. Even if some forms of cognition do give rise to psychologically real propositional structures, this does not mean that all forms of cognition do so. From a cognitive semantic point of view it is plausible to think that not only are propositions embedded in more basic image schematic structures when they are psychologically realized, but also on many occasions, such as those of everyday bodily action, cognitive processes are directly and exclusively image schematic. The question that then arises is, when metaphors are psychologically realized, does this realization always involve a metaphorical proposition? If metaphorical language is defined as that which provides the basis for the construction of a potential cross-domain mapping, does a commitment to the cognitive reality of propositions entail that on every occasion where such a potential cross-domain mapping is realized, it will be realized via the initial construction of a metaphorical proposition? Or is it the case that some psychologically realized metaphors do not involve metaphorical propositions at all, that their cognitive reality is to be understood solely in terms of image schemas and the cross-domain mapping of these? May some psychologically realized metaphors be completely non-propositional in nature?

One class of metaphor of which this may well be true is image metaphor. (For an extended argument that this is so, see Crisp, 1996.) In the following lines from T.E. Hulme's 'Autumn' there seems to be a mapping directly from the image of a farmer's red face onto the image of the moon's reddish disc low on the horizon in autumn:

(4) I walked abroad,
And saw the ruddy moon lean over a hedge
Like a red-faced farmer.

There seems no need to make any appeal to a metaphorical proposition here. If the linguistic simile is realized psychologically by the reader, and it would be disingenuous to suppose in this case that it would not be so, then there is no need to postulate the occurrence of any other cognitive event than that of the construction of an image to image mapping. In this case it seems that no metaphorical proposition is likely to be involved.

The last few rather speculative paragraphs have been taken up with considering just what kind of psychological reality metaphorical propositions might or might not have when linguistic metaphors are psychologically activated in the mind of a text's producer or receiver(s). It is crucial, however, to remember that our group's procedure is not as such committed to any specific theory about the psychological status of propositions. It attempts only to make available a method of textual metaphor analysis which may be of use to those who are attempting to investigate human reality in its cognitive, or indeed any other, aspects. There is therefore no reason to treat image metaphors any differently from other metaphors in our procedure, even though their relation to propositions may ultimately be different from that of many other metaphors. In the case of image metaphor, at least, I would myself want to leave open the possibility of treating the concept of a metaphorical proposition as a purely heuristic device. Whether image metaphors are ever actually realized psychologically as propositions or not, however, their linguistic expression still always allows for the construction in principle of a metaphorical proposition.

3 Conclusion

I return finally to the emphasis with which I began. Our group's approach is not a process approach. We do not assume that whenever there is a linguistic metaphor the potential cross-domain mapping it makes available is actualized in the mind of either the producer or the receiver(s). Neither do we assume that when there is such a realization the cross-domain mapping is always realized via the construction of a metaphorical proposition. Nevertheless, our procedure is based upon constructing, or allowing for the construction of, a metaphorical proposition for every linguistic metaphor. Our approach to metaphor analysis is thus a three-level approach. The first level is that of the surface linguistic expression; the second level is that of the metaphorical proposition; the third level is that of the cross-domain mapping. What is most distinctive about our approach is its use of the intermediate level of the metaphorical proposition. The reasons for our introducing this second intermediate level are both practical and theoretical. From the practical point of view, we have seen, we cannot move directly from language to conceptual mapping. We know far too little about conceptual mappings to be able to integrate them into a practical, empirically oriented, procedure of text analysis. From the theoretical point of view, if one grants that propositions in general have some sort of cognitive reality, even though not all cognition is propositional, then it seems that one should allow for the empirical possibility that propositions have a cognitively real role to play in the psychological realization of at least some metaphors. Although our model does not deal directly with cognitive reality, it is still concerned with it. We hope that it may ultimately be of help in the exploration of cognitive reality.

Notes

1 Our procedure so far has restricted itself to full lexical words, that is, nouns, verbs, adjectives and adverbs. The particle *out* in the Maitland sentence is therefore not underlined, since it is clearly a grammatical word. (It would be analysed traditionally as a prepositional adverb, and could plausibly be seen as an intransitive preposition.) In discussing the kind of mapping that *turned* participates in, however, one has to consider *turned* as part of the expression of the phrasal verb lexeme **turn out**. This is unsatisfactory, but is a consequence of temporarily identifying only full lexical words as metaphorical. The added difficulties of also identifying grammatical words will have to be faced by our group in the future.

2 I follow Steen (1999a) in using the terminology of 'focus' and 'frame' of Black (1962) for discussing the linguistic as opposed to the conceptual metaphor.

3 The issue of the various possible criteria for counting the number of metaphors in a text will be dealt with in Crisp et al. (2002).

4 Steen (2002) will give a more detailed presentation of the Bovair and Kieras apparatus and of our group's application of it to metaphorical language.

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