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Psycholinguistic comments on metaphor identification

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One of the most difficult challenges in poetics is to define what characterizes metaphor. A quick view of the vast literature on metaphor over the last 30 years reveals little agreement on the essential properties of metaphorical language, and there are even more heated debates on the relations between metaphor and thought. Many dictionaries, encyclopaedias, and handbooks of literary terms attempt to concisely define metaphor. Yet these rough definitions are not really useful to scholars who study metaphor in real-life spoken and written discourse. Despite these difficulties, metaphor scholars have bravely marched forward and published thousands of papers on how metaphors are used, learned, understood, and, more generally, reflect key aspects of human conceptual structure. But nobody has offered an explicit procedure for metaphor identification that then demonstrates how these linguistic expressions are grounded in cognitive mappings – until now.

The four articles published in this issue of *Language and Literature* offer several ideas for identifying metaphors in real-life texts and speech. These articles

differ, to some extent, but together they offer several interesting proposals for identifying metaphors and then linking these verbal expressions to underlying conceptual mappings. My aim here is to respond to the work of this metaphor identification project from the perspective of someone working in the field of psycholinguistics.

1 Psycholinguistic experiments

Psycholinguists have for almost 30 years now conducted experiments investigating people's learning, production, and understanding of metaphoric language (see Gibbs, 1994 for a review of this literature). Most of these empirical studies present people with either literal or metaphoric language and then measure, for example, how easy it is to comprehend or remember metaphoric expressions compared to literal ones. One important conclusion of this work is that people do not necessarily take longer to process, or experience more difficulty remembering, metaphoric expressions than they do literal uses of the same sentences or non-metaphorical equivalent utterances. These findings suggest that using and understanding metaphors does not require additional, special, cognitive effort over that used to understand literal speech.

One difficulty psychologists experience in conducting research on metaphor is that it is sometimes difficult to define what constitutes a metaphor compared to, say, a literal expression. Psychologists have generally tried to find single expressions, such as 'Regardless of the danger, the troops marched on', that appear to have literal meaning in one context (e.g. when referring to actual soldiers) and metaphorical meaning in another (e.g. when referring to a group of small children tormenting their babysitter). Psychologists also find metaphors (e.g. 'Some jobs are jails') and then create non-metaphorical equivalents (e.g. 'Some jobs are confining') to see how people process both kinds of statements within the same context. But psychologists have not been explicit about what specifically constitutes metaphor, as opposed to literal language, and mostly rely on their own intuitions when creating empirical materials for study. Although psychologists may occasionally ask other people, such as groups of undergraduate students, to affirm their judgements of what is literal and what is metaphorical, they do not, again, provide any explicit criteria for identifying some stretch of language as metaphorical.

One of the great benefits of the metaphor identification project is its aim to create an annotated corpus that psychologists, and others, can use to select metaphorical language materials when conducting different kinds of psycholinguistic studies. Furthermore, the promise of a five-stage, or six-stage, procedure for identifying conceptual metaphors from linguistic ones would be a tremendous help to psychologists who have other linguistic materials that they wish to study, whether it be metaphors in naturalistic texts, or even texts created for specific experimental purposes. I personally believe that, with additional

work, the metaphor identification project may be able to propose a reasonably reliable procedure for identifying metaphors that can be potentially adopted for many empirical purposes. My hope, though, is that the project will attempt to be even more inclusive as to what counts as metaphor, so that, for instance, prepositions and polysemous words are recognized as conveying metaphorical meanings (as they often do).

2 Inferring conceptual metaphors

One concern I have with the five-step, or six-step, procedure for discovering conceptual metaphors from linguistic expressions is that what is 'conceptual' here differs, to some extent, from that understood by most cognitive linguists. For example, the fifth step of Steen's (1999, 2002) procedure results in a conceptual mapping between distinct source and target domains, along with a listing of some of the entailments that arise from that mapping. In this sense, Steen has indeed completed the journey of first identifying a linguistic expression as metaphorical and then determining the underlying conceptual knowledge that forms the motivation for the verbal utterance. It is perfectly reasonable to refer to this cognitive, indeed psychological, level of knowledge as 'conceptual'.

But cognitive linguists talk of 'conceptual metaphors' as enduring conceptual mappings from source to target domains that motivate a wide range of linguistic expressions. For instance, the classic conventional metaphor LOVE IS A JOURNEY motivates a variety of linguistic expressions, such as 'Our relationship got off to a good start', 'Our marriage is on the rocks', 'We are at a cross-road in our relationship', 'We seem to be going nowhere in our relationship', 'We are simply off-track', and 'We finally hit a clear patch in our relationship'. Each of these linguistic expressions, although highly conventional, reflects different entailments from the mapping of our embodied experiences of taking journeys into the domain of love and being in love relationships.

There are two important points here. First, any procedure for inferring conceptual metaphors from linguistic expressions must have some way of being able to identify conceptual mappings that are enduring, or are conventional, and make up a significant part of our ordinary conceptual systems. Right now, how this can be achieved within the five-step procedure is not quite clear (but note some of the discussion in Semino et al. (ms.), about adding a sixth step to be able, in part, to draw these generalizations). Second, analysts' identifications of different verbal expressions as metaphorical are clearly shaped by their knowledge of conventional conceptual metaphors. The five-step system is primarily inductive, and fails to recognize the utility of deductive processes involved in the identification of linguistic expressions as relating to conceptual mappings in the way usually done in cognitive linguistic research.

Of course, part of the goal of the five-step procedure may be to provide a more systematic, explicit procedure for inferring conceptual metaphors, whether these

be one-shot mappings or conventional conceptual metaphors in the way discussed in the cognitive linguistic literature. Yet as one who has employed cognitive linguistic methods in identifying linguistic expressions as metaphorical, my belief is that somehow working in a more top-down, deductive manner would be quite useful. This is the case not only for identifying that a specific linguistic expression is metaphorical, but also for specifying quite precisely what kind of metaphorical mapping it illustrates (e.g. LOVE IS A JOURNEY).

3 The psychological (un)reality of propositions

The authors of the articles in the metaphor identification project are quite clear in their statements that they make no claims that the identification procedure proposed here captures anything about human metaphor processing. One place where they specifically urge caution in adopting a psychological stance on their work is in their embrace of propositions as the underlying representational framework for conceptual metaphor. Psychologists have often assumed that the 'language of thought' is best characterized in terms of language-independent propositions (Kintsch, 1974). Much empirical research on text understanding has employed propositional analyses of texts as the descriptive medium by which to explore text comprehension and memory (Britton, 1994).

But there are many psychologists, and cognitive scientists, who argue that propositions fail to represent the richness of human conceptual knowledge. These scholars claim that propositions do not capture the embodied character of concepts (Glenberg, 1997; Shannon, 1993), and that embodied metaphorical mappings, in particular, resist propositional analyses (Lakoff, 1987). Space limitations prevent me from saying more about inferring propositions from linguistic metaphors. Yet I simply urge that metaphor scholars be very careful in reifying descriptive tools, such as characterize meaning in terms of propositions, and assuming that these tools necessarily reflect the way people ordinarily think.

4 Do we identify metaphors before understanding them?

Must people identify a metaphor (as a type) before that metaphor's meaning (as a token) can be understood? Again, the authors in this issue carefully avoid making any psychological claims about metaphor understanding, or even identification. Yet several writers have argued that metaphor identification is an essential first step toward interpreting what metaphors mean (Beardsley, 1976; Levin, 1977). Under this view, readers must recognize that some instance of language does not have acceptable literal meaning and has the structural characteristics of metaphor, which subsequently forces people to draw various comparisons between the linguistic terms involved (including an assessment of both similarities and differences between the topic and vehicle, or between source and target domains).

To some extent, this view has similarities with the procedure suggested by the metaphor identification project. This model assumes, then, that understanding metaphor involves substantially different processes than used to understand literal, or non-metaphorical, speech (i.e. steps 3 through 5).

But it is unlikely that people must first identify a metaphor before understanding what it means. There are several types of empirical evidence to support this claim. First, many psycholinguistic studies show that people need not take any longer to interpret a statement used metaphorically, in one context, than when it is employed with literal meaning, in a different situation (Gibbs, 1994). If people must first identify a linguistic expression as some sort of metaphor 'before' they begin to derive its meaning, then we would expect metaphors to take longer to understand than corresponding literal statements. This is not simply the case, at least for many metaphors seen in rich social and linguistic contexts.

A second reason for believing that people need not identify metaphors before understanding them is that ordinary readers will often fail to recognize many metaphorical statements as metaphors, especially conventional ones, when asked to pick these out during normal reading (Gibbs, 1994). Readers, like listeners, aim to infer something about writers'/speakers' communicative intentions and focus their efforts toward figuring these out without having to consciously label each instance of language as being of a certain type. Thus, readers need not think, consciously or otherwise, 'That's a metaphor and so I need to engage in process X to interpret it', or 'That's a metonymy and so I need to engage in process Y to interpret it', or 'That's irony and I need to engage in process Z to interpret it'.

Even if one argues that people tacitly recognize that a metaphor is a metaphor along the way to understanding what the linguistic utterances means, it is not clear how metaphor identification can actually occur unless one has already read and understood the metaphor to some significant extent. For this reason, it makes little sense to suppose that metaphor identification is a separate, prior, and obligatory step in the sequence of mental operations involved during ordinary metaphor interpretation.

There may be instances, nonetheless, where metaphor identification consciously occurs before metaphor understanding has been completed. For instance, consider the following examples of metaphorical language from the novel *Jitterbug Perfume* by Tom Robbins (1984):

> Louisiana in September was like an obscene phone call from nature.
>
> Her voice was limp and webby, as if it were being filtered through mommy wrapping.
>
> She walked down the path feeling like three-fourths or two pieces of slug bait.
>
> … the goings-on … were enough to strain the elastic on the cerebral panty hose.

My experience of first reading these complex, twisted metaphors, was that I often knew they were metaphorical statements before I had finished interpreting what

they may possibly have meant. I had this conscious experience of knowing these statements were metaphors before understanding them completely because of my immediate efforts to understand the author's/narrator's intentions, and failing to determine what these were in full, soon recognized that I was dealing with unusual metaphors. A competent analyst of metaphor employing the five-step procedure would clearly identify any of the previously mentioned statements as metaphors, even if that analyst may be hard pressed to articulate what any of these metaphors actually meant. Some of this difficulty lies in the image-mapping qualities of some of these metaphors, which are characteristically difficult to express in words. Yet it seems evident that people will sometimes know that they have encountered a metaphor before completely understanding what that piece of language means. But this fact alone should not be mistakenly viewed as evidence that metaphor identification precedes metaphor understanding processes in a psychological theory of metaphor interpretation.

5 Conclusion

The metaphor identification project may prove very useful for psycholinguists studying metaphor, not only for the potential corpus of reliably rated linguistic metaphors, but also because it suggests a procedure for identifying metaphors in real-life texts. More interestingly, the research raises several questions about the representation of meaning in human thought, how and when people ordinarily identify metaphors en route to understanding metaphorical meaning, and in drawing links from metaphorical language to metaphorical thought. For these reasons, the project should be invaluable to metaphor researchers in psychology.

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Applied-linguistic comments on metaphor identification

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1 Introduction

This short article has three aims, which are inevitably intertwined. The first is to examine the main implications for applied linguistics of Steen's (1999) five-step metaphor identification and specification procedure. The second is to pick up important points made by the authors of the four core articles in this collection. The third is to indicate specific topics which rely on identification that need more research.

As applied linguists, we are concerned to increase our understanding of how language is used in real discourse contexts. A central motivation for many applied linguists is to improve the teaching and learning of languages, but other, non-pedagogic, motivations require investigation of specialist uses of language, related to particular groupings of people (e.g. lawyers) or genres (e.g. research reports, literature). In taking naturally occurring discourse as the site and substance of our research, our applied linguistic approach overlaps with that of the contributors to this special issue. As will become clear, a key difference lies in our reluctance to jettison surface language features as 'noise' (Steen, 2002).

2 Words and meaning

Effective use of the lexical resources of the language is as important to specialist users as it is to second-language learners and is generally seen as a key topic by both.

Our first point concerns meaning. It is the observation that neither group *needs* to know the 'basic' senses of many words in order to use them appropriately, or to avoid using them inappropriately. Thus someone writing an essay needs to be able to 'buttress or support an argument', but does not require a previous course in medieval architecture. Similarly, learners will rarely need lessons on interactivity in order to understand the extended sense of 'ask' in 'to ask oneself' (Heywood et al., 2002). What learners *do* need to know is how and when to use words to achieve certain rhetorical, informational or behavioural ends.